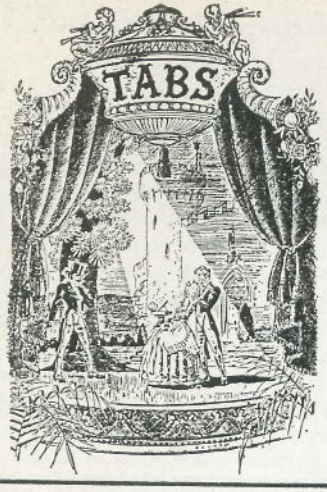

TABS

March 1972 Vol. 30 No. 1

TABS

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Cover picture: Royal Shakespeare Theatre, Stratford-upon-Avon, complete with swans.

1066 and all that

Once upon a time there was a stage lighting firm renowned for its equipment, or some of it, but which cast a blight over all with its strange irregular reference numbering. Thus there were Pattern 23s, 49s, 73s, 50s, all of which defied classification by those who wanted to classify them, but those who wanted to use them for lighting found that in their perverse way these numbers were memorable—indeed they became hallowed by tradition. Is there a lighting man alive whose soul is not still stirred one way or another at the number twenty-three? In overdue course reference numbers were devised for accessories. However, it was desirable to state, when ordering, in plain if abbreviated English what the thing—subject of the order—was. Cases of duplication were not unknown and there was always the peril of a slip; thus instead of a *Patt.* 137 flood one might receive a *Ref.* 137 snow effect.

Customers of a classificationary kind used to frown on these old *laissez faire* ways and wonder when some organisation was going to come in and take a hand. Well it has and has; of the result we can now report. Our catalogue price list bears an imposing new array of numbers—everything being treated alike. The basis is a seven digit code thus: instead of a Patt. 23 one simply orders a 20 01 003 or instead of a Patt. 23 W (wide angle) it is memorably a 20 01405 which hangs from a 26 483 07 clamp, while the beam is daintily tinted with a 31 359 04 10 pink or according to dramatic need a 31 359 04 40 blue.

The observant will notice that now for colour we have grown two extra digits—the seven digit code only tells us that it is a piece of Cinemoid of a particular size—should one require it to be coloured then a further two digits are of course needed. For many purposes a 20 06 00T spot would be better in which case we should still need 26 483 07 to hang it, but our pink becomes 31 401 09 10, and of course we might need a 26 484 02 and a 26 626 09 if our Patt. 123, for that is what it is, were to be used on a stand from floor level instead.

A scrutiny of these new reference numbers suggests that the main difference from their predecessors is the fact that they consist of seven digits instead of just two or three. Picking the code numbers for the seven variants of what we used to call a Patt. 23 seems to have been left to ERNIE. Working on the hypothesis that in an organisation there is organised thinking, and with Rene Cutforth's BBC television programme *The Codebreakers* in mind, we set out to break this particular code. Alas, we have to confess that even with a 41-page explanation of what it all meant before us we did not succeed. To take a simple case, the three sizes of Fresnel spots 500, 1,000 and 2,000 watt are respectively 20 06 00T, 20 11 008, 20 13 203. Why? How comes it that among a wholly numerical code a "T" crops up from time to time in the last column? It is no help to be told that the last column is only for the computer—we still have to get it correct when using the code because this single figure tells the computer that we have got the other figures right. Obviously it is no good having those figures right if the wrong last figure leads the computer to assume we have the right figures wrong. Likewise a right last figure is useless if any of the ones that are left were wrong. A cautionary tale indeed.

There are some, believe it or not, who find seven figure code numbers not easily memorable and it may help them to know that we would have had a nine figure code but for the firm stand taken by the man who has a finger in our index.

Baulked of their public prey "the organisers" go to work in private adding digits here and there and almost everywhere. Thus that nice 31 359 04 40 mentioned has three extra digits put on it to show which representative sold that piece of blue Cinemoid. Of users we have 57 varieties, so a further two digits are slapped on, and for all we know the codemakers have a four-digit word for us. Who are "us" by the way? Breaking our traditional anonymity in this area of TABS we are 11280450230715%72201009P400004328 . . . or so the Electricity Board's computer tells us at the bottom of our quarterly bill.

Stratford Ontario Festival Theatre New Lighting Installation

*Bruce Buck**

It is not surprising that Stratford, situated on the Avon River in Ontario, Canada, should have been chosen as the site for a theatre holding a festival of Shakespeare's plays. Stratford is however nearly 100 miles from Toronto and required the complete dedication of its founders in order to overcome the doubts of its success. The theatre is now known internationally and its performances attended by people from all over Canada and the U.S.A. and many other parts of the world.

The idea was first conceived by Tom Patterson, a local journalist from Stratford, and developed into reality by Sir Tyrone Guthrie with very definite views on what the venture should consist of. "It must be closed in and not open air as earlier planned (there are too many distractions) but must have an open stage", was his edict. The latter became a famous feature, the Stratford pillared, porticoed thrust stage designed by Tanya Moiseiwitsch and Tyrone Guthrie.

Soon its success was established. Contributions had come from private individuals and large companies alike, including The Rank Organisation.

The theatre started in a tent in 1953, this enclosure serving it well for some three seasons until in 1956 it was taken down in order to prepare for a more permanent structure. This structure designed by Robert Fairfield, still resembles to a large extent the atmosphere created by its tent predecessor.

**Vice-President, Strand Century, Canada.*

The additional facilities offered by the building were extensive but unfortunately severe limitations in respect of lighting were created by budget restrictions and the earlier previous simple lighting limitations of the tent were passed into the new building. The cramped, all but inaccessible, positions in the domed ceiling precluded the use of colour and were in any case very few in number. This lighting which belonged to the Tyrone Guthrie "white period" was adequately controlled from a 20-channel, Century 2-preset control.

It is interesting to note that the Chichester Festival Theatre in England was inspired by the design but that the same limitations of lighting did not pass to this theatre when it was constructed. Although similar, the Stratford Theatre has a much larger capacity of 2,258 seats.

During 1971, it was decided by John Hayes, the Production Director, that these serious limitations would cease and a new installation was designed for the theatre by the New York lighting designer Gil Wechsler working very closely with the technical consultants M. M. Dillon Ltd., of London, Ontario. The chief engineer, Emil Czerkowski from M. M. Dillon had to overcome many problems in modifying the ceiling structure to adapt for the new installation.

In the main the new installation is based on five concentric rows of lighting slots in the ceiling. That above the front edge of the stage is almost a complete ring, the others conform to the 210° encompassment of the stage by the seating. The last slot nearest the periphery of the auditorium is broken up into eight short sections instead of being continuous. A great deal of structural alteration has had to be made to the ceiling itself and new catwalks allow access to each lighting slot from above.

The characteristic contours of this theatre's ceiling have been preserved as have the original dome slots which are therefore additional positions to those of the five new rows.

The new lighting equipment supplied comprises sixty 1490 series 6 in. Leko lights (profile spots)—one hundred and sixty 1570 series 8 in. and twenty-five 1520 series 10 in.—245 new spotlights in all. A variety of lens combinations are used and lamps of 750 watt, 1 kW and 2kW, as appropriate to the varying lengths of throw.

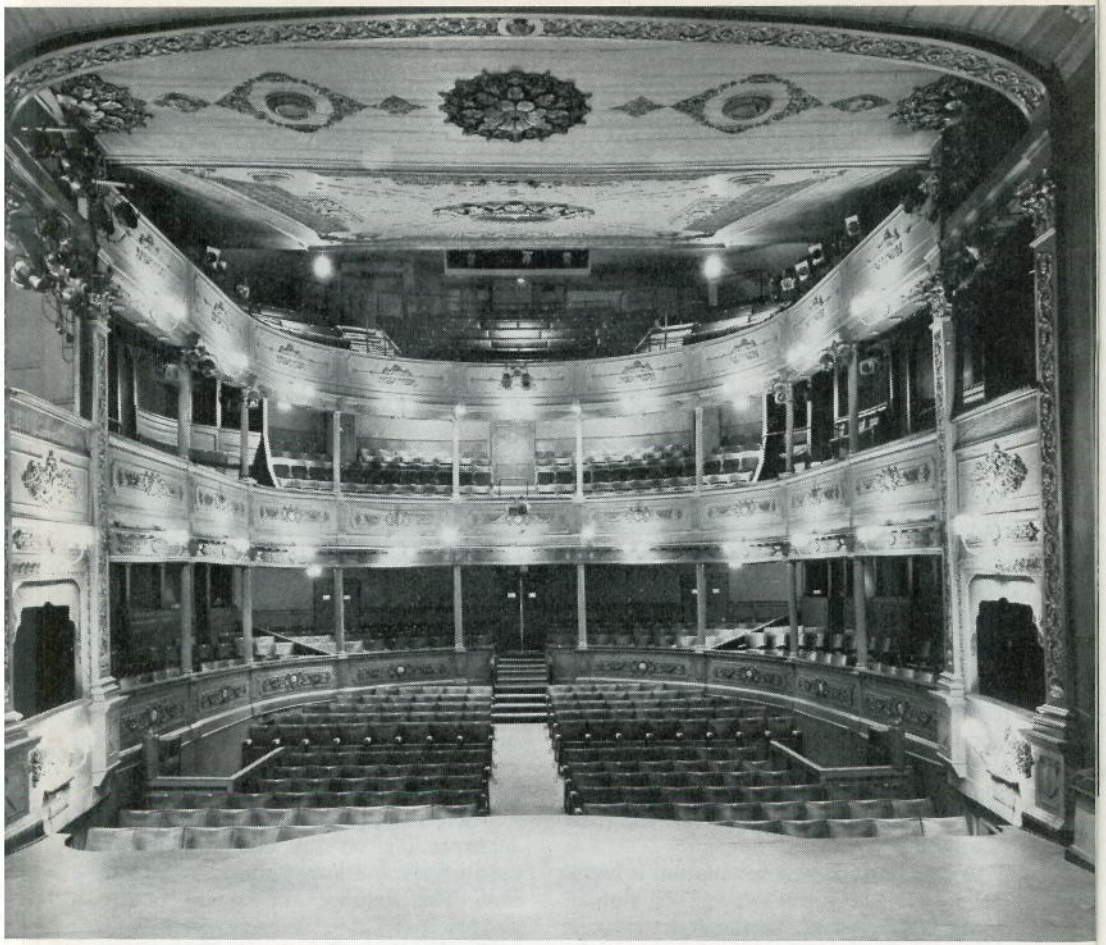
The control is from a 120 dimmer channel Strand Century Memo-Q System with 600 instant dimmer memories. This large number is to facilitate quick turn around of productions in the Festival repertoire without re-programming. A Teletype print-out with punch tape is also being supplied.

The Memo-Q Control System supplied is very similar operationally to IDM and in general provides the same facilities. Its manufacture however is by Century Strand in Los Angeles, who have manufactured a large number of these systems for North American theatres. The extensive use of patching is, however, completely characteristic of American practice. The floor standing load-patch panel has 350 retractable cords for circuits and 480 dimmed receptacles, i.e. three per 3 kW dimmer and six per 6 kW dimmer.

There are eighty 3 kW and forty 6 kW thyristor dimmers—eight racks in all. In addition there are five 50 amp non-dim contactors each represented at the patch panel as three receptacles.

There is a stage manager's booth in the main ceiling on the centre line of the auditorium and level with the last lighting slot. The lighting and sound booth is farther back behind windows in the gallery wall slightly off centre. This position provides a better angle of view and the advantage of access from outside the auditorium via the gallery promenade on which the new room encroaches. The sound and lighting operators have separate windows and a door between their two areas. The dimmer room and patch panel is in the backstage area.

Everyone connected with the theatre is very excited by this latest improvement and Jean Gascon their present Artistic Director along with John Hayes, are thrilled at the added flexibility which is already obvious in early rehearsals, for their forthcoming season. New and exciting things are envisaged, making full use of their new lighting and sound facilities.



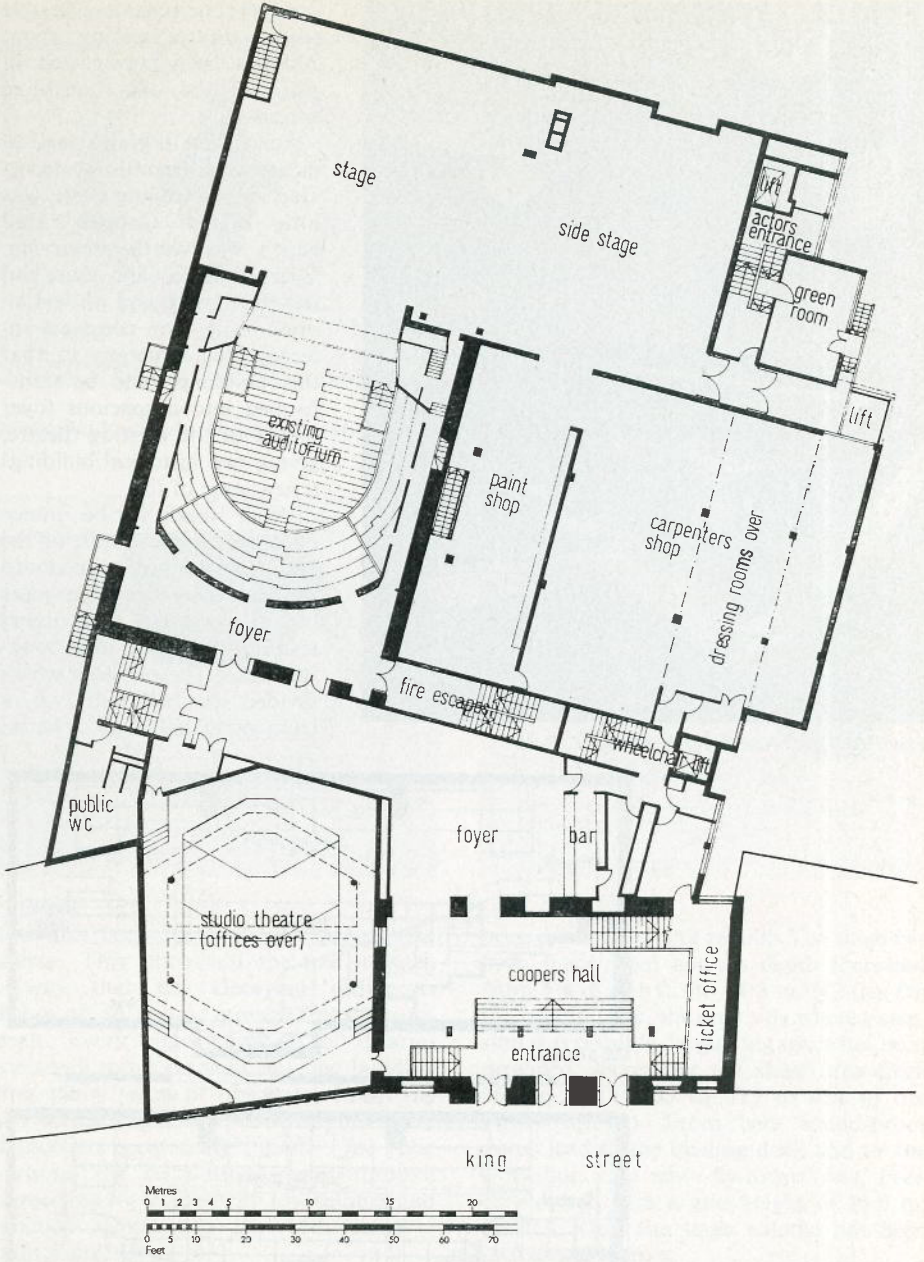
Theatre Royal Bristol

Peter Moro FRIBA

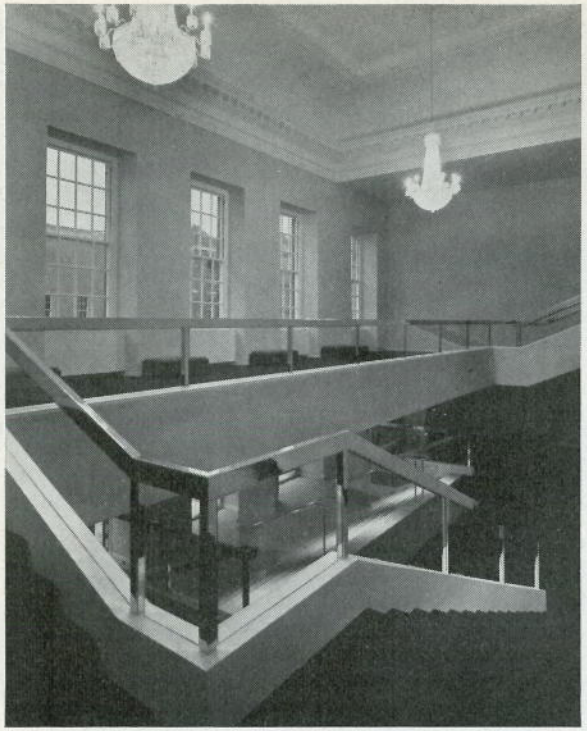
Those who knew the Theatre Royal before the recent re-modelling will remember it as a charming 18th Century auditorium approached through unprepossessing front of house areas and equipped with sub-standard production facilities. The object of the work just completed was to put this imbalance right and to give this historic theatre the ancillary facilities, front and back, which it deserves and desperately needs to function properly.

