

# TABS

September 1971 Vol. 29 No. 3



# TABS

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Cover Picture: Rank Strand DDM Lighting Control "lovable computer" in action. 240 channels, 250 memories

## Accounting the Individual

So at last it really seems that Great Britain is going to become part of Europe. What does TABS think of this? Bearing in mind the size of theatres in Europe and the amount of money spent on their equipment our reply must be "Yoicks! Hurrah for The Market and let's hope their traditions cross to this side of *La Manche!*" However, TABS, as representing a small firm of personality which became part of a very large organisation the greater part of which spoke a foreign language, is in a unique position to pronounce on a less superficial basis. There can be no doubt for sheer resources in a world of large communities, whether national or commercial, the large organisation has it all the time. There is a trouble, however, that besets mass coming together—in a word, "communication". We referred just now to the organisation which Strand Electric joined as one speaking a foreign language—in point of strict fact it was English—but nevertheless communication by *word* of mouth or pen, transmission of ideas can be difficult.

The language of the "large organisation"—"group", "block", call it what you will—is not *words* but *figures*. Now the Master of the Figures, so the theory goes at any rate, is an accountant. Thus we may see in the large organisation either an accountant already at the head of things, or if not, then an accountant as heir apparent or presumptive. At the elbow of this figure of figures is a computer humming away, happily digesting the statistics and ready to regurgitate an answer for any question put to it. All such operations are expressed in figures and the poorest figure cut among

the figures is that of the individualist. To make an impression he has to create enough of a stir to let down an average. The larger the catchment area for the figures the more and more difficult it becomes for an individual figure to do this. His effect on throughput, gross margin or any other of the figures by which one judges the success of such a community, becomes negligible.

It is a sad fact that the only place where an individual can shine is in a small community. That "so-and-so" had or has a great wit—historically a more memorable commodity than "gross margin"—will only be known to a small circle. The appreciation of such a circle may act as a launching platform from which to fire him into a larger orbit whereas "on the figures" he would not surface enough to be "fired" in any way.

The importance of the small circle within the ever-growing community cannot be overestimated. Of course there are circles and circles. There is the closed circle—the committee or the drama studio, or on a larger scale the conference—which exists for itself alone, i.e. to hold committee meetings, to drama stud or to confer. The open circle is the important one, for it cannot exist without an audience. The classic example of the open circle is the theatre. In a theatre lies the hope of the future, for here it is that an individual can express himself and perhaps become more than a figure on a balance sheet. The hope therefore for a Europe which will be *fun* to live in—and there is no use for any other kind of Europe—does not lie in the offices above but in the theatres beneath!

## What kind of theatre?

The answer sought will not be couched in terms of open stage, centre stage, proscenium stage or more mystically—adaptable theatre. The theatre we all need is “a successful theatre”; so this rather than anything else should be the main consideration when deciding on building a new theatre or adapting and improving an old one. The first thing to do is to ask, “Who would want to use our theatre?” and, “Who will want to visit the place and see them use it?” It is only after these questions have been answered that the next steps can be taken, namely to decide where the money and design are to come from. Another way of summing up the problem of a theatre is to say that it consists of a “show” and an “audience”. All the rest follows a long way after. Given the right show and the right audience then the difficulty will be to keep them apart rather than to bring them together.

Thus we see the building itself makes a rotten beginning for the exercise. This is strange, as the building is the only visual part of theatre which is not ephemeral. All the rest is governed by change, fashion, taste, people passing on or more terminally—passing over. The brief for a theatre must be a wide one but not too wide. On the other hand taking out the insurance of making the place able to take any kind of show is to ensure that it will

## How to plan that theatre

Having excited the theatre builder to some extent to anarchy—to throw off the shackles—it is necessary to indicate what should be the next step to take to put a dream into practical shape—into brick or concrete, wooden hut or inflatable balloon. Since this is addressed to theatre people the answer must be, first make a model. This is a time-honoured practice in all scene design but it applies even more when

score a great no-success in any role. Likewise the scale of your theatre is vitally important. Mr. Micawber's rule for happiness applies equally well to theatre. In the world of big things, communities, companies and all the rest, the small theatres have perhaps a more important role to play than the large ones—this is where try-outs begin and fresh talent may arise. The grander the theatre project, the more need for careful consideration before the money is spent. Fortunately, advice nowadays is readily available.

If we are not careful, however, we may swing the wrong way and the launching of our theatre become hedged around with too much good advice. Those who know—who have been there before—try to save the up and coming from repeating follies. By the time the plans have been inspected and the permissions and grants obtained, the heart may have gone out of the enterprise. Man has a need to enjoy his own mistakes. This is why in this age of civic theatre building, scale in size and time is so important. Frank Dunlop's urgently flung together Young Vic in the Cut may—yes, in spite of those hard, hard wooden benches—be a better starting point than a temple for Thespian rites. As a country we want both, and many of them but, as a town, which would suit you best?

devising the biggest and only permanent scene—the theatre itself. Never mind the exterior, the foyers and all that; the architect should be at home there, but the relationship of stage to auditorium is something that concerns your style of production, it cannot be left to the architect. You and your audience must *belong* there. This model of auditorium and stage, not just plain but in colour, will help you

do what no plan and section can do, to visualise the final ensemble. It needs a real expert with a lifetime's experience of plans and sections to visualise from them things in full scale and in three dimensions—to be able to conjure up the space as it will be to work and play in.

Once you have got your model, it must be peopled to give both the stage and auditorium scale, but on the stage there must also be scenery, not just for *Lear* or *Hamlet* but for *Private Lives* or *The Caretaker*. The madding crowd will be far away most of the time, how does your stage look when sparsely populated? Intimate contact is not just a matter of the audience being close to the stage, but actors will often need to be close to one another and but a few steps from their entrances and their exits. There are more plays in which the characters suffer from claustrophobia rather than agoraphobia. Scenically, interiors are common—exteriors rare.

The model has to be used properly; the temptation to look at its wonders from up aloft resisted. Try to get the view audience (and the actor) will have. Another pitfall to avoid is too facile changing of the scenery or adaptation of the place. Flourishing a bit of wall in one hand while inserting a block of forty seats with the other leads to the wrong assumptions. There is no wall that is simple to move (not even when made of painted and framed canvas scenery flats), while the shifting about of seats can be an awful bind. Who or what is going to move them when full sized? Where are things going to be stored when not in use? What sized doorways are necessary? Above all, when you have set the scene and/or the theatre (if it is one of those adaptable or multi-purpose affairs) where is the lighting and how do you get at it?

By now it will be apparent that a theatre, whatever its size and type, is a complicated affair—a background to the work of artists who use highly technical resources—nor are these same techniques known *in toto* to every man of theatre. The pitfall lies in detailing. It is all too easy to conjure up a

theatre in a few words or a few lines on a piece of paper but to make it work, every blessed detail has to be covered and specified. In the end, however artistic the product—what we see and hear—the whole thing will in reality be a machine and machines which are to work have to be fitted, not slung, together. This applies with equal force to the smallest and largest enterprise. It is not surprising therefore that in recent years a new form of consultant has arisen—the theatre consultant. His speciality, when he is a good one, is the *detailing* of all the aspects that go to make a working theatre. Just as an electrical consultant at home in mains and cables cannot be expected to know of the needs of the art of stage lighting neither can the architect or anyone who has not made a study of the matter be expected to know the ins and the outs of a workable theatre.