Two factors made this a practical proposition. First, Coopers' Hall, a semi-derelict 18th century Guildhall next door to the theatre's entrance and serving as a fruit and vegetable store until recently, became available to form a new foyer for the theatre. Secondly, additional land alongside the theatre itself was purchased by the Trust in order to build on it a much enlarged stage, workshops, wardrobe, stores, rehearsal rooms, dressing rooms, offices and so on.

Foyer bars on all levels were designed to form linking elements between Coopers' Hall and the existing auditorium, and to



Bristol Old Vic: plan, Theatre Royal auditorium untouched but stage extended. Studio theatre replaces old entrance area. New foyers etc. in the Coopers' Hall alongside. Architects: Peter Moro & Partners.

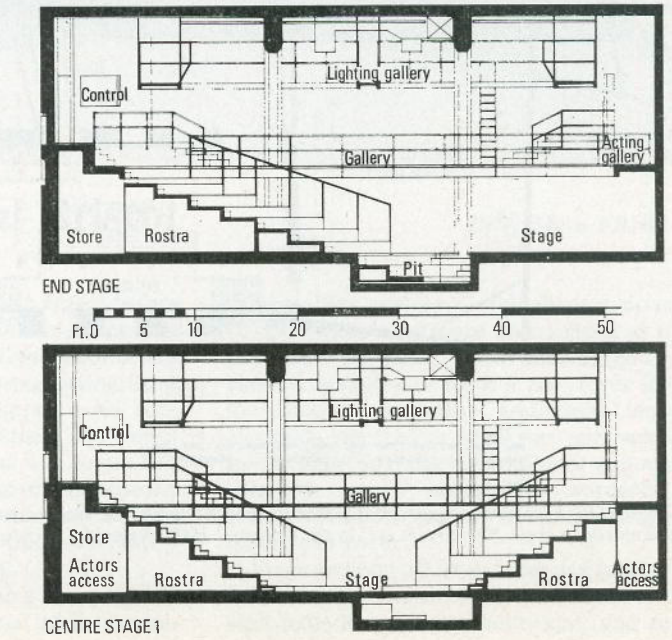


Bristol Old Vic: New foyer in Coopers' Hall.

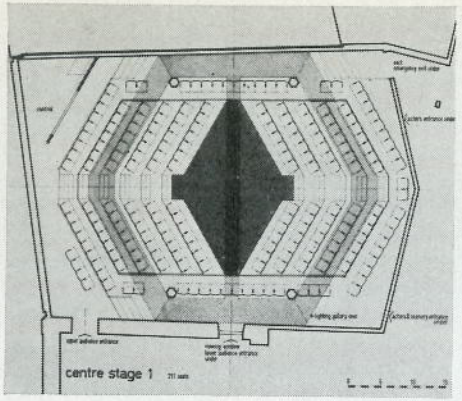
complete the scheme a flexible studio theatre seating about 200 has been constructed in place of the old tunnel-like entrance.

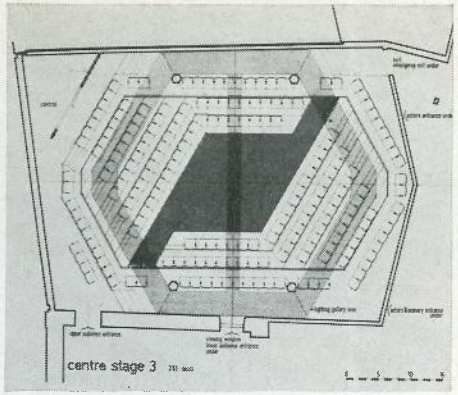
Apart from its grand classical façade and beautifully decorated plaster ceiling there was little left of Coopers' Hall which was worth preserving. Years of neglect and abuse had left their mark and offered an opportunity for complete internal reconstruction so that this building could be transformed into a spacious foyer linked to the existing theatre, giving two historical buildings a new lease of life.

What used to be minor openings in the plinth of the building have been turned into the main entrances. Three pairs of armour-plate glass doors lead into the foyer with booking office. The old floor which divided the hall into two, a banqueting hall over a barrel

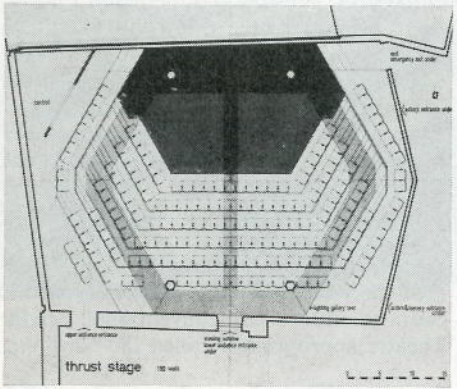


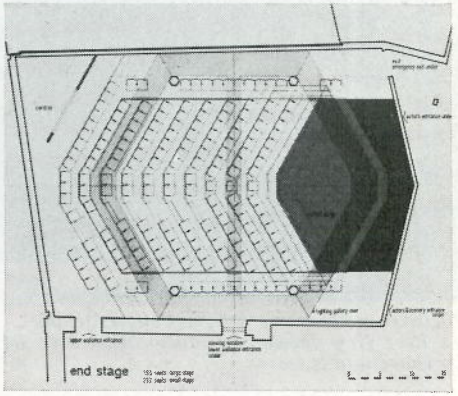
Bristol Old Vic: Studio Theatre (the New Vic). Sections showing end stage and centre stage formations.





Bristol Old Vic Studio Theatre plans showing various formations. Tinted area indicates lighting gallery over.





store has been replaced by a promenade gallery. This opens up the hall in such a way that the Georgian ceiling is shown off to best advantage from various levels. Every night hundreds of theatre-goers will move through this fine building after many years of obscurity. From the hall with its light walls and bright crystal chandeliers especially made for the purpose, the circulation moves through connecting foyer bars with low ceilings and subdued lighting to the 18th century-auditorium.

The auditorium has not been touched, but it is hoped that in the near future it will be possible to redecorate it and to replace the rather tatty seating.

Beyond the proscenium everything has been demolished and rebuilt. The stage has been made level and its depth increased from 9·4 m. (31 ft.) to 14·3 m. (47 ft.). On the prompt side, the only side where extension was possible, large wing space has been provided, increasing the stage area from 164 sq. m. (1,765 sq. ft.) to 414 sq. m. (4,356 sq. ft.). From here sound-proof doors lead to the loading dock and to the workshop. A new fly-tower has been constructed with a grid height of 15·5 m. (51 ft.). Thus the stage volume has been increased 3½ times.

Extensive workshops, paint frame, rehearsal rooms, wardrobe and dressing rooms have been built on the newly-acquired land. These may appear disproportionately ample for a theatre seating only 660, but

it must be remembered that the new complex not only comprises a flexible studio theatre for 200 but is a base for numerous additional activities of the Bristol Old Vic Company.

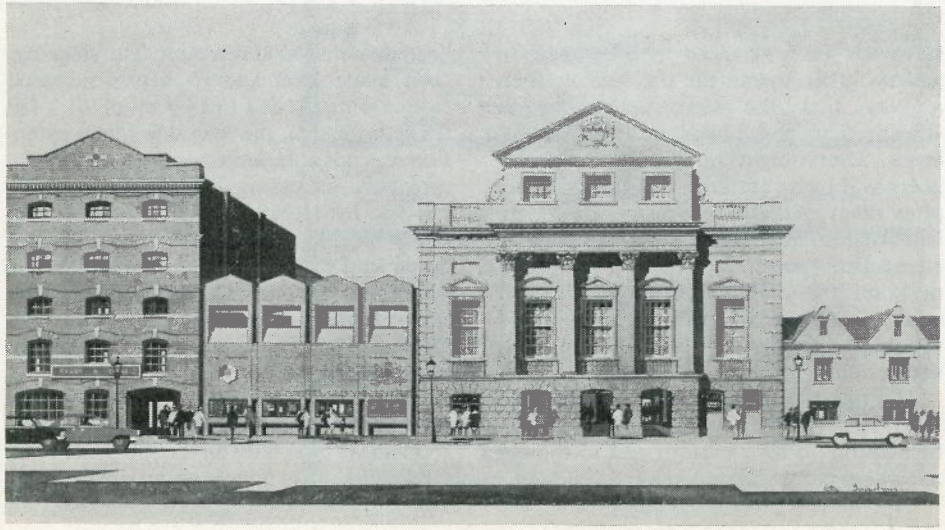
For lack of money part of the scheme must, for the time being, remain incomplete. Workshop and paint frame are still to be equipped. The platform lift, which acts as a loading dock and which moves down to the large store and up to stage level which is 7 ft. above street level, has still to be installed; and the same applies to the passenger lifts connecting some of the dressing rooms with the stage. Only two-thirds of the dressing rooms have been equipped so far, and the administrative offices are merely shells to be fitted out later. This also applies to the rehearsal room and the wardrobe.

In the public area it is the Studio Theatre which, in spite of generous help from the Gulbenkian Foundation, has yet to receive its flexible seating specially devised on a system of interlocking rostra.

Outside, the new façade, which replaces the old theatre entrance, is without its illuminated lettering and the Royal Coat of Arms granted to the theatre in 1778. The perspective drawing gives an indication of what the King Street elevation will look like when all this has been done.

Architecturally this is essentially a remodelling job, and for this reason perhaps doesn't make the same impact as an entirely new theatre building. However, what makes this theatre complex unique is the attractive idea of combining under one roof the oldest working playhouse in this country with an unconventional Studio Theatre appropriately called the New Vic.

Above: Old Theatre Royal entrance sandwiched between a warehouse and the Coopers' Hall.
Below: New façade for studio theatre in its architectural context.



Wythenshawe's Forum

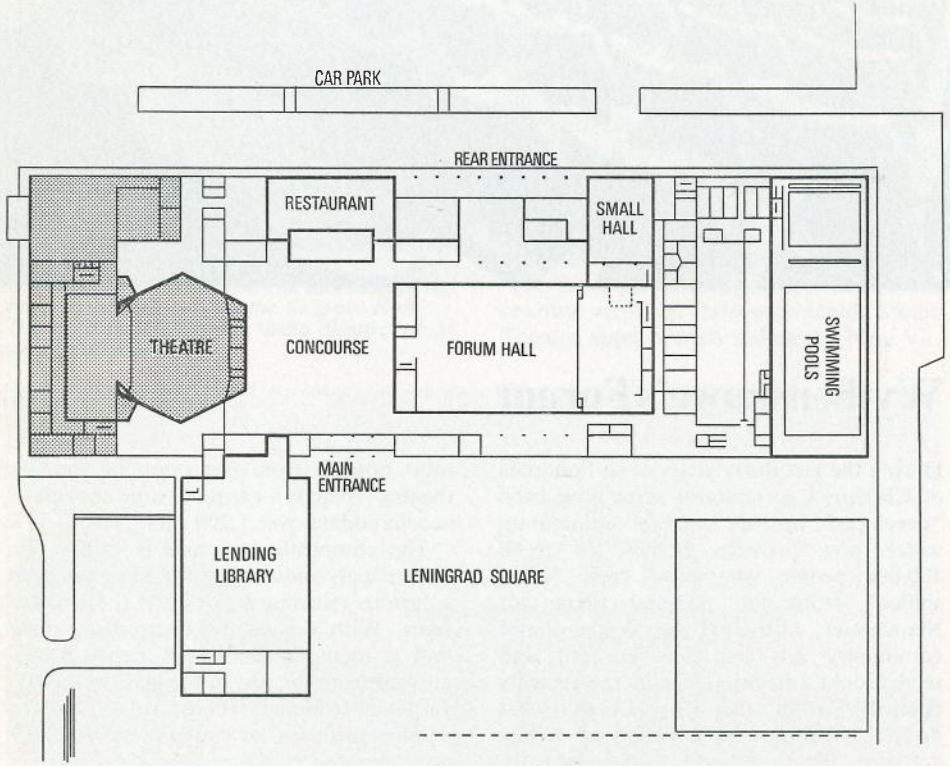
Percy Corry

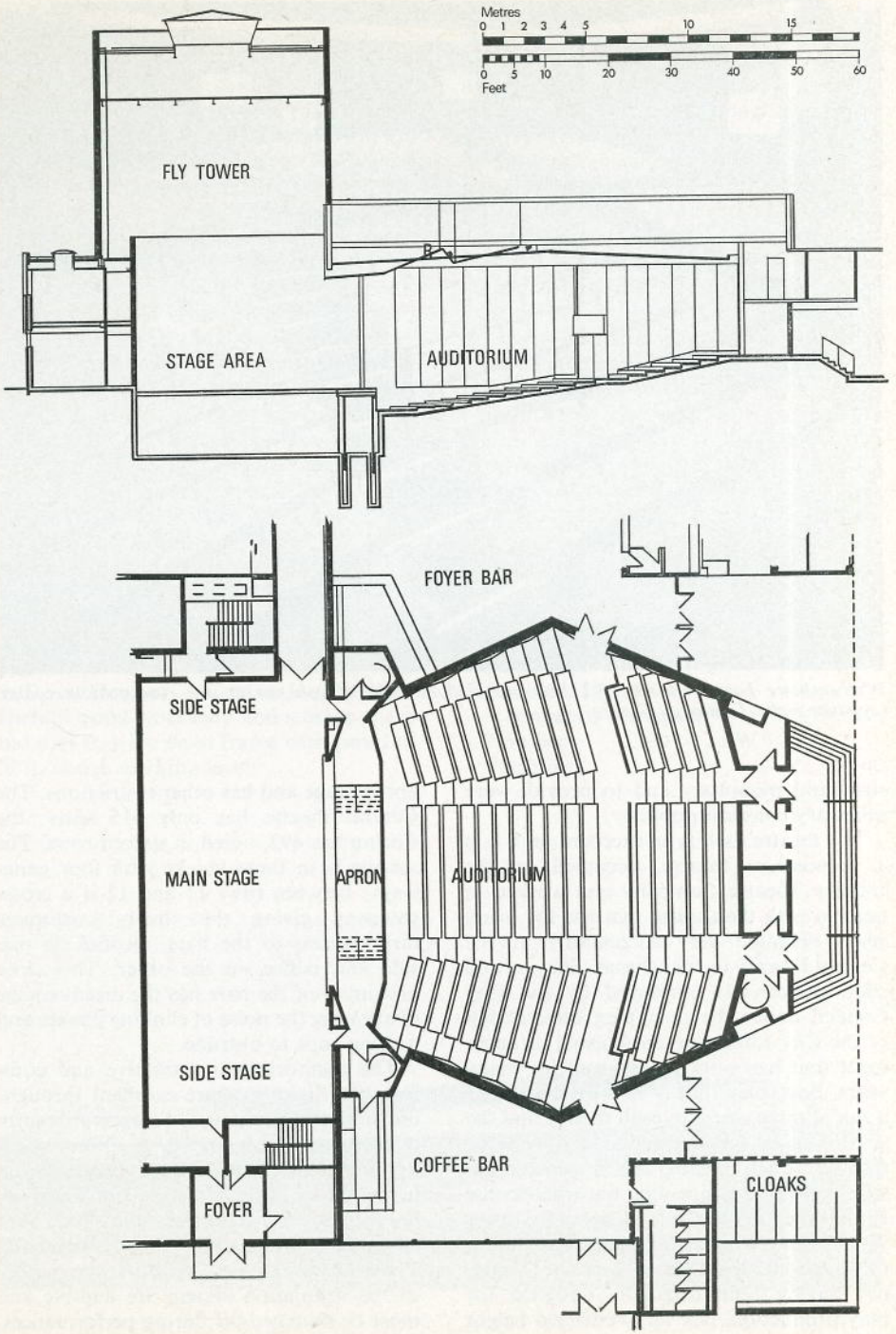
During the last thirty years or so hundreds of Cheshire's agricultural acres have been "developed" into a "satellite" community which now provides homes for those 100,000 people who have been "overspilled" from the parental planet of Manchester. Hitherto, the Wythenshawe community has had few cultural and recreational amenities, but in the recently opened Forum the City Council has provided facilities for a variety of leisure activities: there are two multi-purpose halls, one very large (144 ft. by 72 ft.) and one more intimate (60 ft. by 36 ft.) both with flat floors; two swimming pools, a sports hall, a lending library, a restaurant, three bars, a promenade, a small lounge and—most notable from our point of view—a theatre. There is a car park large enough to accommodate over 1,200 cars.

The composite structure is rather disconcertingly anonymous and there has been a curious reluctance to exhibit informative signs. With dogged persistence one may find a main entrance, not easily distinguished from the rest of the glass in the 100 yards of frontage. There are no wall or window displays of posters, play-bills or photographs: no illuminated signs save for the simple lofty announcement of "Forum": no illuminated canopy or other attempt to create a magnetic attraction, a welcoming gaiety. This main entrance fronts a vast area of something like 3,500 square yards,

shown on the plans as Leningrad Square, an exclusively pedestrian area. When complete this open space will doubtless be aesthetically satisfying, especially on a warm summer evening; but hey, ho, the wind and the rain could well deter some less hardy potential customers during the winter. In view of the space available, access for coaches and cars to unload at the main entrance would have been considerate. There is, however, access to a not very clearly indicated rear entrance opposite to the large car park and, when the customers have found their way about the complex, this is likely to be used a lot. The main entrance leads directly (the rear entrance more deviously) to the large concourse which serves as foyer to theatre, bars, restaurant, library and multi-purpose halls: its 900 square yards of floor space is also intended to serve as an exhibition area. The decor is rather sombre and the fluorescent lighting hardly helps the female of the species to achieve impact of maximum glamour on arrival.

Altogether one cannot avoid a suspicion that the restrained municipal aesthetics could discourage the proletarian pleasure seekers from taking full advantage of the amenities so generously provided for them. The addition of a little tasteful vulgarity would seem to be needed to relieve the





Wythenshawe Forum. Left: Block plan of the complex. Right: Plan and section of theatre. Architects: Manchester City Architects Dept. S. G. Besant Roberts.

Wythenshawe Forum (above) 492 *Viceroys clad in cloth of gold, or at any rate gold in colour. (opposite right) Leningrad Square.*

structural monotony and to provide very necessary constant publicity.

The theatre itself is an excellent unit. It is a proscenium theatre, occupied by the Library Theatre Company and worked in tandem with the theatre that has for many years operated very successfully at the Central Library in Manchester. Players and staff are directly employed by the City Council under the managing directorship of the City Librarian, an unusual arrangement that has worked very well for many years. Each play that is now produced has a run of three weeks in each theatre and the settings must, therefore, be designed for transfer. Each theatre has a proscenium stage with a wide opening, but whereas the Forum theatre has the facilities of fly-tower with counterweighted suspension, and a forestage lift, the Central Library theatre, not having been originally designed for play production, has very restricted height above stage and has other restrictions. The Central theatre has only 315 seats: the Forum has 492, tiered in sixteen rows. The seating is in three blocks with four gangways; between rows 11 and 12 is a cross-gangway giving the thirsty customers direct access to the bars, alcohol on one side and coffee on the other. This close proximity of the bars has the disadvantage of allowing the noise of clinking glasses and rattling cups to obtrude.

The auditorium is attractive and comfortable. Sight-lines are excellent throughout and the maximum distance to centre front-stage is under 70 ft. Fluorescent lighting in perimeter ceiling coves appears to be rather superfluous as the walls are practically non-reflective and the inset tungsten lighting alone is quite adequate. The acoustics are very good but the motors of the ventilation system are audible and must be switched off during performances.

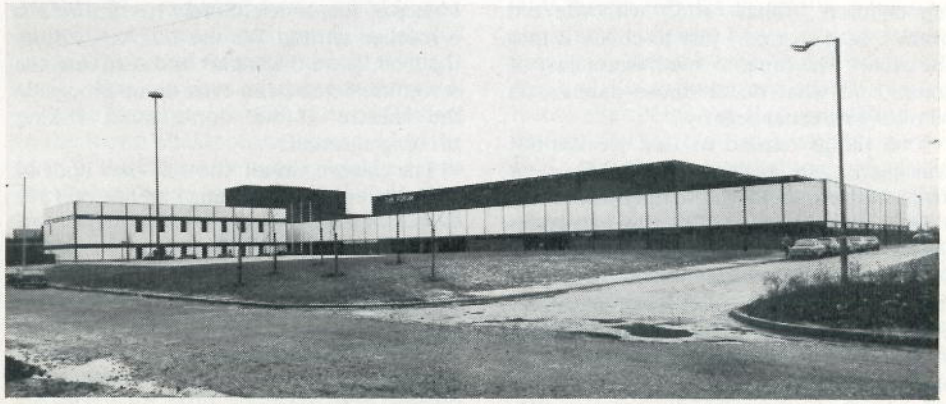
Once again one has to complain that building construction has frustrated the proper siting of the F.O.H. lighting galleries. As a result the lanterns project too far through the ceiling apertures and to focus and service them involves painful contortions and inhuman dexterity. Good access to such lanterns is always important and is doubly so when, as in this case, the number of lanterns installed has been based on the reasonable assumption that they may be easily moved about to suit differing needs of successive productions.

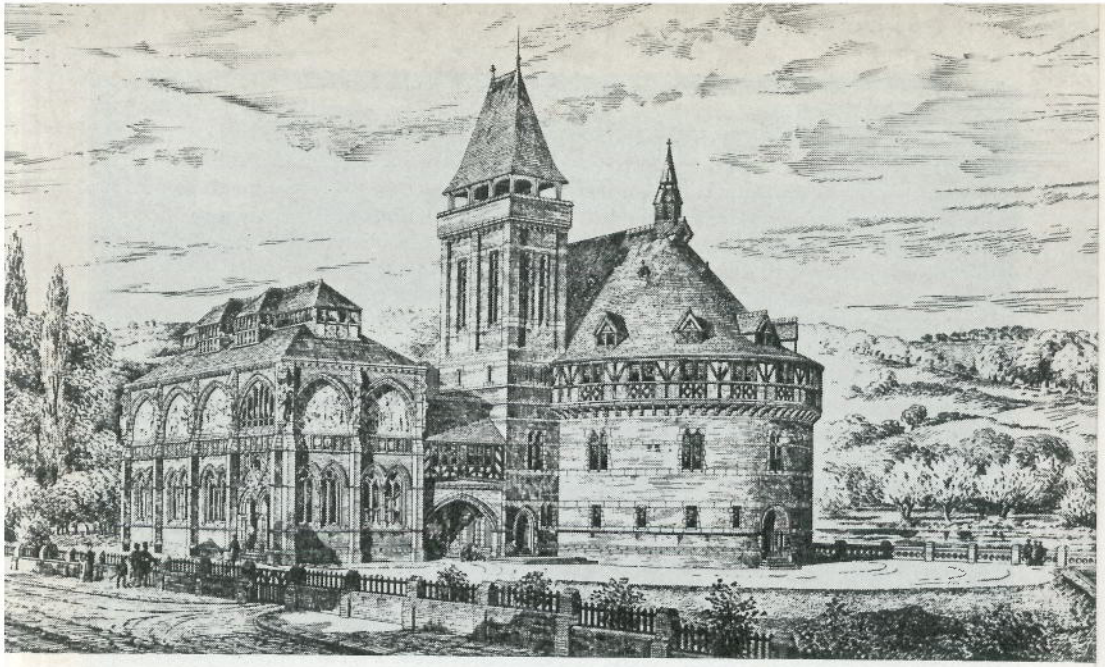
As may be expected for a single tier auditorium with a capacity of about 500 the proscenium width is 36 ft.: the height is 17 ft. 6 in. The stage height is 3 ft. 6 in. The grid at 45 ft. above stage level has 37 sets of counterweighted lines. Stage depth from proscenium opening to rear wall is 30 ft. to which may be added an 8 ft. apron, the central 28 ft. width of which is a lift having the usual three positions. There is access from stage to apron through arches with Juliet balconies above. The wing space of 21 ft. on stage right and 13 ft. on stage left is as near to the usual half-and-half requirement as makes no matter. There is good workshop and storage space and a 44 ft. wide paint frame with travel of 20 ft. above working level.

It is unlikely that the residents of Wythenshawe alone will supply the audiences required for three-weekly rep. but there is a very large population within easy distance, certainly large enough to provide good regular attendances, subject, of course, to effective publicity. And one must assume that this will apply also to the other leisure activities that have been provided for. It is noted that amateur production of plays and musicals has not been provided for. The multi-purpose halls are not suitable. Apart from the flat floors, one hall is much too big for most amateur shows and both are limited in the stage and back-stage facilities, being obviously intended for other purposes. There is, however, a lot of space on the site and one assumes that if a need were demonstrated some form of community theatre for varied use could be added at some future date.

Wythenshawe Forum
Stage Lighting Circuits

FOH	24
Flys	60
Stage Dips	16
Control Lightset 100 (Presets 3 Groups 6)	
Dimmers 100 × 2 kW	
Patching	24–40





Stratford Revisited

Frederick Bentham

The way may not be straight but it certainly is narrow and the grubby backs of urban sprawl close in as we pick our way through the Forest of Arden. Flotsam abounds, some but the tip of a jetsam-berg for sure: the messy waters allow the lookout no inkling—visibility is nil in the watery shallows. Mercifully no cry of "we split, we split!" follows. Why is it that the solution to that besetting problem of growing children "What to do with the old pram", is to so many just to chuck it into the canal? The canal towpath is not easy of access and what do all those parents do who have no canal near by?

Two things remind us that we are not cruising on an open sewer, the frequent locks we have to fill and empty and a key we have in our pocket. This tiny key opens the last lock, the padlock on the gateway to the Avon; not just any Avon—not that rival in Ontario for example—but Shakespeare's own Avon. A lone and tiny splash of colour crawls by; some dear soul has planted with flowers—a blessed plot on a bank where the wild slime grows. We round a sharp bend, one of the quietest and peacefullest dogs we have ever seen floats serenely and calmly by. Ahead lies a dark, dank tunnel; we brace ourselves sounding a warning sennet, or a tucket, on the siren. Our boat crawls in—we just clear—but the darkness has passed and it's daylight at last.

There we are in an ornamental basin surrounded by grassy and flower bedecked gardens. Beyond looms the theatre and the object of this article. Surely no theatre has a lovelier setting. We use our key, empty the lock, leave the canal* and turn into the Avon itself—and can even tie up alongside the theatre—if we don't mind risking running aground!

The theatre we all know is that built in 1932 to replace the strange edifice of 1879 shown at the head of this article, which was destroyed by fire. Not completely, since the walls survive to form a conference hall annexe to the south of the theatre. Like all theatre design the new Shakespeare Memorial Theatre (as it was known then) had a mixed reception.

The theatre itself has little to do with the town—it just happens to be there. The kind of visitor Shakespeare's birthplace attracts and the kind his theatre attracts do not mingle much. The enthusiast who travelled from afar to see Peter Brooks' *Midsummer Night's Dream* was unlikely to be attracted by the fairies at the bottom of Ann Hathaway's garden. The Bierkeller in the High Street and even, dare it be confessed, Harvard House are not for him. What would suit the sightseer—especially in the limited time left if he does the day trip involving that picturesque British Rail branch—might be a potted digest of say four of "the plays", a quarter of an hour to each. Be that as it may the new theatre itself got off to a shaky start and it was not until well after the war that it achieved its present world renown. Such world renown in fact that it made me declare, "This and no other shall be the first home of my so 'lovable' computer control."

Now just as it takes two to make a quarrel so it takes two to make a contract; the Royal Shakespeare had to want the DDM control as well! In fact as readers of David Baker's article in our last issue will know it takes more than two to develop DDM! The technical basics of this new principle of control have been fully detailed in his article, and reference should be made to it. Here we have to concern ourselves with the circumstance of the Grand Control in the Royal Shakespeare theatre. I use the term in the same way as one would refer to the Grand Organ in St. Paul's Cathedral or the Royal Festival Hall or even to Grand Opera. Chamber Opera or a Chamber Organ are in a different scale which can be equally perfect in its way. A Little theatre, a Minor theatre and a Great theatre, Bolshoi as the Russians call it, all have their place. So too I consider when it comes to a lighting installation and the instrument from which it is played; what would make them inappropriate is if they were out of scale with the rest of that particular theatrical enterprise. A large lighting installation with a masterpiece in control conception is as appropriate at Stratford as it would be inappropriate at the Young Vic.