This kind of advice cannot be given by a mere few hours' consultation with something like the ABTT's Architecture and Planning Committee—important though that service undoubtedly is. Nor can it be obtained from the suppliers of particular commercial equipment—even when they are as altruistic as the firm which sponsors TABS. Detailed advice and planning requires hours and hours of painstaking work, attendance at meetings and so forth. It has therefore to be paid for; someone has to be *employed* to do this.

In 1964 the late Stephen Joseph founded the Society of Theatre Consultants to compile a register of those who felt drawn to this work and to provide a code of professional conduct and practice.\* Ultimately, however, responsibility for the form of theatre is with those who decided to have one. If this was you then you must take every step to ensure that you do not get a surprise when you eventually see it. Every theatre tends to exercise an allure while it's brand new but it is the many months that follow which will prove whether you have in fact got it and its detail right.

\* The Society of Theatre Consultants, 9 Fitzroy Square, London W1P 6AE.

# Focusing

Francis Reid

The glamorous bit of stage lighting is the switchboard. In every stage-struck technician there is a Walter Mitty valiantly fighting the powers of darkness with a machine that has associations with either mission control or the organ loft. I know the feeling well. But the critical point in lighting is not "the board". Incidentally, I don't hold with all this escalation of a switchboard into a "control system" and while I'm riding hobby-horses, may I say that all this lovable switchboard stuff is getting out of hand . . . give me a lovable spotlight that doesn't burn my fingers but caresses my vision with a silken beam of sensual sheen—the Porno-beam.

No! The real crunch in lighting is where we put the lights, where we point them, and how we adjust their beams. And if



"... you can cut bits out of their sides."

we have not *put* and *pointed* correctly, the most fantastic performance on the digits (human or computer) will not make the whole greater than the sum of the parts. It is the putting and pointing that is the creative part of lighting; at least I hope it is because I certainly do it on the basis of hunches rather than as a result of any sort of scientific method. But adjusting beams or FOCUSING . . . now that is more a matter of technique. The trouble

with beams of light is that you cannot control their length. You can cut bits out of their sides with shutters and you can cut bits out of their middles with gobos, but you cannot cut a bit off the end of the beam. Most of our lighting is positioned for the benefit of the actors and it would be marvellous if we could chop off the beams after they have passed the actors



"... you can cut bits out of their middles."

and before they hit the scenery: but the light beam passes resolutely on until it hits the scenery with a nasty splodge, often drawing audience attention away from the very actor it was designed to illuminate.

Much of *putting* and *pointing* of lights is concerned with finding ways of lighting the actor so that the end of the beam falls where it will do little damage; i.e. off-stage or on the floor rather than on a prominent bit of scenery. But this breeds a very large lantern layout for which it is frequently not possible to budget in terms of either money, time, or space.

When I plan a show, I always take *time* as my limiting factor. I have learned from bitter experience of my own (and other people's) work that there is no point in indulging in a large, expensive, multi-lantern layout if there is not adequate time available for proper focusing.

When we focus a spot on an actor position, our prime concern must be to check that the light covers all the area in which we expect the actor to be lit by that particular spot. I find that the only practical way to do this is to move around personally in the beam and check that the light does hit me. And, to save my eyes, I turn my back to the light and watch my shadow. If there is a full shadow of me plus hand (to allow for the fact all the actors in my shows seem to be seven foot tall), I am lit. This method also allows me to check the secondary point of concern in setting a light; the mess that the beam is making after it has lit the actor.



"... but you cannot cut a bit off the end."

What can we do about this mess? Let's start with something we cannot do. It is no good setting another light onto the scenery to smooth out the mess, for the scenery will then become so bright that the actor in front of it will darken into silhouette. Up a point on the actor and the mess again becomes predominant; compensate with a point more on the scenery and the actor is back into silhouette. In no time we can escalate into the brightest dark-spot on the stage.

The principal way of clean focusing is to pay adequate attention to the edges of the beam, and there are two inescapable rules here (it is nice to find an occasional

hard fact in such a subjective business as stage lighting!).

1. Soft edges are less noticeable than hard.
2. Any edges are less noticeable if they coincide with an architectural edge.

The easy way to soft edges is to use a Fresnel spot but I only do this myself if I am working to a restricted time-budget. In providing a soft-edge, the Fresnel by its very nature throws out an embarrassing amount of scatter light close to the lens—light which emphasises the borders which we are at some pains to lose. Our aim is to use light to make the audience look down on the action, not up at the masking arrangements. And in passing, I should add that personally (others do not agree) I regard the minimal improvement in scatter offered by lenses with blackened risers not justifiable when related to the extent of light loss in the main beam.



"... all the actors in my shows seem to be seven feet tall."

Nevertheless, when short of time, and this is probably the case in something as high as 95 per cent of all stage lighting, I would still advocate the use of Fresnels for actor lighting (from on-stage lighting positions) simply because mistakes don't show—or at least don't show so much.

However, with the exception of the micro-mini stage, the scatter and lack of throw from a Fresnel make it unsuitable for

use in the auditorium; from this position we must use a profile spot. Now it is these so-called "front-of-house" spots which cause the worst mess on the scenery as a result of their relatively flat lighting angle. These are the very spots which must be set with soft edges, yet by their very nature they are often the ones which are most difficult to soften. In ninety-something per cent of cases the usefulness of a profile spot is not that the beam can be shaped at will but that it throws relatively little scatter outside the main beam. Indeed, until recently there has been a tendency to design profile spots with more concern for hard edges than for soft. They are certainly cheaper that way. But for most applications it is worth while taking time to fiddle with the lens and lamp-centring adjustments to achieve a soft edge. Bifocal spots, and the double-lens optics of the new tungsten-halogen profile spots make this soft-edge adjustment very easy.

Even after careful focusing however we



*Clean focusing*

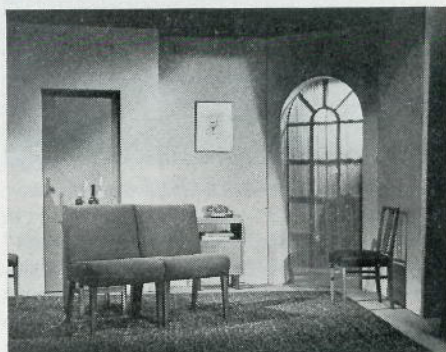
are still left with an edge, albeit a soft one. To make this edge seem natural it is helpful to line it up on an architectural feature of the scenery—door frames, picture frames, etc., are naturals on a realistic interior set.

So much for the edges of the beam. What about the inside of the beam? If you want a rule, I suppose it is that textured surfaces are less obtrusive than flat surfaces under light. The easy bit to texture is the

scenery surface and indeed scene designers have a way of rushing at their sets with handfuls of gunge and spatters of vandyke brown as soon as I start to light.

But the interesting thing to texture is the light itself. The obvious way is to use a gobo with irregular holes to produce the quality of light that falls through trees. I have in fact used such texturing, very softly, inside a "who's for tennis" interior setting without anyone muttering about trees. If I did lighting for artistic reasons rather than to feed my children, I think I might explore textured light in depth, as they say.

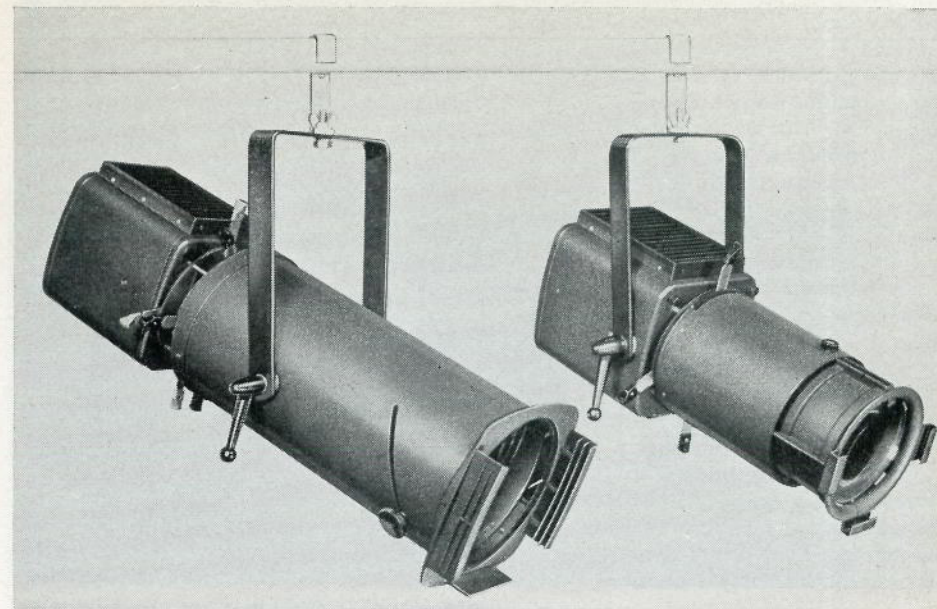
If my life as a lighting man has had any revelations, I think it is the discovery that the better I focus the lamps the fewer cues I need on the switchboard. I can remember shows where half the cues consisted of fiddling with levels of lights which were ugly on the scenery and thus had to be up when the actors were in that area and down when they were elsewhere. I can remember hours wasted in the still watches of the night, delicately balancing switchboard levels to avoid hardness on the



*Untidy focusing*

scenery—only to take it all up two points the next morning when we had actors. I still do it.

There is an old switchboard operator's saying: "If you do it slowly and smoothly enough you can get away with murder." The equivalent for focusing spots is: "If you set it soft enough . . ."



*(Left) Patt. 774 Long range Bifocal Profile Spot.*

*(Right) Patt. 763 Profile Spot.*

## Brighter Stage Lighting

*Brian Legge*

That wax candles represented a great advance over the tallow variety we have on the authority of Pepys, a regular London theatregoer some 300 years ago. Late in the eighteenth century a better and more efficient light was provided by the Argand oil lamp. In 1817 came open gas jets and, for the first time, a centralised stage lighting control. Later limelight, the first high intensity compact source for follow spots, allowed the beginnings of directional stage lighting. The present era commenced in the last days of 1881 with the first complete electric stage lighting installation of Swan's incandescent lamps at the Savoy Theatre. Carbon arcs, the second compact source, then began to be used as an alternative to limelight, and meanwhile for incandescent lamps metal filaments replaced carbon, and gas-filled bulbs replaced a vacuum. Soon after Strand Electric was started in 1914 higher wattage projector lamps began to

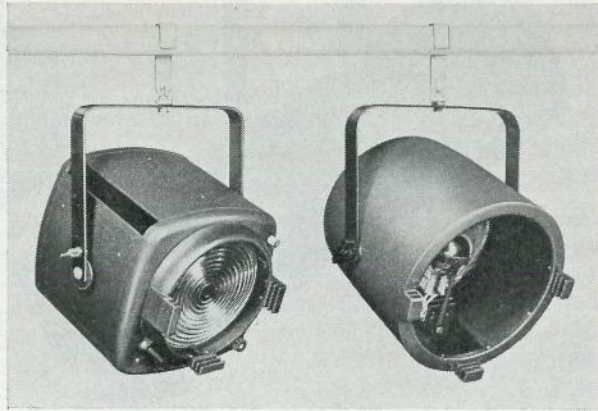
replace both limelight and all but the largest carbon arcs. From then on there has been very slow progress in the development of lamps suitable for stage lighting, but there has been quite considerable progress in the development of more efficient optical systems around the light source. The last lamp developments of importance have been reduction in bulb sizes; first a 500-watt compact filament in a 4-in. (100 mm) diameter bulb, and then, comparatively recently in Europe, a 1,000-watt filament in the same bulb size. In North America the thicker filament required for their 115-volt supply has always eased the problems of projector lamp development.

Now we have reached the next stage in this long chain of development. First, the Class T/9 1,000-watt tungsten halogen projector lamp, a lamp manufactured to Rank Strand's specification specially to

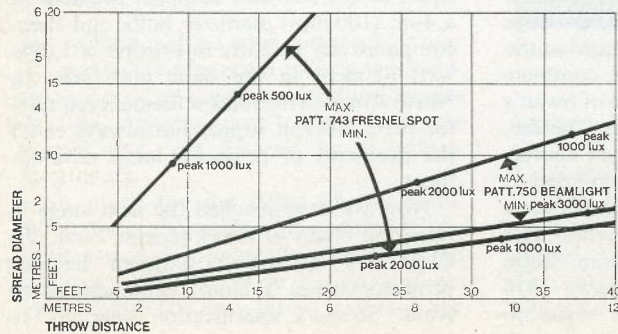
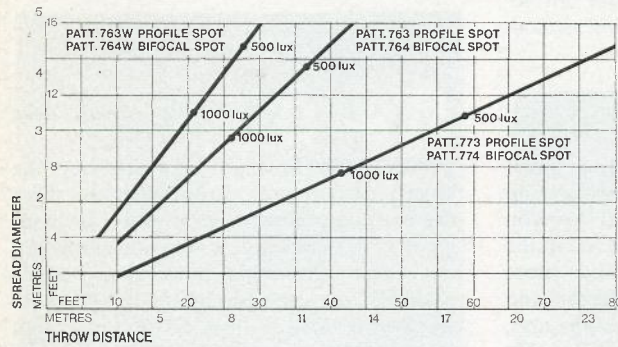
suit the needs and economics of stage lighting. It has a brighter and whiter output than the equivalent conventional lamps, it has no onerous restrictions on the angle of tilt and by virtue of the tungsten halogen cycle\* it maintains 99 per cent of its initial light output throughout its objective life of 400 hours. It is also very compact, and therefore to obtain the maximum total gain in performance a new and complete range of equipment has been designed around this one lamp. This range includes four profile spots including the Pattern 773 for long throws from high auditorium lighting bridges, a complementary range of three bifocal spots, the Pattern 743 Fresnel spot (even better than the conventional-lamp Pattern

223) and the Pattern 750 which, in the cause of international understanding, is called a Beam-light (a Pageant when translated tends to cause some confusion).

The second technical breakthrough is



(Left) Patt. 743 Fresnel Spot (Right) Patt. 750 Beamlight.



provided by the 1,000-watt compact source mercury iodide (C.S.I.) lamp. This has an efficiency of 85 lumens per watt, a four-fold increase over conventional projector lamps. Being a discharge lamp it cannot be dimmed by varying the line voltage but is ideal for a follow spot where high intensity is of greater importance than the convenience of remote control. This new follow spot, with built-in starting equipment, is the Pattern 765. To gauge its performance look back to the cover of last December's TABS, Vol. 28, No. 4, where the prototypes are shown in use at last year's Edinburgh Tattoo; that, incidentally, really is a Pageant.

\*See TABS Vol. 27, No. 1, page 36.



Leningrad Children's Theatre (photo' The Guardian).