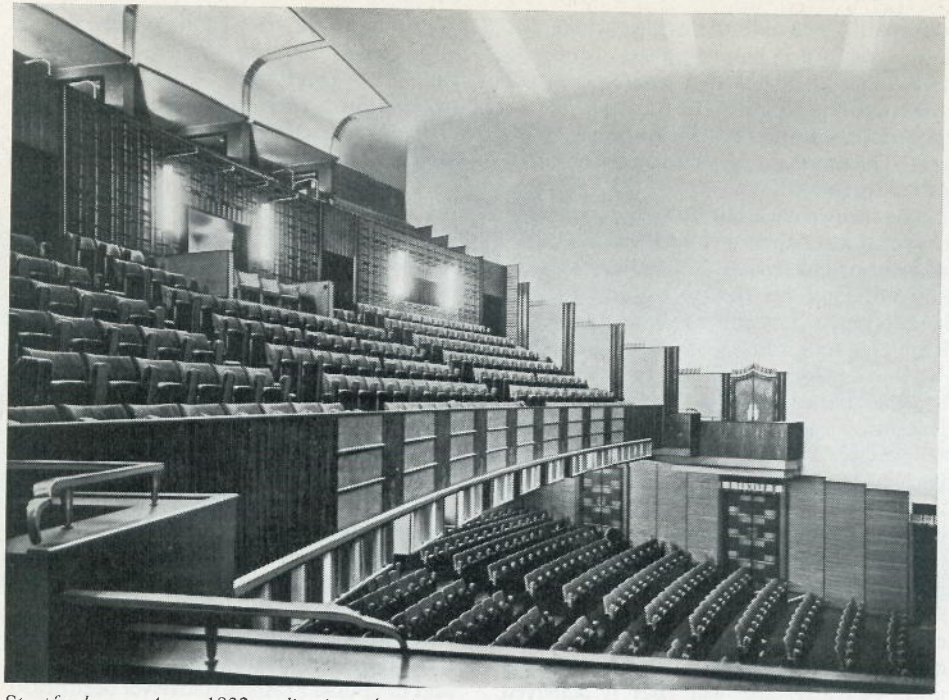
It is curious that the new Stratford-upon-Avon theatre building originally did not have an appropriate installation when it opened. It is true that in 1932 installations did use spotlights in far fewer numbers and it is our localised lighting that is the great breeder of circuits. Four-colour compartment battens and footlights were wonderful circuit economisers—the technique being to put down washes of light and use the few spots as highlights, except of course in very dramatic scenes. Even so it is amazing how telling a couple or even one spotlight then could be. Behind windows the odd flood or two did wonders, lighting up the backing and shooting the sunlight through the window all in one go when strategically placed. These were the days before Pageant lanterns (beamlights) and of course Fresnels had never been heard of in the British theatre. Spots gave very little light—a 1,000-watt class B lamp was not exactly an efficient device when used with only a 6-inch diameter plano-convex lens. The arc was the theatre's only bright source in 1930 except for the recently introduced Stelmar spot. Four of these latter were used in the Memorial Theatre ceiling. The switchboard itself had only 20 out of the 56 dimmers, dedicated to spots*.

A feature of the theatre was its forestage, so it is strange how a mere two dozen circuits could ever have looked after both this and the spotting and special requirements elsewhere. Yet this installation was designed by Harold Ridge with his partner F. S. Aldred *the* stage lighting consultants of the time, in Britain that is. All the odder when one remembers that Ridge had been associated with Terence Gray's Cambridge Festival Theatre in its prime—a theatre where spotlighting was virtually the rule.

The tale of those times appears to have an all too familiar ring. Confusion reigned

In fairness to the lovely and interesting Stratford-upon-Avon canal it must be stated that these remarks only apply to the bit in the town! Towns seldom play fair by their canal. Neither does our Government when it proposes to split the priceless network regionally among seven glorified water boards. One wishes our Prime Minister when sailing the silver sea around this sceptr'd isle would spare a thought for the happy breed of men who cruise within this other Eden.

*Twenty-four really, but that must wait for page 25.



Stratford-upon-Avon. 1932 *auditorium showing straight-fronted balcony with Royal Box in the centre and the gallery above. Note the empty side walls.*

in Arden and even the then *sine qua non* of advanced theatre—the cyclorama—was only decided on at the last moment. Norman Marshall† has said,

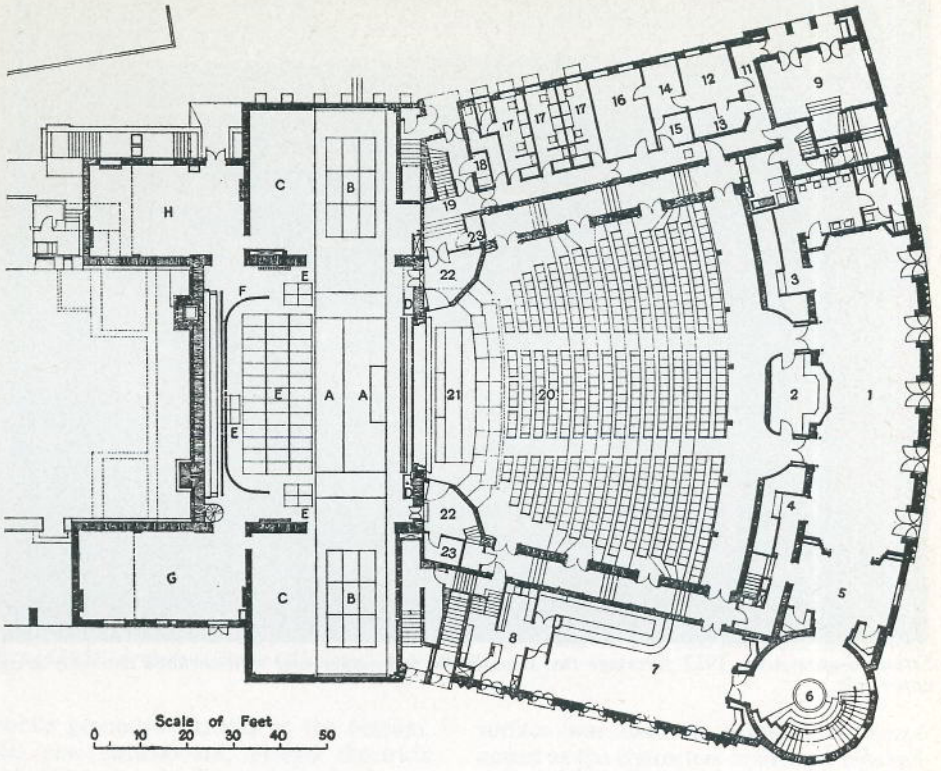
> "The committee. . . decided after careful examination of other theatres both in England and on the Continent that a cyclorama was not desirable. The stage was designed accordingly. But at the last moment, in direct contravention of this decision, a cyclorama consisting of two hundred tons of steel and plaster was added to a stage which had never been designed for it. Similarly, the lighting equipment was designed for a remote control system, but at the last moment a standard switchboard was awkwardly crammed in."

Mr. Marshall went on to say of the forestage arrangements:

> "The fundamental weakness in the design of the Memorial Theatre is the gulf between stage and auditorium. This would be a serious enough defect in any theatre, but it is doubly so in a theatre built for the plays of Shakespeare which were written for a platform stage with no proscenium arch and no barrier of any sort between actor and audience. . . .
>
> "It is true that at Stratford there is a forestage in front of the proscenium, but it is so badly related to the stage proper that it has every appearance of being an afterthought. It is impossible to combine satisfactorily a forestage and a conventional picture-frame stage. At Stratford when an actor moves forward on to the forestage he steps, quite literally, 'Out of the picture' framed in the proscenium arch. A producer attempting to use both forestage and picture-frame stage is faced with the insoluble problem of combining two totally different conventions of acting and production."

Norman Marshall continued with a masterly analysis of the theatre and brought to light its various planning faults. We have had to wait for the present decade before it became accepted practice to examine

†*The quotations attributed to Norman Marshall are all from his book* The Other Theatre, *first published in* 1947 *by John Lehmann Ltd.*



Front of House

1. Entrance Foyer
2. Box Office
3. Women's cloaks and lavatory
4. Men's cloaks and up to lavatory
5. Ante room
6. Main staircase
7. Stalls refreshments
8. Service and stairs up to kitchen
9. Gallery entrance hall
10. Gallery pay-box
11. Auditorium emergency exit
12. General manager
13. Assistant General Manager
14. Secretary
15. Waiting Room
16. Director
17. Star dressing rooms
18. Stage Door-keeper
19. Up to Dressing rooms
20. Auditorium
21. Forestage
22. Assembly Spaces
23. Quick Change Rooms

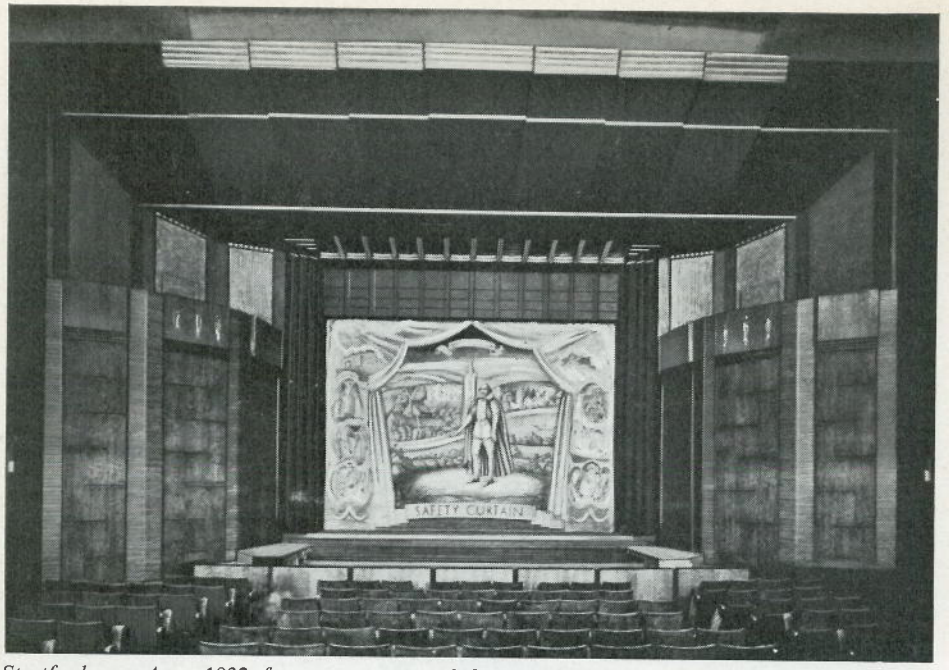
Stage

A. Bridges
B. Rolling Stages
C. Scene Docks
D. Electricians' perches & Prompt
E. Traps
F. Cyclorama
G. Properties
H. Carpenter

Shakespeare Memorial Theatre, 1932. *Architects: Scott, Chesterton & Shepherd.*

theatres in this way. Norman has since told me that this part of his book was written before the outbreak of the war and that by it he made himself unpopular in certain quarters, and it is no wonder! Incidentally, the whole book is an absolute must if the between-wars development of the kind of theatre we now have in this country is to be understood.

It is interesting to trace the changes at Stratford and learn the lessons. TABS is not concerned with the change in the productions themselves which has replaced the regular luke-warm notices by regular



Stratford-upon-Avon. 1932 *forestage two steps below main stage and with enclosed assembly areas either side.*

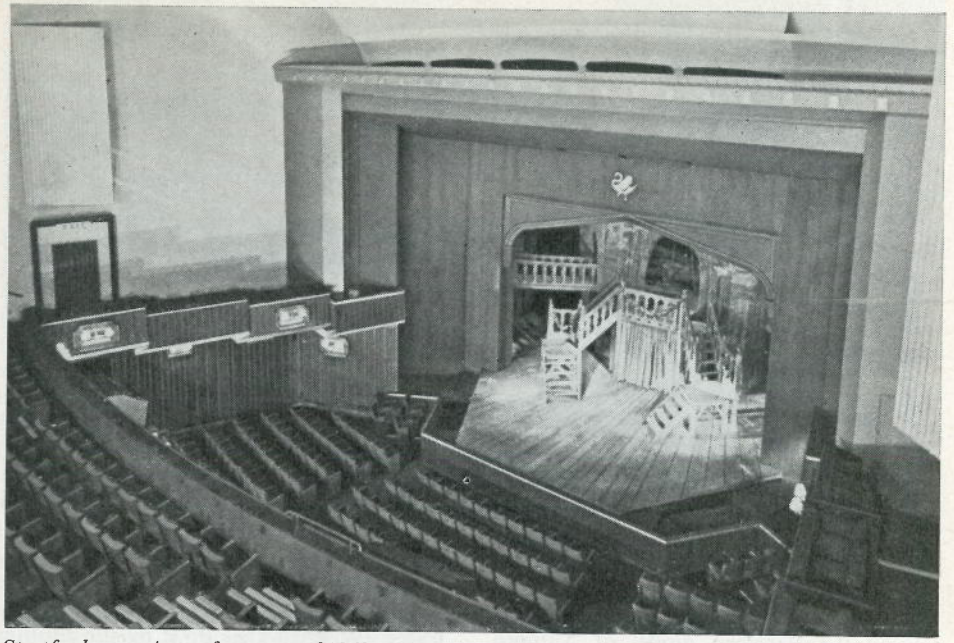
enthusiastic ones but rather with the changes to the theatre's auditorium which have assisted this achievement. For example, there was Baliol Holloway's complaint of acting difficulties in the same book.

> "The acreage of blank walls between the proscenium arch and the ends of the circles, coupled with the immense distance between the lower edge of the stage proper and the front row of the stalls (which in an ordinary theatre would about correspond to the first row of the pit*), completely destroys all contact between actors and audience. It is doubly hard on the actor that the audience does not realise this, and is aware only of the actor's comparative ineffectiveness."

This was tackled after the war in 1951 under Anthony Quayle by extending the dress circle along as small balconies (boxes†) towards the stage and a vertical lighting slot appeared in each wall over the side entrances. Six spots were carried here each side nicely masked from the audience and with access from outside the auditorium. The sides of the forestage were altered mainly by removing those architectural enclosures with their "assembly spaces" within and Juliet balconies atop. In their place walls in the form of wings were built, and often used covered with material giving the effect of giant curtain legs. The four Stelmar spots in the roof became six and with the other new or increased positions there were now at least 46 spots in front of the curtain. Exact figures are hard to come by due to the movable nature of much lighting equipment; in which connection one notes that the number of stage dip plugs' dimmers increased from four a side to sixteen.

The cyclorama was in 1950 still very much in favour and its lighting was increased both at the top and by provision of

**Pit was the term for the rear stalls in the days when they had a separate entrance and were classed with the gallery as the cheap seats.*
†"Boxes" known to some others as "loges".



Stratford-upon-Avon: forestage of 1962 *with "thrust" effect and the side wall balconies and lighting slots of* 1951. *Architect: Brian O'Rorke, ARA FRIBA.*

mobile groundrow trucks at the bottom. The new switchboard, Strand Electric's latest (see page 26), had 133 dimmers and provision for an ultimate total of 144.

In 1960 Peter Hall and John Bury made further alterations in the forestage area culminating in that extraordinary achievement for a theatre of this shape, namely a feeling of thrust stage as shown above. This result was obtained largely by concentrating on the floor itself. Indeed, one could say that it led to a positive mania in respect of the actual floor surface. A strong rake was put on the stage which then thrust out over the forestage area. It was not so much a thrust among the audience but from out of the proscenium. This abolished the problem at Stratford which Norman Marshall had referred to. Scenically this floor with the actors upon it was the most important element; the very surface was changed by using bits of plastic such as Formica to suggest marble and so on, and of course the ultimate in floors was the one employed for the Peter Hall sequence *The Wars of the Roses* when an expanded metal surface was used to ensure the correct noises as the characters in armour clanked and dragged their swords across it. The 30 ft. opening had to remain, but one was no longer so conscious of the proscenium frame, the action really could move back and forward without the effect previously complained of. Yet on close examination this thrust with only a token row of side seats, is quite literally more apparent than real. This form of stage was subsequently repeated when the Royal Shakespeare Company set up their London branch at the Aldwych Theatre*.

Now, in 1972, Trevor Nunn has made a further attempt to minimise the proscenium effect by opening right up the assembly areas either side of the forestage. The thrust idea has now gone into reverse so to speak. The stage tends to encompass the audience —though not by very much; it is also largely a token. What is at Stratford for the new season is Christopher Morley's version of the Peter Hall/John Bury stage that we first

*TABS, *Volume 19, No. 1.*

View from new control room before completion of 1972 *alterations; system DDM control desk in foreground.*

saw in the Barbican model of Autumn 1966*.

Instead of waiting five years (for the completion of their new London home) before they can have the pleasure of trying out that stage, they are doing it now—in so far as the existing building at Stratford permits. The new arrangement shows well in the photograph of the model. The various surfaces may not be faced as shown. The photograph suggests to me the ruthless imposition of fair-faced . . . but it is just possible that I have a thing about that. In any case, as we have seen, it has become a Stratford tradition to make changes to the facing material and the like in the forestage area each season. It is probably intended to suggest marble on this occasion since the new Shakespeare season is to consist of all the Roman plays and I have a private hope that all those Romans will wear togas!

We need only concern ourselves with the permanent changes. The theatre's own 30 ft. proscenium of 1932 is still there. It cannot be removed since it holds up the grid—and much of the rest—but the two new great wing walls, with the suggestion that they are free standing, disguise that particular frame. Whether they do it by substituting another one—a giant triumphal arch to dwarf everyone—remains to be proved.

The stage floor now runs right across the width of the auditorium from wall to wall and entrances can be made from around both the on-stage and off-stage edges of the wing walls. The most obvious changes are to the balconies on the side walls. There is a completely new balcony to be known as the Gallery boxes. This suggests extensions of the gallery itself but in fact they are not and have their own separate access. Below this the extension of the existing balcony slip boxes of 1951 right over to the forestage is only semi-permanent; it is a scenic feature to be used as the play demands. The Peter Hall "papering of the walls with faces" adds about seventy-six seats but his plan of the cheapest seats being in the front rows has not been possible at Stratford—presumably the groundlings are up in the gallery slips. The fan shape of the Barbican auditorium is of necessity absent.

The gradual if shallow occupation of the side walls by audience is significant indeed. A new stage floor runs downstage of the existing lifts right out into the auditorium and is fitted with hydraulic tilting mechanisms so that a range of rake can be applied and changed—if necessary actually during the performance. The little-used stage lifts of 1932 come into their own and tilting top surfaces are also being fitted to them. The rolling stages remain, as they have for so much of their life, unmoved. Giant structures—the "gridded screens" we heard about during the launch of the Barbican project—make an appearance as periaktoi on the main stage and are shown in the model—though in the aspect they present in the photograph they look like more ordinary, if large, wing units. When set like this there is a suggestion of great stage depth with a vista all the way up to the parking position of the old cyclorama (removed in 1964).

It is a solemn thought that exactly 40 years after this theatre opened the auditorium/stage relationship still needs attention. Of course it might be thought that the notions of close actor/audience relationship and of the running production of Shakespeare's scenes without breaks were not around in 1932, but they were! The theatre as designed was supposed to provide for these, but they got it wrong; what should have joined together, in fact had put asunder.

Meanwhile in another part of the wood other forces were at work:

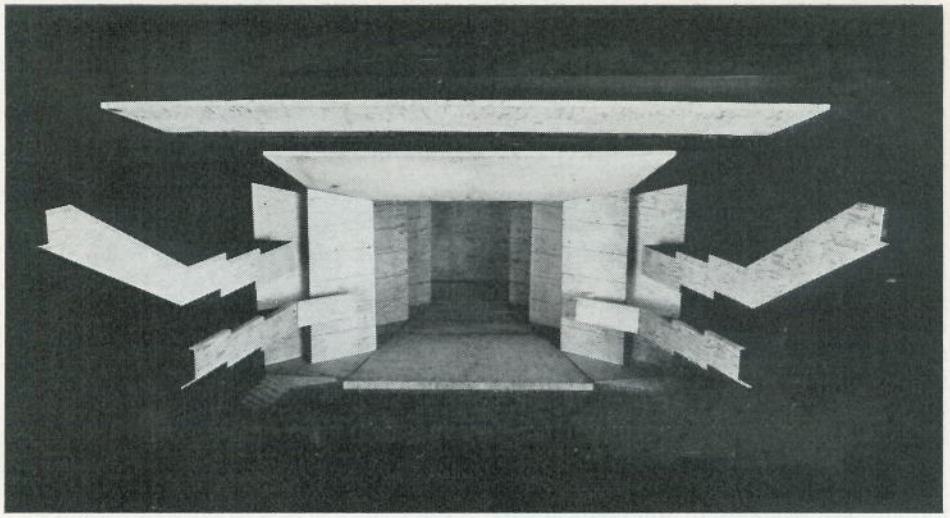
> "It was obvious, however, that the style of lighting had changed so much since the installation was put in, in 1951, that the existing equipment could no longer adequately meet the demands of present-day producers. . . .The large number of spotlights in use may seem extravagant, but in order to get 'pace' into Shakespearean productions is often necessary. . . ."

The date above has in fact been changed by me. It should have been 1932 as the quotation comes from TABS in 1951*. David Brierley, the RSC General Manager today, could use much the same words. The development of the "multi-lantern complexity" and the increase of light intensities elsewhere has tended to make the lighting somewhat lack-lustre whatever was done

*TABS, *Vol. 9 No. 3. Peter Paget-Smith the then Chief Electrician on the new 1951 installation.*

System DDM. Rehearsal Control in the stalls. Sir Marmaduke's D'oly Carte mansion on the stage.

*Tabs, Vol. 24, No. 4.



Stratford-upon-Avon: Model of 1972 *arrangements showing auditorium with added balconies.*

with it. And so it comes about that the third stage-lighting installation of the present theatre is being completed as I write.

The auditorium architecture now provides two lighting bridges (Nos. 1 and 2) in a new ceiling over the forestage. In the main ceiling there is a lighting bridge (No. 3) right across and a smaller one (No. 4) farther back which houses follow spots. There are now vertical side-lighting positions to correspond with the No. 1, 2 and 3 overhead bridges.

The installation requires 240 dimmers, and Strand Electric as Rank Strand, come for the third time with their latest in control. The theatre also has changed its name over the years, the *Memorial* having vanished in favour of *Royal*.

It is a feature of travel along a canal that one seldom has any doubt where one is going. The crossways and by-ways to get lost in are few indeed. It is quite otherwise with theatre design. The target of theatre design is audience involvement but what on earth does that mean? What will involve some will alienate others while a drop of deliberate alienation can sometimes produce even greater involvement. Then again the passage of time can make great changes in what is expected in our staging of what, in the case of Shakespeare at any rate, are the same plays. We do not use less scenery than was the case with, for example Beerbohm Tree's productions at Her Majesty's; it is a different sort of scenery. Some would say we use more scenery. Certainly at Stratford before the war all scenery remained behind the proscenium and in consequence, however large, was small. Since 1951 the forestage and the proscenium itself have changed their scenic character for each season.

One might assume this was an attempt to bridge the gap between the enclosed stage and the audience, were it not for the fact that where "one room" theatres have been built, designed as really open stages from the first, scenery nevertheless proliferates—and of necessity it is large in scale.

In tracing the history of this particular theatre it is necessary to try to disentangle genuine attempts to overcome the defective actor/audience relationship of the 1932 building from those changes brought about by fashion and sheer love of change.

After all Peter Brook in the Stratford context writes* "About five years, we agree, is the most a particular staging can live."

*"*The Empty Space*". Peter Brook. MacGibbon & Kee, London. 1968.*

A Tale of Three Switchboards

Frederick Bentham

Originally, when I wrote the article on "Stratford Revisited" I did not intend to separate the development of the lighting control systems from the architecture and the rest, but as I delved among the archives the great contrast between the original system of but 56 dimmers and that of today with 240 was not the only thing that surfaced. The sheer inconvenience of the 1932 arrangement when examined in detail was what surprised me. It should not have done. After all I knew and worked among such things in those days. The Stratford-upon-Avon switchboard had many descendants and there are still lots of them around. They are indestructible and in any case direct-operated dimmer boards have continued to be made and installed by Strand Electric and others until quite recent times.

In a sense all that was made and installed before 1964 belongs to history. It was in that year that the first two great thyristor-dimmer installations went into service in Europe. They were the 120-channel for the Glyndebourne Opera and the 240-channel for the Royal Opera Covent Garden. Only such theatres could afford them then. In but a couple of years later the price came right down and now the remote control and presetting they made so easy are commonplace.

In the de-luxe market, presetting and remote control had been common long before 1964, but the means were electrically and mechanically difficult. Nevertheless, as TABS readers will know, we in Strand Electric were able to exploit those means to the full. What we had to do was to move the dimmers by electro-mechanical servos—that is connect the dimmers by electro-magnetic reversing clutches to a motor-driven shaft. By means of a feedback circuit remote positioning became possible. The addition of this polarised-relay servo to the type of dimmer bank used by my Light Console received a fillip in 1955 when another promising method of presetting which used thyratron valves was found wanting. This, "the Wood Electronic", as we in Strand knew it, went into a number of theatres round about 1950. That put into Stratford-upon-Avon for the 1951 season was the most notable and has only just been replaced this winter. Here in this part of my article we can compare a 56-way Grand Master board (1932), a 144-way Preset Electronic (1951) and a 240-way System DDM (1972). Each of these was and is "the last word" for this famous theatre. In fact, in 1932 at the age of 21 and about to join Strand Electric, I thought *that* new switchboard out of date and obsolete, and said so. And so it was! The Germans could have put in a splendid control albeit for much more money, and of course it was that kind of thing that John Christie was to import for his new Glyndebourne Opera house when it opened two years later. Indeed, in the same year Strand had perforce to resort to remote control for the 108 dimmers in the Covent Garden Opera House, but they lapsed from grace (my grace!) thereafter. The truth is that L. G. Applebee, who was in charge of Strand's Theatre Lighting Department, did not understand remote control. One would have thought that the Shakespeare Memorial Theatre's consultants, Ridge and Aldred, would have known better.

Anyway, in 1932 Strand were able to claim in a special six-page pamphlet

> "The apparatus is entirely BRITISH throughout, and has been designed and manufactured by British craftsmen, who have for many years been associated with the English stage."

That was true enough but what followed

was not! Of the switchboard the pamphlet says:

> "Built to special designs, it has been arranged that however complicated the scheme of lighting called for by the play producer, the manipulation of this, the brain of the equipment, can be operated with a minimum effort by means of its interconnections and cross controls. In all, 120 switches are provided, whilst in all cases the protective fuses are carried on the board, there being no fuses in any other part of the stage, all circuits having been individually brought back to the main control board. Each dimmer is provided with individual control and a graduated scale so that the intensity may be recorded. It can be locked to its particular shaft, and the handles are so arranged that at the "Raise" and "Lower" end of their travel they automatically release themselves. Each shaft can be operated as a whole by means of its master wheel, and can be, if desired, connected to the centre grand master cross control by means of the master worm drive, irrespective of the direction that any shaft is revolving. Pilot lighting is provided behind each dimmer handle, so that the operator, without seeing his actual lighting, may follow his dimming."

The switchboard schedule is printed opposite and has been arranged to show the actual order of the controls. One is very apt to forget that the inconveniences of a Grand Master board went beyond just the great size of thing and the primitive mechanical mastering. Because the handles had their dimmers mounted immediately behind the panel, the order of circuits was often dictated by physical and electrical factors rather than by operator need. Even allowing that, the order of dimmer levers is more than a bit odd!

Of course the three rows of shafting—with the Grand Master cross control in the centre—gives you the worst of possible worlds, if the scheme also requires, as this one did, four colour shafts. Inevitably the arrangement adopted was to put all the spot circuits on the top tier right across and separate the colours as pairs to the left and right of the master wheel. It is surprising how many stages had this inconvenient centre-split three-tier arrangement. In this particular theatre height would not have allowed four tiers. Later, when four tiers became more the rule, the dimmer regulator was separated from the switch panels if there was insufficient height—as at the London Palladium for example.

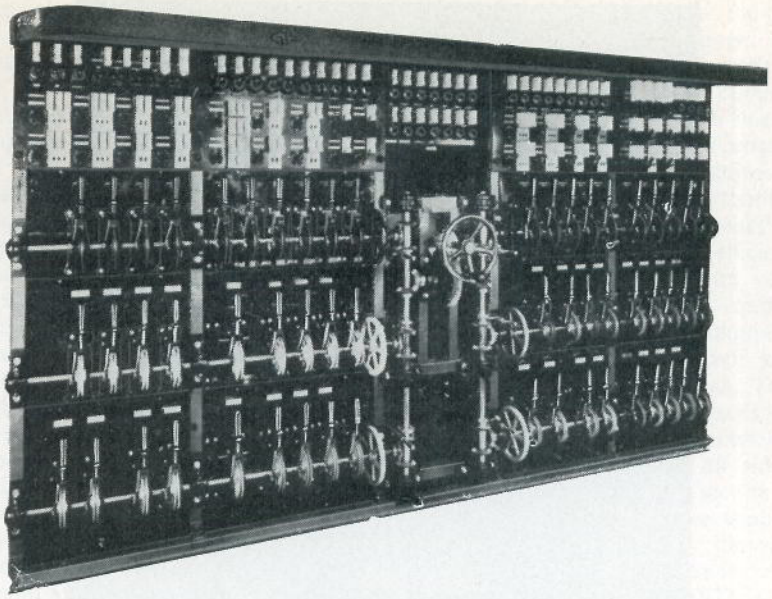
Connoisseurs will be interested to note that the supply was 230/460 3-wire DC*, and that the dimmers for the stage dips were liquid pots! The rest were wire-wound resistances and the batten and footlight dimmers were in pairs ganged to a single handle and taking up a lot of space. I had been wondering, off and on, while writing this article, "Why?" when suddenly the truth dawned. It was not the wattage of the load that made these paired dimmers necessary but the circuit switches for the centre and the ends! By feeding these off separate dimmers it was possible to cut these circuits in and out without making the rest of the batten in that colour "jump". But what a fuss and why not have separate handles to make the lot all available as real dimmers. A further curiosity was the placing of the four Stelmar spots one to each of the colour shafts. One can only suppose that these were the only spaces physically available.