## Things Seem Better Than They Are

The Leeds International Children's Theatre Festival, Summer 1971

Mike Doyle\*

The title for this piece has been lifted, without apology, from Albert van der Baan's review of theatre activities in Holland aimed at young people. For by merely changing the names of the groups and towns his document would exactly sum up the situation at the Leeds festival.

The chief problems with this festival came from muddled thinking largely compounded by the Public Relations people. Roger Chapman, who organised a similar festival in Bolton two years ago, had wanted to get together "the world's best entertainers for children". So in November 1970 he approached "my own favourite companies, and companies which were new and in vogue with young people". Between these two statements lay the hidden contradiction which has severely limited the success of the festival.

The sponsors, with the aid of their

PRO men and the publicity media, put forward the notion that "the future of the theatre lies with our children, therefore let us get them into our theatres". Many of the performers had a different approach which ran, "Drama is a medium that should be useful in education, let us take it to the kids and see." The "it" in many cases was not so much a play, but frequently a dramatic presentation followed by a work session or discussion with the children of the audience. This applied to all the Theatre-in-education teams—from Newcastle, Coventry, Sheffield, and also to the touring groups—*Theatre Wim Zomer*, *Theatre Mobile*, *Brighton Combination*, *Portable Theatre*, *Pip Simmons*. The approach was less that of stimulating a

\*Since the Leeds Children's Festival Mike Doyle has in fact joined *Theatre Mobile* as their Stage Manager.

workshop in the case of the Black Theatres and the puppet shows. The results of this dichotomy between the attitudes of performers and sponsors were probably inevitable.

First the shows were advertised in the festival brochure in a manner more suitable for soap: words like "Finest", "Famous", "Exciting" and "Newest" abounded, and any real information about the aims and working methods of the groups was conspicuously absent. This was particularly unfortunate in the case of Albert Hunt's Bradford Art College group, whose work, based on political and social analysis, evolves through public performances; hence their "premiere" would have better been billed "first public try out—see the

final result in three months time".

Secondly, the prices—50p for adults and 20p and 30p for children—resulted in decisions on the level of "A day trip to the Castle Museum in York or a trip to the theatre—both will cost you 20p. Which do you want, children?" The most blatant piece of misplaced commercialism occurred over *Earthwise*, John Fox's "Cosmic Circus". Originally conceived as a mass entertainment at "four bob a go", tickets were actually sold for 60p (perhaps because figures like Mike Westbrook were playing) and naturally enough the children could not flock to this.

Thirdly, and most significantly, many of the shows were put into inappropriate environments. Instead of financing groups

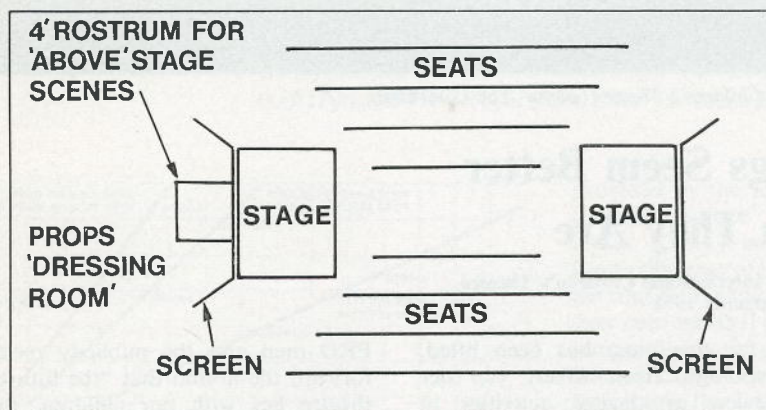


Fig. 1 Layout for *Jew of Malta* using rostra set up in auditorium

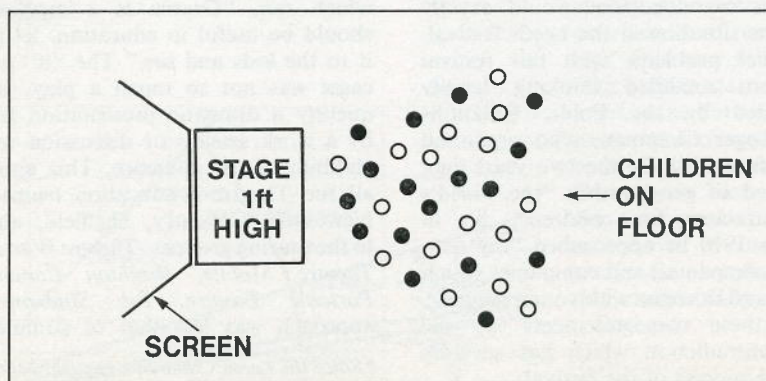


Fig. 2 Layout for *Cats* set up in auditorium



The Civic Theatre—a round building with proscenium inserted.

who normally perform in schools for a tour round the schools of Leeds where they could really work properly, the organisers involved every conceivable theatre in town and put in these groups as "shows". The need to create a programme of reasonable length resulted in some amazing occurrences—London Black Theatre and Pip Simmons' *Pardoner's Tale*, billed as "suitable for 11 years upwards", caused irate phone calls (and that certain offending word\* was duly expunged from the latter and replaced by a nauseating euphemism). The principal theatres used were:

- The Leeds Playhouse† (open stage)
- The City Varieties (music hall of BBC fame)
- The Civic (a mechanics' institute converted to proscenium)
- The Grand (the touring house now under civic control)
- The Gaumont (a playhouse, ex-cinema sloping rehearsal-room)

What happened in each was typified by

\*It wasn't *Frank or Flame* either (see TABS, Vol. 22, No. 1)—ED.

†TABS, Vol. 28, No. 4.

the experience of Theatre Mobile (the Mid-Pennine touring theatre). Normally performing in village and school halls, they have abandoned the so-called stages to be found there and have set up rostra in the auditoriums. Their shows were then performed to the kind of layout shown in Figs 1 and 2. In Leeds they were allocated to the Civic Theatre above. The result was that the style of the show constantly fought the theatre. In *Cats* this was especially so. This is a 40-minute tale of the "Adventures of Timmy" involving a lot of work off the stage proper and followed by a "work-out" with the kids. In the Civic the house lights had to be left on and the stage ignored as far as possible; the "work-out" was a riot—children running round the auditorium, climbing up the house tabs and generally enjoying themselves—to the distress of management and teachers.

As a result of the organisers' approach to this festival it became less a children's festival and more a meeting of drama groups and young people involved in theatre, with children as a convenient excuse. In some cases the number of members from other companies in the small audience became conspicuous.

The only groups which seemed to me to succeed on their own terms were two contrasting ones—"Interplay", a community action group doing street theatre in housing estates, which gathered up the children in pied-piper fashion as they processed through the streets—and the Leningrad Children's Theatre at the Grand. Here children were entertained on a scale and with an expertise and skill that

we seem to reserve for the National Theatre and Royal Ballet.

Had the rest of the shows been taken round Leeds schools and youth clubs, something might have been achieved; as it was—with the exception of the street theatre—the critics were the ones who found everything with ease and the children in their crocodiles, once marched in, were promptly forgotten.