In fact, the house-lighting dimmer, made for Strand by Mansel & Ogan (then an independent firm), was way ahead of the stage lighting control. This was a motor-driven dimmer with three magnetic-clutch-operated sets of dimmers which fed the decorative lighting. To quote that pamphlet again—

> "The lights are dimmed in three stages starting at the back of the auditorium, each stage taking three seconds, with a total of ten seconds for the whole operation.
>
> "The effect of the lights 'dying away' towards the stage is extremely effective, and unconsciously focuses the attention of the audience towards the proscenium opening."

We lower the curtain to denote the passage of time and it rises on the same scene, but it is nineteen years and a World War later. We are witness to a premature entry

*This theatre did not go over to AC until 1951.



1932 Installation Order of channels as at switchboard

Red Shaft (*LH Bottom*)
Cove (Forestage)
FOH Spot (Stelmar)
Footlight
No. 2 Batten
No. 4 ,,
No. 1 ,,
No. 3 ,,
Dips OP
Dips P

Amber Shaft (*LH Middle*)
Cove (Forestage)
FOH Spot (Stelmar)
Footlight
No. 2 Batten
No. 4 ,,
No. 1 ,,
No. 3 ,,
Dips OP
Dips P

Black Shaft (*LH Top*)
Cloud lantern
Circle Spot R2
,, ,, R1
Circle Spot L2
,, ,, L1
Batt. 1 Spot 5
,, ,, 4
,, ,, 3
,, ,, 2
,, ,, 1

White Shaft (*RH Bottom*)
Cove (Forestage)
FOH Spot (Stelmar)
Footlight
No. 2 Batten
No. 4 ,,
No. 1 ,,
No. 3 ,,
Dips OP
Dips P

Blue Shaft (*RH Middle*)
Cove (Forestage)
FOH Spot (Stelmar)
Footlight
No. 2 Batten
No. 4 ,,
No. 1 ,,
No. 3 ,,
Dips OP
Dips P

Black Shaft (*RH Top*)
Perch Spot OP 3
,, ,, OP 2
,, ,, OP 1
Perch Spot P 3
,, ,, P 2
,, ,, P 1
Circle Spot C4
,, ,, C3
,, ,, C2
,, ,, C1

Switching (from the board)
The 4-colour battens and footlight separately switched as Centre and Ends.
Each Dip switched as three circuits Down, Mid and Upstage.

Only the dimmers on the top shafts (i.e. for the Spot shafts) had 2-way and off switches to render them independent of master blackouts.

"Stars" one circuit of thirty lamps with "twinkle" flashers on the cyclorama.

Master blackouts by remote contactor from 2-way and off switches give independence of DBO.

In addition to the four colour masters there were separate master switches for "Circle Spots Centre", "Circle Spots L & R", "Batten Spots", "Perch Spots", "Special Effects", "Arcs" and "Chamber Plugs". There were only two circuits of these last, one P and one OP, without dimmers. There were six Arc circuits, two at stage level, two on the perches and two on the flys. Two circuits of batten pilots and one to light up the dip traps completed the board.

1951 Installation

Schedule of channels controlled from Electronic Preset

Location	*Dimmers*	*Location*	*Dimmers*
First circle ends P. & O.P.	4		b/f 76
Circle Spots	12	Assembly Dips O.P.	1
Ceiling Spots, P. 1 & 2,		Cyc. Dips P.	3
Centre 3 & 4, O.P. 5 & 6	3	Cyc. Dips O.P.	3
F.O.H. Side Spots O.P.	6	Batten 1 (4 colour)	4
F.O.H. Side Spots P	6	Spot Batten	12
Float Plugs (4 colour)	4	Batten 2 Acting Areas	8
Forestage Plugs	4	Batten 3 (4 colour)	4
Forestage Acting Areas	2	Flood Batten	3
Assembly P.	6	Fly Plugs P.	6
Assembly O.P.	6	Fly Plugs O.P.	6
Perch P.	4	Cyc. Batten (New 3 colour)	3
Perch O.P.	4	Cyc. top (3 colour)	3
Dips P.	7	Stars	1
Dips O.P.	7	Spares	11
Assembly Dips P.	1		
c/f	76		144

There were two wings at an angle of 45° each containing six rows of 24 dimmer levers. To each set of twelve there was a Group master and the individual dimmers could be connected to this or independent of it by 2-way and off tablet switches over each. The Group masters could be connected in the same way to either of two Preset masters. The wings representing the Preset I and Preset II respectively were joined by a centre section containing plot desk, auxiliary switches, the Preset Masters and the Crossfader. This last substituted one preset for another, they could not be piled together. The substitution by presets was complete (i.e. Dimmers which were not to change had to be set to the same level on both). However, mounted on the centre panel were 12 transfer switches which could hold any group masters and their dimmers independent of the crossfader.

to modern times, as has been said earlier, with the electronic control, but it is something that this theatre had cause to be thankful for. This was a really modern installation with variable-load dimmers, presetting and a 144-channel control desk compact enough to take over the Royal Box position "centre out front". Think of it, no more skulking round the corner backstage, but a room with a view—a view fit for the King!

The schedule of dimmer circuits as taken from L. G. Applebee's estimate, and specification for the job appears opposite. There were 133 dimmers and space for a further 11 which were later fitted. There were other small revisions, and of course the removal of the cyclorama in 1964 freed further dimmers. The electronic reconciled Applebee—and indeed the rest of the theatre world—to remote control. Unlike my own outlandish organ consoles it looked like a Grand Master control. It was smaller, of course, with levers at one inch instead of 4½-inch centres and completely twinned as a left-hand preset and a right-hand preset with the crossfader between.

The Grand Master simile went further because the rows were broken up into groups of 12 each with its own group master. Dimmer levers could have circuits allocated to them in an order which suited operation, but the 12-way permanent groups formed too rigid a framework. A 12-way spot bar soon became a thing of the past, along with most of the three or four colour circuits, so these groups of 12 were not perpetuated in later Strand systems. Indeed, the organ console and the two-preset desk were to interbreed, and system CD—as at the Aldwych Theatre—and the like were born. Instant memory selection was adopted for the groups which could then be of any number and composition according to the demands of that particular moment. However, at Stratford, the Royal Shakespeare staff got very attached to their Wood's dozens and the genuine authentic Electronic desk went on to survive until December of last year.

From the lighting and control point of view the Electronic was a great success, but electrically we had to wait for the thyristor dimmer for a real breakthrough. The two forms of dimmer are in principle very similar since both operate by chopping the AC cycle. At full light the full sine wave is passed. To dim conduction is progressively delayed until in the off position nothing flows. So it is that the dimmer that turns up beside the Avon twenty-one years on contains no surprises. It is more efficient since that bugbear of the thyratron valve the filament heater has vanished—and with it some 10kW of heat in the dimmer room that was doing nothing except keep the valves at the ready to conduct. The Electronic employed 36-way racks—double sided and with three short rows of three dimmers (nine valves) on all sides of a centre power distribution section. Three valves, one per phase, were supposed to balance out each 2 kW dimmer—but didn't. There were four racks for 1951 and there are 12 20-way for 1972. On these there are 40 5kW and 200 2kW dimmers, yet the dimmer room will be cool.

All this is by the way, for it is the control that we should examine. Another first for this particular theatre, System DDM is the first completely computer based lighting control in any theatre in Europe. In fact, as far as I know, in the world.

The diagram of the 240 dimmers as at the switchboard appears on page 29. The new stage lighting installation has been devised by John Bradley the "Stage Lighting Engineer" to give him his official RSC title. He joined this theatre in 1949 and therefore just remembers the old Grand Master. By then it had gone through some minor changes and had moreover been supplemented by the addition of a 12-way and a 6-way portable board.

John Bradley has been able to take advantage of the fact that the dimmer channels can be arranged in any order at the controls and that there are eight rows of 30 for the purpose. Actual grouping is no problem; that can all be left to the computer and the instant memory system. Of presets he has 250 so to speak, and within three minutes by tape cassette Dump store the unlimited credit of a Monte Cristo.

1972 Installation

System DDM Principal control facilities

Channel Control

(*a*) Rocker with top, bottom and centre contacts in association with speed and level control levers for setting channel levels.
(*b*) Meter indication of channel level whenever top, bottom or centre push of rocker is touched.
(*c*) Momentary flash to full or flash to zero of channel output by touching rocker top or bottom respectively in conjunction with master flash push.
(*d*) Green and Red mimic lamps in each rocker show which channels on Green and Red playbacks are in use on stage. Switches enable this display to show preview of next cue and content of a CUT cue.
(*e*) Amber centre push mimics show modified channels and AUTO MOD channels.
(*f*) Rocker control normally affects the active playback but the operation can be limited to a specific playback.

Record and Cue Select

(*a*) Cue selection is by push-button switches. Zeros are automatically inserted if only a unit, or ten and unit, is selected.
Cue numbers above the maximum capacity of the equipment will not select.
(*b*) Record function subject to keyswitch.
(*c*) Record is interlocked to prevent recording on a used cue number. An audible warning is provided to indicate when this occurs and a second attempt over-rides the interlock.
(*d*) Individual record pushes are provided for each playback as well as an overall record control.
(*e*) The cue number is shown on a numerical display together with an indication when a recording has been made.

Playbacks

(*a*) Two similar but independent playbacks Green and Red are provided, the outputs of which pile together on a "highest takes precedence" basis.
(*b*) Separate control of raise and dim speeds is possible for cues on each playback. Normal speed ranges are 1 second to 60 seconds and 10 seconds to 10 minutes.
(*c*) Normal cue functions available are:
(i) CROSSFADE: substitute all memory levels.
(ii) MOVE to new levels except to zero.
(iii) DIM: subtract from existing state and fade to zero.
(iv) ALL DIM.
(v) REVERSE last cue action.
(vi) INSTANTANEOUS.
When pressed in conjunction with (i) to (v) above completes the action instantaneously; i.e. cuts to new cue state.
(*d*) Any change can be interrupted, stopped or started at will and the cue function changed during a cue.
(*e*) The progress of cues on each playback is shown by "travel" meters.
(*f*) A CANCEL push clears the playback.
(*g*) A new cue number may be selected either in or out of sequence by a NEXT push and this cue may be previewed and if necessary modified prior to being used.
(*h*) Cues may be added together before starting, or during the progress of a cue.
(*i*) In addition to fade cues, CUT IN and CUT OUT cues can be carried out on Green playback without affecting any fade in progress. Common channels retain their independent levels and add together on a highest takes precedence basis.
(*j*) TRANSFER and copy facilities are provided to enable cues to be combined or split at any time—including during a fade.
(*k*) Playback cue numbers are shown on a numerical display for each playback together with an indication if the cue has been used and in what manner.

Blind Setting and Record

Either playback may be used for setting, modifying and recording cues without bringing up lights on stage. The other playback may be used quite normally while this is occurring.

Modification

A channel can be modified at any time by means of the appropriate channel rocker.

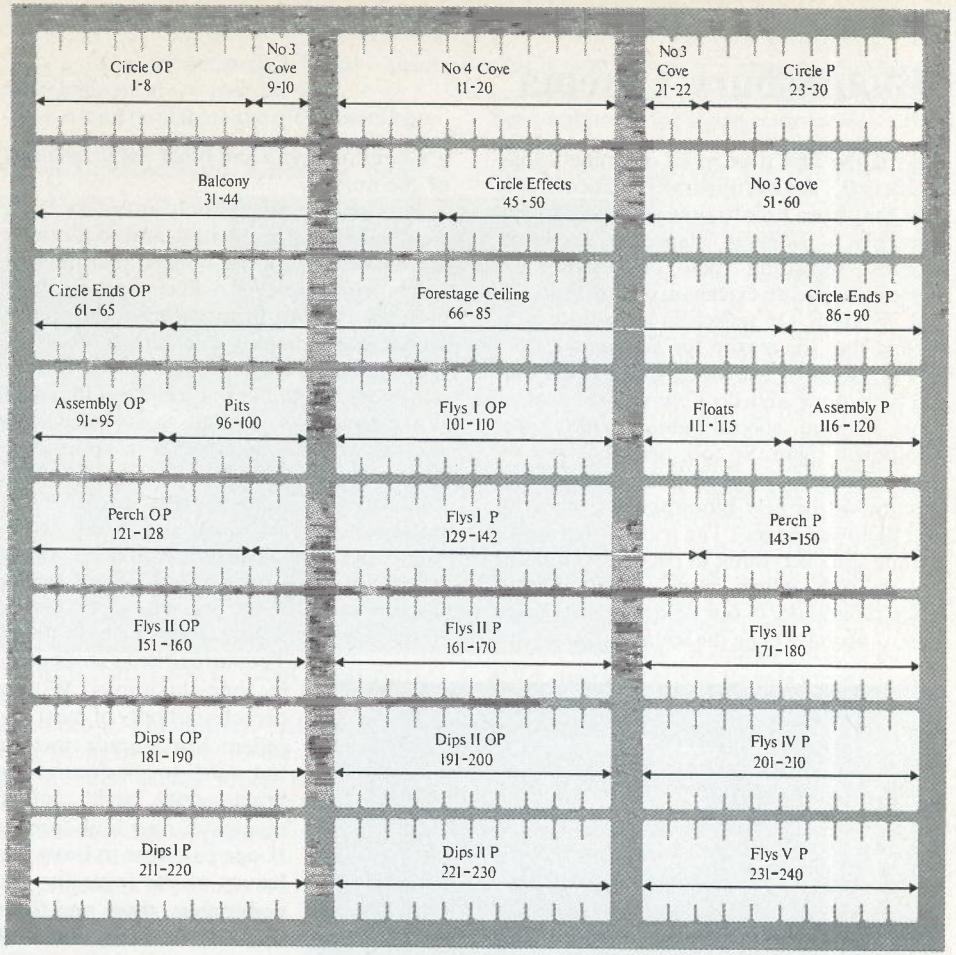
A modified channel is indicated by the amber rocker mimic. Each channel can be returned automatically to the original level at any time without recalling the original cue.

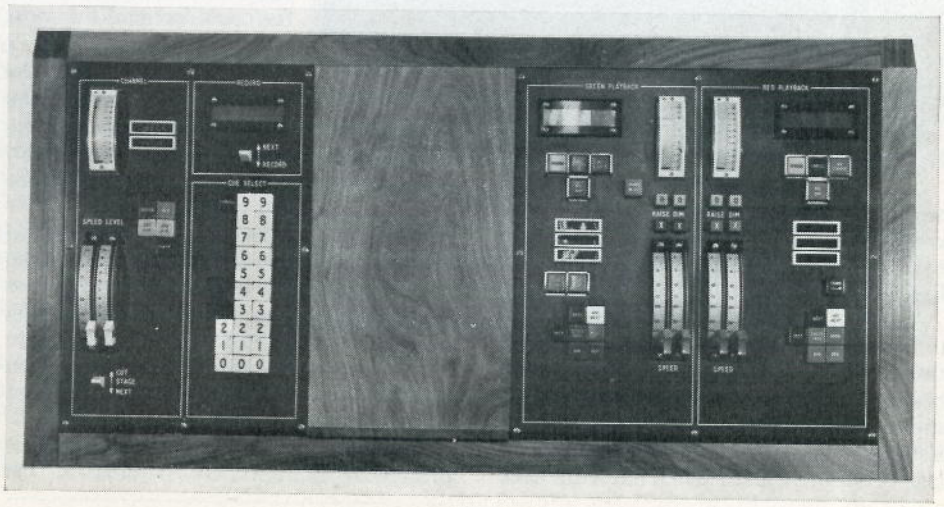
AUTO MOD facility enables a channel level to be modified temporarily whenever that channel appears in a playback cue.