### A new Rank Strand publication

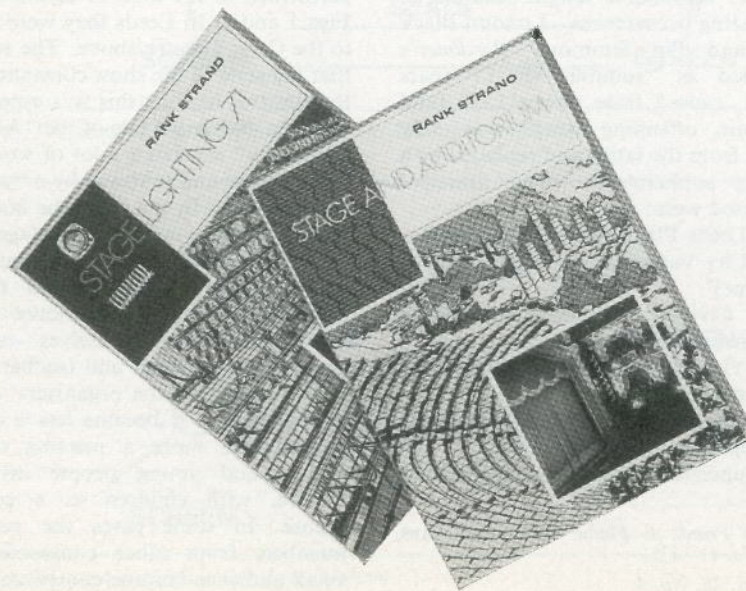
Our Theatre Compendium is well known to TABS readers, to supplement it we publish two A4 catalogues each of sixteen pages. One is called *Stage Lighting '71* and the other, just published, *Stage and Auditorium*. Together with the two appropriate price lists they provide 52 pages on the unique "Both Sides of the Curtain" Rank Strand package.

Introductory articles, anon but from a well-known TABS pen, set the scene and relate one item to another. For example, a Fresnel spot to a Profile one, or the both to a carpet, so that all risk of muddling them

up is obviated. Lavish illustration sometimes in full colour assists in this noble aim. Apply to us at Covent Garden or to the Rank Strand regional office.

Outside these Isles the small print at the foot of our last page should be consulted to find the appropriate address to which to apply. In which connection please note the new address of our U.S. headquarters now moved from New Jersey to California as follows:

Century Strand Inc.,  
3411 W, El Segundo,  
B L V D Hawthorne, C A 90250.



*Grand Master Control, 90 ways, Royal Court Theatre, Liverpool.*

## Scenes in the Theatre\*

*Frederick Bentham*

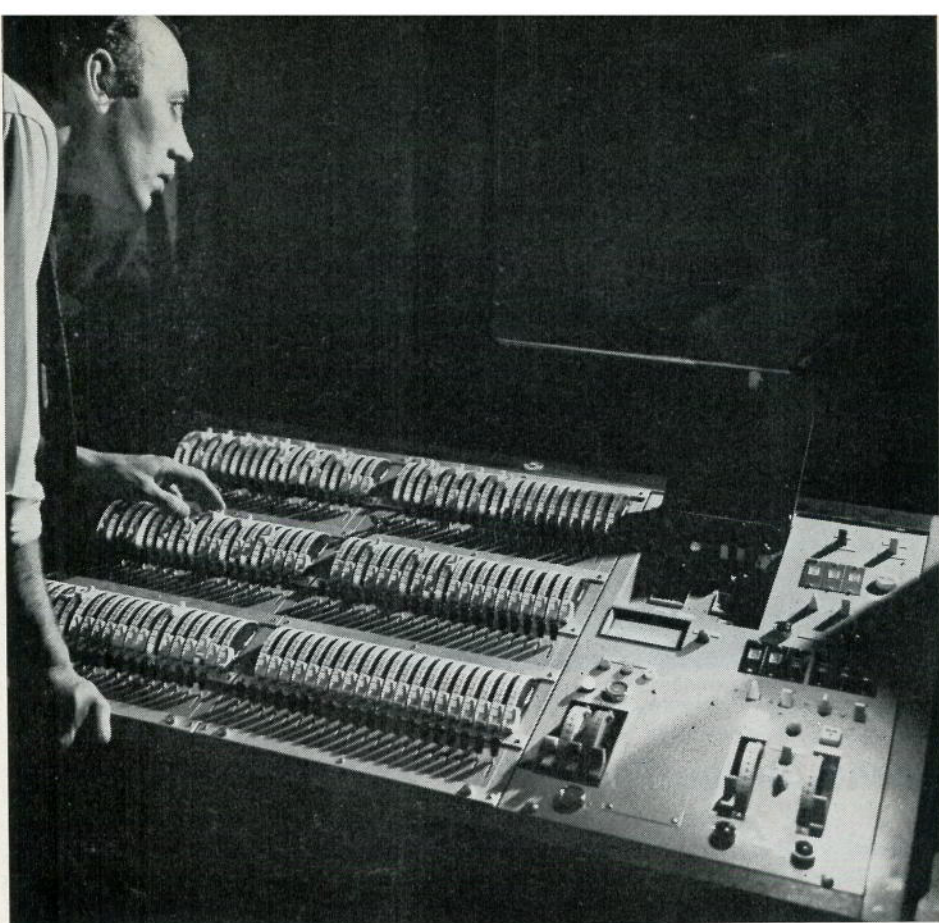
Clustered around a glow of light in the empty stalls is a small group. Because this is a rehearsal and not a performance the smaller the number the better. It is important to have the Director there but not his sisters, and his cousins and his aunts. Let us assume that we have achieved the desirable minimum of two—the director and the lighting designer only. Even then we have to cope with a number of conflicts. There is the man the director *was* when he planned the production before he came to the theatre, there is the man he *is* today while he is in the theatre, and of course tomorrow he *will be* yet another man dissatisfied with the work he did today or at most content with only part of it. This goes on until the first night and if he is not involved in another job somewhere else or physically locked out of the theatre, could go on and on and on.

*\*This is the first of two instalments of technical autobiography the Editor is allowing this author in his sixtieth year.*

This coming together of the ingredients of a production at the last moment is at its worst in the case of lighting. The actors have learnt their lines and moves, dancers have been dancing, singers singing and musicians playing—they have all been studying and rehearsing. There is even an authoritative text or score to refer to. The scenery has already been painted, or more likely today caked with chunks of some polywhatsit plastic; yet at this late stage the lighting, which will shape all this for the human eye, is a collection of notes comprehensible only to the particular lighting designer. The principal agent for the visual scene, the switchboard operator, has not only not learnt his part; he has not even seen it, for the simple reason that it has not been composed.

Like Moses he will hear the word of the Lord and have to write it down pretty damn quick. Unlike Moses he will receive more than ten commandments and certainly "the lord" will change his mind





System IDM, Globe Theatre, London, 120 channels.

many times and shove in extra commandments until his tablets are in a sorry state indeed. Further, unlike Moses he will be expected to put in action there and then the "Shalt not commit adultery" or whatever without any previous experience or rehearsal.

It must be apparent to all therefore that the lighting process is even more fraught than are the other fraughtful processes which come together and make up a production. Making up a series of lighting pictures is a problem requiring time, patience and skill. Writing all this down and getting effectively from one picture to another may present an even greater, perhaps insoluble, problem. It could be that there is literally no way of getting through a series of pictures or follow-ons

given the limited time scale and/or the particular control equipment.

In recent years it has become possible to ameliorate the problem by recording the lighting changes *automatically* without the need to write them down. The qualification "automatic" is important because the early form of recording—still popular because of its relatively low cost—is punched card but as the punching process is slow the system's advantage is limited to accurate repetition at performances instead of its saving time in rehearsal. It is the rehearsal and composition stage—which may continue right to the first night or even beyond—that governs the design of a really sophisticated control for *tomorrow's* theatres and productions.

It is the need for rapid recording *and modification* that has led to the development of control systems based on magnetic recording technology. So fast is the process that the term "memory" is appropriate. To liken the magnetic process, which holds the information comprising one stage picture, to a "record" or a "file" suggests a slowness of access to the information which simply is not there—no matter whose memory system it is. Instant memory and instant recall is something

process as it was in the days of such giant switchboards as the one at the head of this article. The operator in the picture, it so happens, is a young Charles Bristow, now the well-known lighting designer. For all that preset controls are common, the familiar frustrations appear. Most Directors still "fight" the switchboard, that is to say they are intolerant of the discipline it imposes. Even now, when stage lighting pictures can be plotted instantly and brought back equally instantly, frustrations

will be around. Give a Director a technological inch and he will expect to take an artistic mile.

The lighting control which this article will eventually be about, and which we show on our cover, starts off with a computer. No action however simple happens without it. And it really is a computer not just, as so often, a glib or publicity phrase. The operator when he touches his controls asks the computer to take a hasty look around, appraise the situation, calculate and effect the appropriate course of action. All this the computer does with extreme rapidity—instantly it appears to us humans. The use of a computer at one



Drury Lane Theatre, London, 216 channel Light Console.

stroke enables us to shake off the tyranny of two dictators, of the designer of the particular machine on the one hand and of the technology he had to use in his design on the other. Given this new-found freedom, what do we do with it?

In such an article as this I have come to the conclusion that it would be better to stick to my own work in this field rather than to make comparisons with the work of others. Why did I at least do what I appeared to want to do? My own work begins—one might almost say notoriously—with the taking over of a cinema organ console in order to "play" the lighting. This play-ability was absolutely paramount

that all of us who make these things can provide from a magnetic store.

So it is that, at any rate for those who have the money, each lighting picture can be taken down and used in evidence in the twinkling of an eye. To extend this twinkling to the "all shall be changed" part—beyond the mere transformation of one picture to another, needs far more than an instant memory—it needs instant appraisal. It is instant appraisal that this article is about and not surprisingly it centres round the solution I have been closely associated with recently.

There is a tendency for people to be surprised that lighting is still as long a



*System CD Stadsteater, Goteberg, Sweden.*

to my thesis as a young man, being linked to a firm belief that stage lighting paralleled the organist seated at his console rather than an orchestra under a conductor. Stage lighting was so to speak one of the instruments of the orchestra under the director as he is now known or the Producer as he was then called. In retrospect it is impossible to tell whether I was aided or frustrated by the fact that the only form of dimmer control available in Britain was, and would be for a long time, a servo-operated resistance or transformer. Furthermore, it was a very limited servo since it had merely an up and a down clutch to increase or decrease light, response being excellent but any type of positioning out of the question due to the crude and costly form taken by the only polarised relays then available.<sup>1</sup> It was bad enough talking about the extra cost of remote control in a Britain where the dimmers were linked directly to their handles by a  $\frac{1}{2} \times \frac{1}{8}$  inch metal link 15 inches long. To add the

<sup>1</sup> *The polarised relay was needed to form part of a bridge circuit. This would then be deliberately put out of balance at the control lever. The dimmer then moved in the correct direction to restore it.*

complications of polarised relays or multiple chains of limit switches was clearly not to be thought of for one moment.

Nevertheless one had to think of positioning dimmers and Britain was not unaware of such things since all-electric systems were becoming available in the United States. Of these the most famous was that in the Radio City Music Hall still in use. Such a system of thyatron-controlled saturable reactors was costly indeed.

So it is that one finds on my first Light Console the emphasis on *playability*—the assumption being the need for a very skilled operator with a keen eye to reproduce the various changes once the curtain had risen. This would have been excellent for the Super Cinema of the day and reasonably practicable for the theatre of spectacle. In fact the Light Console never got into the super cinema for cost reasons; but when, after the war in the early fifties, the fourteen made have been working musicals there has been remarkably little friction in achieving the lighting requirements. In the precise lighting of straight drama or for television it would be quite another matter. I am certainly not



*Experimental system KTV using "Shift", 1959.*

prepared to advocate that type of instrument today, though I do feel that for the Palladium type of show it was ideal.

It is a strange fact that the original Light Console confined any provision for positioning lighting to a crude means of resetting in a blackout or with the curtain down when of necessity the operator could not possibly judge by eye. There were four dials, one per colour, the idea being that one started with all the dimmers at zero and as the various marks were passed the appropriate stop keys could be knocked off at say " $\frac{1}{4}$ ", " $\frac{3}{4}$ " and so on. If a large block of lights had to be knocked off one would use one of the pistons under the keyboard which after all could readily be set since they were "instantly adjustable" using the remarkable crossbar relay of the John Compton Organ Company.<sup>2</sup>

I realised of course that if one had to do this in a hurry it was expecting too much of any human operator, including my young self, so a strange arrangement known as

<sup>2</sup> *This relay continued to be used for group memory by Strand Electric until literally three or four years ago. Since the device was invented and first made in 1929 this was not a bad run.*

"sheet 8" was devised to provide an automatic store of levels to be brought into play when necessary. It operated in conjunction with a dummy dimmer tracking a series of cam-operated limit switches and provides the reason for the nine black notes that appear on the bottom keyboard of the first Light Console. These were intended to give intermediate increments of light, i.e. nine steps of 10 per cent. To set this, one had to press the appropriate colour key and the black key for level in conjunction with the selection of stop keys to be thrown off. It sounds like something of a mental exercise, and so indeed it was. Nevertheless, although I dropped the idea overboard when we came to sell our first Light Console to the Lisbon Opera in 1940 the black notes were restored in post-war models as groups of five. They were then associated with the setting of the four colour change semaphores plus clearance for white. On the last two or three consoles a selector switch arrangement was provided to do much the same thing.

Thus the great battle has always gone on between what one would like to do and what there was the slightest chance of selling. As soon as a good and inexpensive

polarised relay turned up, servo operation of our clutch-operated dimmers became the rule and the systems known as CD and C were supplied in large quantities. It was in fact easy to replace the organ keyboards with positional levers and yet retain the stop-key selection and group memory action of the original Light Console. Precision reproduction and yet playability had been achieved.

This was not enough, however, and one looked around for what one would have liked to have had in the thirties—namely a means of precisely recording each lighting picture. Yet all the time of course I was haunted by the need to keep full facility for improvisation and modification.

To do this a suitable channel control is needed. In the case of the firm of Siemens a servo-operated channel controller was adopted for their post-war all-electric controls. This was needed in order to reproduce, albeit in miniature, the standard form of mechanical-interlock control panel German theatre was used to. This system has been adapted for use in conjunction with various forms of pre-setting or record-state holding ever since. A Siemens switch-board as far as its main panel is concerned is a miniature of our clutch-operated dimmer bank, with the dimmers (i.e. the control pots) at one inch centres instead of the five-inch centres of the full-size dimmer bank. The levers themselves originally controlled magnetic amplifiers and latterly thyristors.

Such a method did not appeal to me—one good reason being that Strand Electric could not make anything of the sort accurately at the right price. Nor could a panel of 200 such levers be small enough—the ideal of the original Light Console with everything within arm's length of an operator seated at the desk being still firmly in mind. After all, this ideal had been realised in two cases—both of 216 channels—namely at Drury Lane and the London Coliseum.