Stalls Control

The complete green playback and numerical selector is repeated as a portable desk. A single row of thirty rockers used in conjunction with eight Shift pushes allows all channels to be monitored or modified from there. A keyswitch on the Main control delegates complete (in parallel) or partial control. In the latter case the stalls position is restricted to channel modification and recording thereof—only cue numbers above 200 then being available.

Stratford-upon-Avon: Top right: diagram showing layout of lighting channels as arranged on the 240 rockers of the DDM wing.
Bottom right: Photograph of master control desk. Dimmer memory controls and numerical selector to break sequence is on the left of the desk and the playback controls on the right.

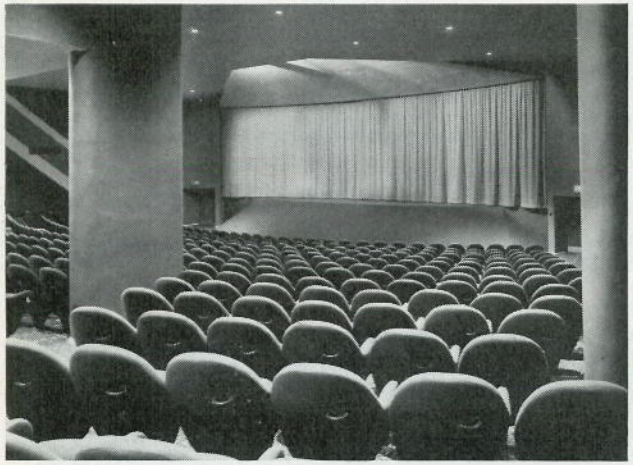




Bloomsbury Cinema

The Editor

This is the first time in all our ninety-four issues that TABS has illustrated a cinema. It is true that from time to time we have allowed ourselves a sidelong glance at television studios—regarding these presumably for some reason as an extension of live theatre—our vocation. On reflection we cannot help feeling that the reason for occasional visits in our pages to television studios was that we have done and do a very great deal of work with our special lighting and control equipment there. So too, just that trace of commercialism may be behind the introduction of the new Bloomsbury Cinema to our hallowed pages? The truth is that Rank Strand did everything in particular and did it very well, which gives us a chance to insert a reminder of our ubiquitous package. Also—proudly bang the sounding gong—to announce that the package has been enlarged recently and among the enlargements are film projectors and studio lighting equipment.



Some will remember that once upon a time there was a Bloomsbury Cinema at the corner of Theobald's Road where nearby trams used to emerge grinding and snorting from the steep slope of the Kingsway Tunnel. It was not a particularly glamorous or de luxe cinema but it did have a Compton organ and other appurtenances of the time.

This cinema prematurely ended its days, we think during an air raid, and so it is with some pleasure that we noticed that the title was being revived—albeit some four minutes away in Brunswick Square. There among the draughty concrete foothills of one of those giant architectural complexes, which one either likes or dislikes with equal vehemence, is a small glass enclosure through which it is possible to descend to the treasure-house below.

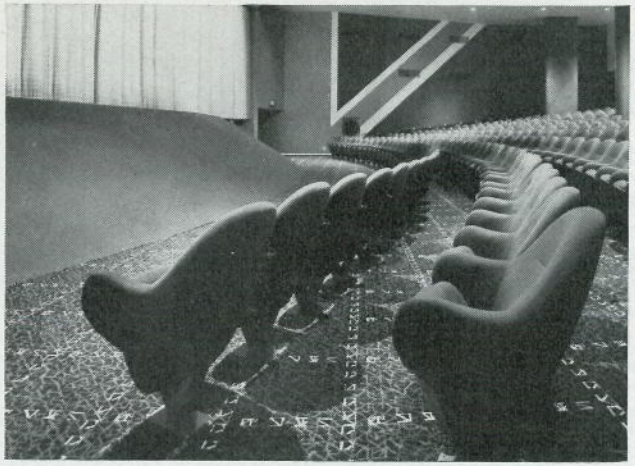
From the moment one enters it is impossible not to use part of the Rank Strand package. With the possible exception of certain small back rooms where sexual discrimination is rife, everything else that is important to life there owes its origin to us. The patron* sinks ankle deep in our luxurious Wilton carpet—not only of most excellent heavy-grade texture but laid to perfection to bring out each subtle nuance of riser and corner. If one can bear to leave the luxury of the foyer for the auditorium, there one finds the self-same carpet (1,000 square yards of the stuff!) for one's feet and the most splendid seating for one's backside. These are the new super figure-forming single pedestal polyurethane Pelican chairs with stretch nylon covers designed especially for luxury cinemas.

Models in comfort, construction and, so it is said, appearance—one reclines at ease with plenty of leg room and gazes expectantly at the Rank Strand lighting upon the Rank Strand house tabs. Before long our thyristor dimmer goes into action as the tabs part to reveal the true purpose of the place—the silver screen.

Upon this Rank Harkness screen is projected—appropriately masked in the various formats demanded today—dead entertainment in the liveliest way.

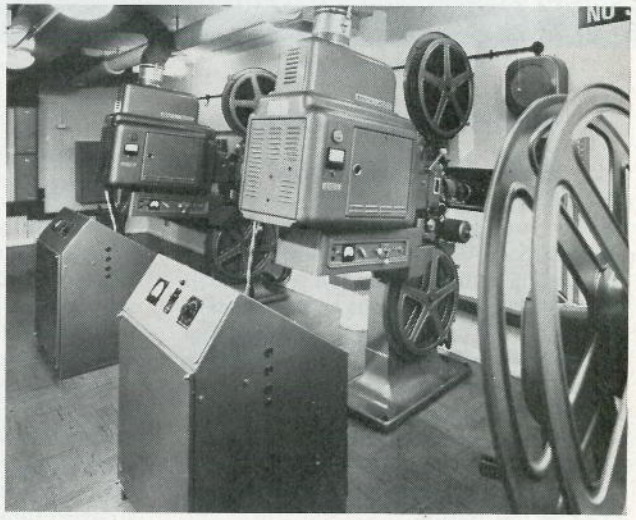
*Trade trad for a member of the audience.

It is a long haul from the old Bloomsbury Cinema's carbon arcs to these 2½ kW Xenon Cinemeccanica Victoria 8 projectors with their 1,800 ft. spool boxes carrying just 60 minutes of show before push-button changeover. Also, just as remarkable in its way, is the development of projection lenses which allow such a wide screen to be covered with a clearly defined picture at such short range. If optical projection of pictures is good, one thing is certain, optical production of sound on film is not. Now at last the hiss and plops can be removed and the top end put back to make Hi Fi possible inside the cinema as well as in the home. Rank Strand have world rights outside U.S.A. for the Dolby Cinema system to make quiet passages quiet and silent ones silent whatever the vintage of the film.



Live theatres themselves are no strangers to film projection; many of the latest make provision for British Film Institute and other cinema activities as part of the benefits they confer on their neighbourhood. Just occasionally film is used as part of a stage production—not always very happily, and it has not been unknown for a projector to arrive for such a purpose only to be slung out when the Director realised for the first time how big a full-sized professional projector is. In at least one instance a part of the film projector (in the shape of a 4 kW Xenon lamphouse and optical system) has actually been joined to scene projection optics as for the production of *The Knot Garden* and of *Tristan* at Covent Garden.

A better way of handling cinema projection as part of the on-stage lighting effects may be to use 16 mm projectors as has been done for example, using two of them, in Kenneth MacMillan's ballet *Anastasia* at The Royal Opera House. However *Jumpers* which opened at the National last month uses 35 mm film to allow the audience to share with its heroine the day's T.V. Newsletter. All these projectors were of course supplied by the same firm that we have been talking about throughout this article, and if you don't know who this is by now our *love's labour* is indeed *lost*.



Meanwhile, over at Liverpool . . .

Geoffrey Haley

The last issue of TABS, described—amongst others—the new theatre at Birmingham and all very splendid it looked too. However, I thought that readers might be interested in what can be done with a conventional theatre built in 1866. The theatre in question is the Liverpool Playhouse which has just celebrated its Diamond Jubilee, thus making it the oldest repertory theatre in this country, beating Birmingham by a slim two years.

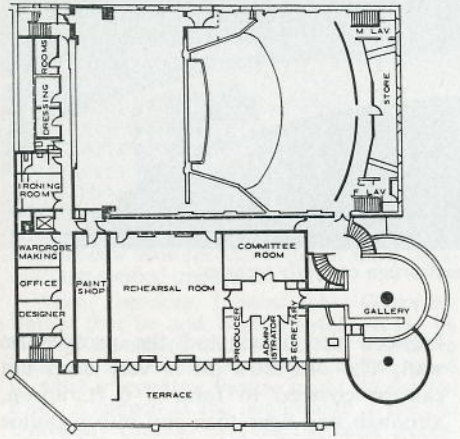
A long list of famous names made their debut at this theatre.

So much for the potted history! We jump now to the years 1966–68, when the sum of £275,000 was spent on structural improvements both front-of-house and back stage. The front-of-house improvements mainly consisted of the construction of an entire new foyer. Above this, and at circle-entrance level, there is a restaurant serving a full dinner, and on the half landing for those who are not quite so hungry, an extra coffee lounge, the one in the basement being retained. At the top is the entrance to the upper circle and, for those members of the public who are neither hungry nor wanting coffee, there is a bar! Also accommodated at this level is a suite of administrative offices.

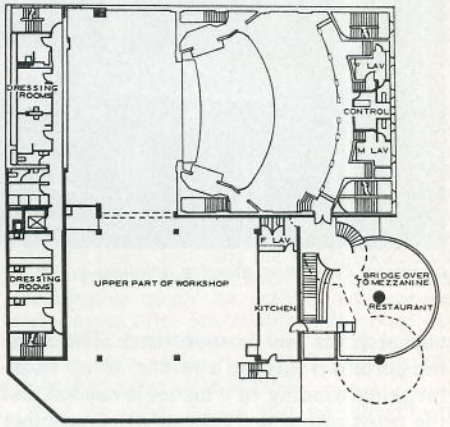
Backstage the improvements include, adequate showers, a Green Room, where light meals are available and a very handy lift. The stage area is quite generous when one considers that the theatre was built as a music hall. The proscenium opening is 30 ft and there is a depth of 33 ft. In keeping with tradition the wing space is rather cramped—being only 12 ft per side. The grid at 42 ft. is by today's standards very low—not for us the Everest-type heights of Birmingham—and there are times when another 10 ft. would be a godsend. Thirty sets of single-purchase counterweights are installed, plus two sets of double-purchase counterweights. In 1964, a new hardwood stage floor was laid, but for some reason the old rake was kept.

One of the real aids to production has been the construction of a large new workshop and scene dock, built directly onto the off-stage-right area. Immediately above this is a motorised paint frame. Thus one can drop painted cloths straight down to stage level and truck them on from the side.

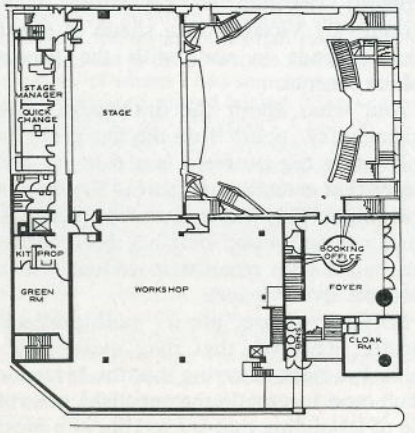
One of the real advantages of the size of the place lies in the fact that every other set can be built on a full-sized truck, measuring 30 ft. by 20 ft.; the set can be dressed and wired up for practical light fittings and the whole truck is then simply winched on stage in a matter of minutes. The door between the workshop and the stage is in



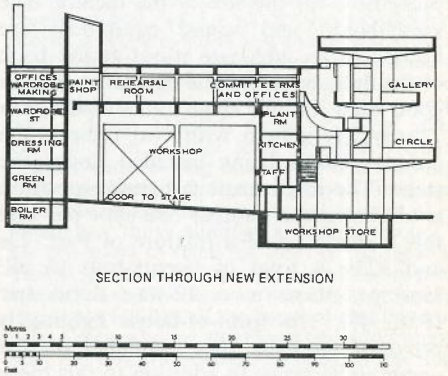
UPPER CIRCLE



CIRCLE LEVEL



ENTRANCE LEVEL



SECTION THROUGH NEW EXTENSION

The Liverpool Playhouse. Architect for the 1968 *extensions: Hall, O'Donahue & Wilson. Plans with section across stage and new workshop.*

Liverpool Playhouse showing detailing of the 1911 *auditorium carefully restored.*

two sections and is motorised. The stage fire curtain is also on a motor, so no back-breaking winding of winches is needed and the provision of a "Tallescope" is another civilised touch.

The lighting installation is fairly comprehensive for the size of the theatre. The switchboard and sound equipment are housed in an adequate room at the back of the dress circle, so the operators enjoy a good view of the stage. The board is a 72-way PR system with two presets, the dimmer banks being installed under the stage. The main onstage lighting position is of course the number one spot bar and this is made up of a mixture of Patt. 23s and 123s, a total of twenty-four in all. Upstage, there is a 12-way flood bar (Patt. 49). The front-of-house lighting is provided by Patt. 263s, mounted on the upper circle front. In addition to this there is also a generous amount of additional equipment that can be hung as and when required. Footlights are not fitted but the red velvet house tabs are lit in No. 6 Red (what else?) by a pair of Patt. 223's located between the boxes and the proscenium wall. The orchestra pit is very deep but can be covered to form a 6 ft. apron, although one does then run into sightline problems from the upper circle. The auditorium seating is in the process of being replaced—needless to say from Rank Strand—by Viceroys in a shade of purple which blends in well with the general colour scheme.

And what about the drawbacks? Surprisingly few, apart from the low grid. The only other big problem is a 6 ft. by 6 ft. girder that extends right across the stage at grid height. This was essential to achieve the basic reconstruction that has been carried out, but it does mean that we lose 6 ft. of valuable flying space.

So there we are; not a "multi-purpose" theatre, whatever that may mean! but I think I'm right in saying that the Liverpool Playhouse has made the very best possible use of a building that started life as a music hall over a hundred years ago.

Geoffrey Haley is a freelance Lighting Designer recently at the Liverpool Playhouse.

Liverpool Flashback

The first Director was Basil Dean and the first Chairman was Charles Reilly whom Basil Dean describes as "the energetic principal of the recently founded and already famous Liverpool School of Architecture . . . without whose ebullient enthusiasm and persistent refusal to look economic facts in the face the scheme might never have got off the ground."

The following extracts are from Professor Reilly's own description of the events of 1911 in his autobiography, "Scafolding in the Sky", published by Routledge in 1938.