My first attempt to provide a substitute for the dimmer lever as a channel controller suitable for use with a memory system came in 1959. The System KTV<sup>3</sup>

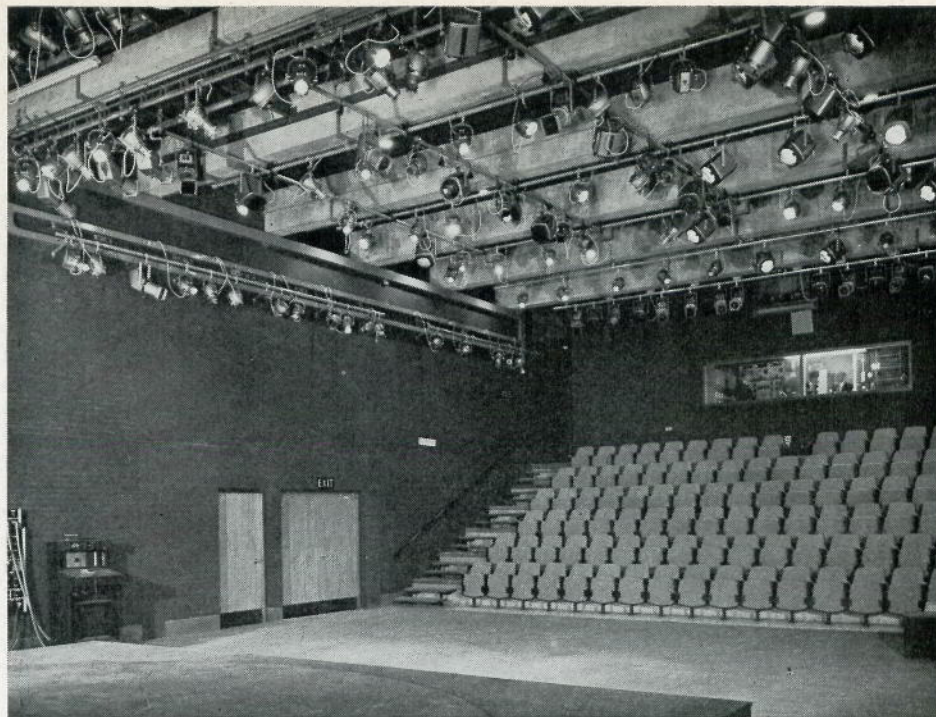
operated in conjunction with Hollerith punched card to record and playback the dimmer intensities. To set up these levels in the first place and to display them ready for instant modification afterwards, we had a column of luminous push buttons giving Full and Off and intermediate steps of ten per cent. To cover the gaps a “half” push could be used along with any other; thus  $40 + \frac{1}{2} = 45$  per cent. There were in fact 11 pushes to a column and each push had to be large enough for clean finger operation, which of course made the columns decidedly unwieldy. Obviously an array such as this for each dimmer channel on a system of 200 or more channels was out of the question.

To get over this the system known as “Shift” was designed and patented and publicly shown in 1959—at the same time, incidentally, as Strand's first experimental thyristor dimmer; probably the first for 200-volt plus range anywhere. By means of master shift buttons a set of 10 or 20 complete channel controls could display say 1–20, 21–40, 41–60, and so on. More compact pushes were envisaged scanning thirty or forty channels—a family group of lighting at a time. I must confess that I never envisaged reduction of scanning to one at a time as adopted by Thorn later. The reason for this “oversight” was my inborn preoccupation with the control of theatre lighting rather than television lighting, and more especially with the playability aspect. Perhaps having once upon a time allowed the fingers to ramble or race over the keys of the Light Console—my subconscious self rejected out of hand the calling up of channels by number, one at a time.

The fact that lighting was then done (and to a large extent still is) by calling out circuits one at a time and laboriously fiddling with them—up or down—does not, and never has, reconciled me to the process.

(To be concluded)

<sup>3</sup> These initials—a coined German portmanteau word stood for *KLONKTECHNISCHWERKE* illustrating the gay approach of earlier days. Incidentally in the photograph on page 93 it is *Len of Len's Choke (System LC)* operating it.



The Allardyce Nicoll Drama Studio, University of Birmingham, showing some of the seating and control room at rear.

## Academic Theatre

Percy Corry

To one who, in the forties and fifties, expended a lot of energy in trying to convince resistant education authorities that they should plan and equip stages in schools and colleges with some reasonable regard for their functional needs, it is most interesting to observe the marked change of attitude of those same authorities in the seventies. In 1949 I wrote *Stage Planning and Equipment* to shed light in the dark places and, somewhat tentatively, suggested stage lighting schemes that could cost £500 or so, but knowing that any such sum was likely to be dismissed as highly extravagant, hastily followed up with possible alternatives that might cost less than £200. In 1954,

at question-time during a week-end Drama Course for Teachers, there were bitter protests that in their fields of activity it was useless to talk in hundreds: fifty pounds was an elusive maximum and, in any case, fifteen amps was likely to be the maximum supply available. As a consequence, *Stage Lighting on a Shoestring* was written and ran into several editions.

In those days, of course, drama in schools was mainly restricted to end-of-term assaults on the classics by senior students, or perhaps to Nativity documentaries with large juvenile casts of devout shepherds and swing-winged angels. Any “Drama” that was incidental to school

productions of that period may, on occasion, have been slightly creative: it was never "Creative". Now, Drama in Education is not only creative, it has become academically respectable: it is an important part of the syllabus with its own specialist tutors and must be ranked with Art and Science in having the right to demand exclusive space and equipment for its activities: it must be catered for in a big way and damn the expense.

Any self-respecting new school must have its drama studio but there is some variety in specifying the precise requirements. The old assembly hall, with or without its old theatrical inadequacies, is out. What is now demanded is a space that can be converted into alternative forms of theatre, with appropriate equipment for each form. One may not know exactly what virtue is inherent in this flexibility of form, but as such flexibility is a consistent requirement, some virtue there must be. Performance to audiences is now something less than a primary function, but audience participation is a frequent requirement so that audience accommodation becomes a tiresome necessity.

### Flint High School

This school was built in 1970: its Drama and Music Studio has an overall size of 55 ft. by 40 ft. There is a permanent stage 24 ft. deep, plus an apron of 9 ft. which can be removed to form an orchestra pit or to increase the main floor area. There are five permanently tiered rows of seats at the rear and three such rows at each side. It is possible to have an acting area of 20 ft. by 20 ft. for Thrust or In-the-round performances. The seating capacities are: Prosc. 250; Thrust, 200; Round, 240.