As evidence of the ferment of ideas and enthusiasms in Liverpool in the years immediately preceding the war, when she was expanding almost daily her young University and starting to build her first Cathedral, the founding of her repertory theatre now called "The Playhouse" is a good example. . . . Founding things and starting new ventures was in the air those days. Nothing seemed impossible. . . .

When, therefore, I heard from Granville-Barker that he and Nigel Playfair would be **visiting Liverpool and would be willing to address a small audience likely to be interested** in what a repertory theatre might do for the town, I jumped at the opportunity. I got the University Club to lend me the large dining-room for an afternoon meeting. . . . The élite and wealthy departed murmuring something ought to be done, but did nothing. A little group at the back, however, consisting of a chemist's assistant, the owner of a small hardware shop, a young man in the coal trade and an insurance clerk, all of whom I had somehow got to know **and had invited, stayed behind. They suggested the formation of a Playgoers' Club, not of the** usual provincial kind, organised to entertain visiting celebrities, but one designed to educate the public and to back good plays of every kind when and where they could be found. . . . I felt from the start, Liverpool must own its own theatre, impossible as that seemed, and not merely rent one as Wareing did. When he had a success at Glasgow up went his rent. However, he fixed up a six weeks' season at Kelly's Theatre in Liverpool for February, 1911. Then he fell ill and the date was vacant. A young man, named Basil Dean, in Miss Horniman's company at Manchester got to hear about it, and came over to Liverpool. . . . We talked over plays and a possible company, and being all young and enthusiastic we agreed to back him in a trial scheme.

The six weeks' trial season at Kelly's, with Basil Dean producing the plays and acting now and then, was a tremendous success, with packed houses and sixteen hundred pounds profit. We held tea-parties on the stage, nominally to meet the leading lady, Miss Darragh, which almost filled the auditorium. On the seats were placed printed forms of promises to take shares in a permanent theatre. I had to make lots of speeches and used to tell the audience that the theatre doors were locked and only those would be let out who filled in their forms. It was all great fun and very exciting too for a young professor. Nearly a thousand people promised.

It was more exciting still when Clifford Muspratt and I actually bought a theatre one day at lunch at the Adelphi Hotel. We had all decided that the Star Theatre in Williamson Square, once a music-hall and then a melodrama house, was the one we wanted. . . . The price was £28,000, of which £20,000 could remain on mortgage.

There were two things to settle first: who should be director of the theatre and who should be architect for the alterations. For the first there were two obvious candidates, Basil Dean and Miss Darragh. The latter came to Liverpool the day before the meeting at which the decision was to be made, took a room at the Adelphi Hotel and rang me up and asked me to go round and see her. . . . I give myself considerable credit for making no promises and leaving after ten minutes talk. Next day at the Board meeting she was a very haughty lady in heavy white furs. Basil Dean, hardly more than a boy, was elected.

For the other post I had no difficulty in getting Adshead appointed. The theatre was to open in September and he had about four months in which to buy some property at the back, get a small passage between it and the theatre closed, build a block of new dressing-rooms, a property room and a paint room, and, most exciting of all, to re-design the auditorium and turn the beer-cellar under it into a foyer. The old auditorium was a sort of seraglio with half a dozen Moorish boxes on either side. Now it is in a large scale dignified Roman manner with two big boxes only and a ceiling with the loves of Jupiter painted in large **roundels by our Sandon Studios friends at,** I remember, thirty shillings a Jovian amour. I am not going to retell the story of the theatre. That it has lived all these years and finally prospered financially must not be mistaken to mean that it has fulfilled all the hopes of that band of young men who set the Playgoers' Club going after the Granville-Barker meeting. It has not, it must be confessed, since Basil Dean, possessed a producer with any consuming ambition to break new ground. It has had in turn several very good producers from Nigel Playfair to its present one, the best of all, William Armstrong, but their ambitions have lain in other directions. Armstrong has, for instance, succeeded in

making it a School of Acting second to none in the kingdom. Artists like Robert Donat, Diana Wynyard and Marjorie Fielding, to mention but three of the better known out of several hundred, have grown to maturity at Liverpool under his hands. . . .

It was not, however, as a School of Acting that the theatre was founded. Indeed, that hardly occurred to us. We wanted life to be made more vivid to us by seeing in turn the great dramas of the past, and we wanted to join in the high adventure of new plays which faithfully interpreted the life of today. We certainly wanted entertainment, but that was not the first thing. We wanted to laugh more heartily but we wanted to feel more deeply too, and the latter was by far the more important. Of all the producers in turn, looking back I think Basil Dean understood this best. Though he nearly ruined the theatre financially in the two years he was with us; he not only included more serious drama than in any two successive seasons, but, with the help of that very genuine artist of the theatre, George Harris, broke what was at that time fresh ground in this country in decorative scenery and lighting effects.

The early days were very difficult. . . , The Board, if it were not very clear and united in what it wanted to do, did not mean to let Dean run away with its new theatre without a struggle. We were always trying to invent methods to check his expenditure and he, it seemed to us, methods to circumvent us. . . . Indeed, we must have been a very difficult Board to work with and, looking back, I sympathise more and more with Dean.

(*Later on*) I was able to persuade him [Lawrence Hanray] to try the full repertory plan which Granville-Barker had always advocated. The company came together a few weeks earlier than usual and got three or four plays into rehearsal. To these it was always adding. The bill then consisted, like that of an opera company, of several plays a week. . . . It meant even harder work for the company, but it meant better produced plays than ones rushed up week by week. It meant great difficulties with scenery, especially in our theatre where there is little storage room in the wings. However, it did this good besides stopping the continual losses. It showed that an average play would run in the town for much more than six nights and that the next six and even the next might be better.

Stands Scotland where it did?

Rank Strand have long been notorious for their premises in a strange building in Sauchiehall Street at the top of a giant staircase guaranteed to daunt all but the most agile. Tradition has it that certain visitors and more than one member of the staff have been known to leave the place far more rapidly than they came in having literally put a foot wrong at the top. This hazard and the hazard of parking has now been removed and they are ensconced in new premises at 104 Hydepark Street, Glasgow G3 8DN which allow much greater facilities of all kinds.

There is now a wider range of lighting equipment in the hire stock including the new tungsten halogen lanterns. Loading, warehousing and parking facilities are much improved. An enlarged showroom features stage lighting and control equipment, architectural lighting fittings, stage equipment, drapes and seating, and also serves as a demonstration theatre. Rank Strand intend to use this to put on stage lighting lectures in Glasgow along the lines of those already held in their London and Manchester theatres.

Rank Strand not only service Scotland from the new premises within the border but could be said to service the whole world of Lighting for Entertainment from Scotland. At Kirkcaldy not far from what is surely the heart of that country, St. Andrews, there is well over 100,000 square feet of brand new factory in which the larger part of Rank Strand lighting equipment is made.

Correspondence

More Stalling

Dear Sir,

I cannot agree with your editorial proposition that the development of sophisticated memory systems makes a stalls control desk less necessary. There are two possible facilities in a stalls desk:

(1) Channel controls which permit the composition of pictures (i.e. *Cue states*) from the stalls as well as from the main control room.

(2) Master control which permits the ebb and flow of these pictorial states into a fluid lighting *plot*.

In any situation, the use of a stalls *channel* control to devise the cue states saves a lot of production time and a lot of operator drudgery. On the other hand, stalls *master* controls are only required when the lighting designer is also the switchboard operator: but this is a situation which is becoming increasingly common with the growth of the civic repertoire theatre.

Surely the ideal way to provide a stalls control facility is to follow the early examples quoted in your editorial and make the entire desk transportable to the stalls: after all, transistors weigh less than relays and although more information must now pass down the interconnecting cables, modern electronics does not require the one-wire-per-contact of the old servos.

Your editorial also tends to suggest that Instant Plotting is the important feature of these new controls: the splendid Gil Binks of Manchester Palace has been offering instant plotting on his primitive Light Console for years but he still has long waits while the production team hold between-cue conferences and the SM gets his prompt copy cued. The real importance and pleasures of DDM are not the hundreds of accurately memorised pictures but the way in which the advanced electronics enables the interplay of these states to be accurately controlled on cue. Having worked most forms of switchboard, ancient and modern, it is only with my fingers on DDM that I have felt really in command of a cross-fading sequence.

When you say that working a board must be fun, I hope that you primarily mean fun for the *audience*: as professional theatre technicians, we light shows for the audience, not for our own personal enjoyment. Nevertheless most switchboards are fun for the operator, provided you can see the stage and have confidence in the machine's reliability (deficiencies can be overcome so long as they are consistent deficiencies). No, the excitement of working DDM is not that it is fun, but that it is the first ever switchboard to behave *logically*.

Yours,
FRANCIS REID
Switchboard Operator,
Theatre Royal, Norwich

DDM—A Revolution, etc.

Dear Sir,

To regulate the light needed by actors on stage you are now saying "We must buy a computer", meaning "You must buy one".

What is wrong with hiring one or two extra pairs of hands for the trickier show? It probably won't run many nights, anyway. A designer who asks for 360 ways before he can get to work should be given a few whiffs of Supplementary Benefit to shrink his ideas down to what is artistically adequate from what is financially possible.

It makes not a jot of difference to the performers or the audience whether the show is lighted by a multi-lantern, multi-way set up or by a modest spot barrel and F.O.H.'s When the former is used only the designer or the operator would notice if two pages of script were turned over at once.

You are suffering from what my distinguished namesake has called "the technological imperative". Others call it "growth mania".

You may, of course, have television production in mind. In that case you cannot expect to go on being accepted in decent society.

Yours, from TABS No. 1,
ERIC MUMFORD
Maesgolau, Newport, Pem.

Synopses

1066 and all that

L'éditeur réfléchit à la grande habileté numérique requise désormais de l'expert de l'éclairage, non pas à cause de la sophistication du matériel, mais du code de sept chiffres à utiliser lors des commandes.

Der Redakteur bemerkt, dass von dem modernen Bühnenbildner grosse Geschicklichkeit mit Zahlen verlangt wird und zwar nicht wegen der Hochentwicklung der Geräte, sondern weil er diese mittels siebenzifferigen Kennummern bestellen muss.

Festival Theatre, Stratford, Ontario

Par une curieuse coïncidence, les Stratford théâtres, d'un côté de l'Atlantique comme de l'autre, subissent simultanément des transformations structurales et installent un jeu d'orgue moderne. Bruce Buck décrit les développements au Canada qui, contrairement à ceux de sa soeur anglaise, comportent un système de "patching" typiquement américain.

Es ist eigenartig, dass die Gebäude der Theater in Stratford auf beiden Seiten des Atlantischen Ozeans gleichzeitig geändert werden und Stellwerke mit neuen Speichersystemen erhalten. Bruce Buck beschreibt die Installation die im Gegensatz zu England ein typisch amerikanisches "Patching System" enthält.

Theatre Royal, Bristol

Peter Moro esquisse les grandes lignes de ses plans pour incorporer à ce théâtre du 18e siècle un foyer de la même époque: un "Coopers' Guild Hall". Il prévoit également des bâtiments reliés les uns aux autres pour permettre de plus grandes facilités scèniques et inclure un studio de 200 places.

Peter Moro skizziert sein Werk bei diesem, aus dem 18. Jahrhundert stammenden Gebäude. Es war seine Aufgabe, eine zur selben Zeit gebaute Zunfthalle der Küfer als Foyer einzuarbeiten und ein verbindendes Gebäude zu entwerfen das vergrösserte Bühne und Zubehör unterbringt und ein Studio-theater mit 200 Sitzen ermöglicht.

Wythenshawe's Forum

Percy Corry décrit le théâtre de 492 places. Celui-ci, ainsi que deux halls à usage multiple, fait partie du nouveau centre civique de Wythenshawe—banlieue de sa ville natale Manchester. Il le compare avec le Librairy Theatre plus centré, de la compagnie affiliée, avec laquelle il échange des productions.

Percy Corry beschreibt dieses mit 492 Sitzen ausgestattete Theater, welches dicht bei zwei mehrzweckigen Hallen steht, mit denen zusammen es ein "Civic Centre" bildet und zwar in Wythenshawe, einer grossen Vorstadt von Mr. Corry's Heimatstadt Manchester. Er vergleicht es mit dem zentraler gelegenen Library Theatre, das Heim der Orginaltruppe, mit der Wythenshawe Aufführungen austauscht.

Stratford Revisited

Lorsqu'en 1932 le théâtre détruit par un incendie fut reconstruit, certains déclarèrent que ce théâtre festival présentait de sérieuses lacunes dans sa relation acteur/auditoire. Frederick Bentham retrace les diverses tentatives faites pour y remédier et se demande ce qui les a inspirées.

Als das moderne Festivaltheater im Jahre 1932 auf den Trümmern des ehemaligen abgebrannten Theaters erbaut wurde, gab es Kritiker, die erklärten, dass hier ein grundliegender Mangel bezüglich des Verhältnisses zwischen Schauspielern und Publikum existiere. Frederick Bentham zeigt auf, wie man mehrartig versucht hat, dieses Problem zu lösen und fragt sich, wie man auf diese Lösungen gekommen ist.

A Tale of Three Switchboards

Délaissant l'architecture, le même auteur examine maintenant le système d'éclairage du Stratford et son jeu d'orgue datant de la même période, allant d'un Grand Master à 56 circuits à l'action d'un ordinateur Memory System DDM.

Nach der Artitektur beschäftigt sich derselbe Vervasser mit der Beleuchtungstechnik in Stratford imselben Zeitraum, angefangen mit einem Grand Master Stellwerk mit 56 Stromkreisen, bis zum neusten, komputerisierten Speichersystem DDM.

Bloomsbury Cinema

L'Editeur risque une excursion dans le pendant du théâtre et découvre—avec un étonnement relatif—que du projecteur à l'écran, chaque article nécessaire au cinéma moderne peut s'obtenir auprès de son cher Rank Strand.

Der Redakteur erlaubt sich einen kleinen Seitensprung vom lebendigen Theater in die Welt von Zelluloid und Leinwand. Er entdeckt mit wenig Erstaunen dass jeglicher Bedarf für das moderne Kino von Projektor bis zur Leinwand von seiner geliebten Firma Rank Strand zu beziehen ist.

Meanwhile, over at Liverpool

Pour ne pas rester en marge, notre plus ancien théâtre de répertoire, le Liverpool Playhouse, vient d'être agrandi. Le dessinateur de l'éclairage Geoffrey Haley décrit ici les avantages de cette extension: une arrière-scène et un auditorium plus spacieux.

Das Liverpool Playhouse, unser ältestes Repertoiretheater ist auch umgebaut worden. Der Beleuchtungsmeister Geoffrey Haley beschreibt die Erweiterung des Gebäudes um mehr Platz für Zuschauer und Techniker zu schaffen.

Correspondence

Eric Mumford se demande s'il ne serait pas plus agréable de manier un jeu d'orgue à quatre mains qu'un ordinateur. De son côté, Francis Reid "part en bataille" non seulement en faveur d'un jeu d'orgue partiel dans les loges, mais de son installation complète dans celles-ci.

Eric Mumford fragt sich, ob ein Stellwerk vierhändig gespielt mehr Spass macht, als ein Komputer; Francis Reid will sich nicht nur für Lichtsteuerung vom Parkett aus einsetzen, sondern will das ganze Pult ins Parkett transportieren.

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