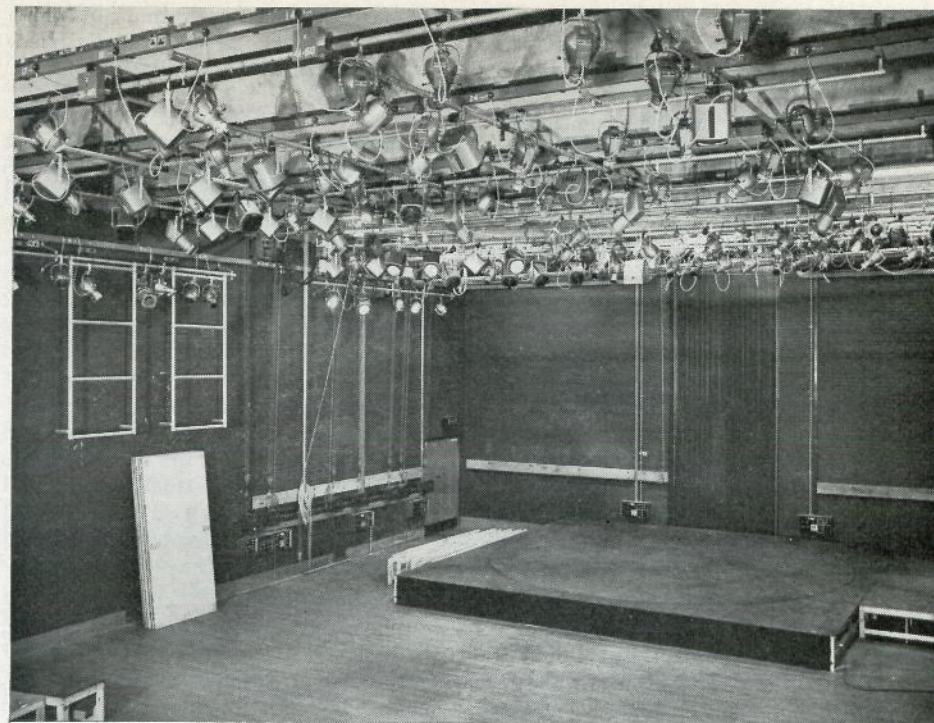
The permanent stage has a removable proscenium frame, creating an opening of 34 ft. by 12 ft. 6 in. Over both auditorium and stage is a tubular frame grid to which lighting barrels, curtain tracks, etc., are fixed. Sixty lighting circuits are wired in pairs to a patch panel on which 30 Thyristor dimmer channels can be selected. The

school has only a limited number of lanterns but can draw on a central pool of equipment owned by the county. There are likely to be anything from 30 to 60 lanterns in use for a particular production.

The Flintshire Education Authority have an interesting organisation for the development of theatrical and educational drama in schools and in youth clubs. A number of actor/teachers are employed as specialist tutors and performers, visiting senior and junior schools where they work in close co-operation with the class teachers. The actor/teacher team tours plays for youth clubs. They have also acted as tutors on courses for teachers and adult drama enthusiasts. The studio at the Flint High School is not used exclusively by that school and was something of an experiment. Other school studios in the county will benefit from the experience. The permanent stage is of doubtful value and limits the purely educational exercises for which a large area at a single level is preferred. The usefulness of the grid is limited by lack of access above. A lot of tediously laborious ladder work is necessary to move around the lighting equipment to suit the alternative forms of theatre. Without access above, the labour could only be avoided if the grid were equipped with sufficient lanterns to ensure that each form of theatre had its fixed lighting rig. Which is good enough cue for the entry of the

### Birmingham University Drama Department

This studio was planned to occupy a space within an area already determined by the design of the whole building in which it is sited. The overall size of the studio is 70 ft. by 40 ft.: this excludes workshop, recording studio, dressing rooms, tutorial rooms, staff offices, and so on. Flexibility was again a stated requirement and flexibility has been lavishly catered for. There is a 24 ft. diameter revolve fitted to a removable truck which, with the addition of folding rostrums, can form an end-stage, with or without proscenium. This



*The Allardyce Nicoll Drama Studio, University of Birmingham. Architect: Arup Associates. Consultant for Lighting Sound and Machinery: Theatre Consultant Services (Martin Carr).*



*Rank Strand Memocard control system with masters centre under window, channel controls on left and card readers and patching on right.*

stage can be dismantled in sections and completely removed into the back-stage area. Portable bleachers provide seating to augment six permanently tiered rows with 99 fixed seats when thrust or centre stage is required. For proscenium or open end-stage more than half of the seating is on the flat floor. Maximum capacity is 206. This studio, like that in the Flint school, has a fixed grid without access above but (unlike Flint) it has 250 lighting units installed (Patts. 23, 123, 223, 264, 252 and 49T). As some wag remarked, that's one for each member of the audience plus a generous margin for cast, stage staff and the usherettes.

The punched-card system of control has 100 dimmer channels and change-over switches allow for the more or less fixed alternative lighting rigs to suit the alterna-

tive forms of theatre. The grid extends over the whole floor area and is comprehensively equipped. There is a most impressive cyclorama track.

As an erstwhile salesman of stage equipment I am filled with envy of the blokes now able to book such whacking orders as are lying around. As a semi-

detached septuagenarian with a consuming hatred of my tax inspector, the current lavishness gives me furiously to think.

We regret it was not possible to include photographs of Flint High School. These were not to hand at the time of going to press but will be published in our next issue.

## “When I Consider How My Light is Spent . . . ”

Mervyn Gould\*

Perhaps it's a secret guilt-complex about being a provincial peasant, but I find it very frustrating to see in TABS photographs of lighting rigs on tour—of booms and portable boards. For my own part I never seem to dare deviate from the theatre's standard rig, unless it is to ask for a few specials or a cyclorama groundrow. On reflection it's more probably the subconscious feeling that my lighting isn't good enough to warrant the trouble of re-rigging!

It is, however, for all the similarly under-privileged that I write. In addition, as our tour is at the time of writing still under way and the show still developing, readers in the provinces may have an opportunity of seeing for themselves what they have been reading about. The show under discussion is Donald Swann's new autobiographical revue *Between the Bars*. Two recent dates together in chronological order neatly illustrate the extremes of equipment with which such a show has to be lit.

At the Stables Theatre Club, Hastings—a delightful and friendly little Theatre Club—the lighting is frankly limited. F.O.H. positions are composed of two vertical bars on the side walls. These

positions hold between them four Patt, 23s, two 123s and two antique Patt, 43s. Bar 1 holds four Patt. 43s; Bar 2 four Patt. 123s. The cyc. batten is too short and too close to the cyc. and the cyc. groundrow was formed by the floats moved for the occasion. Side lighting was given by three focus lanterns on telescopic stands; and there was one special, a Patt. 23 with gobo focused on the cyc.

Control of this little lot was achieved by (or possibly, in spite of) an interesting combination of a home-made switchboard with patched dimmers, in addition to two separate dimmer banks and a Junior 8. This gave a total of 19 slider dimmers to control, with no mastering facilities. For certain cues the Junior 8 “individual or paired” switching was used.

The two most unfortunate effects of all this were that two operators were needed for the board, and that the subtle cross-fades weren't—they were step-fades and rather jerky ones too. None of this modern nonsense about the lighting designer being aloof from the operation either! On the opening night I was the second operator

\*Mervyn Gould is a free-lance lighting designer and stage manager based in Lincolnshire.

and beside myself with apprehension, having forgotten what these home-made boards were like. As one dimmer—the cyc. top blue—was home-made, with the sliders ungreased and mainly out of correct load range, it can be imagined that the lighting changes fairly threw themselves at the audience. On the basis of lighting the lights and not the show, the whole thing was of course highly successful. Fellow electricians will be delighted to learn that an SP 40, 2 Preset is due to go into the Stables very shortly. This will add greatly to the facilities of a theatre which is in other ways already well-furnished.

Conversely—as might be expected—at the Thorndike, Leatherhead, all was ease and comfort. The SP80 and the F.O.H. bridge made short work of focusing. True to my form in using a standard rig, I hadn't specified what type of lantern I wanted in each position (assuming certain things like the likelihood of Patt. 264s front of house and Patt. 223s on bar 1). I had of course sent a colour call and specified the type and position of specials. In the event, typically with this show, the piano—which forms the focal point for focusing (if you'll forgive the expression)—wasn't where it was going to be when I designed the lighting.

When I started in stage lighting, like Francis Reid<sup>1</sup> I had two limes, half a dozen Patt. 23s and 123s out front, and a float, three battens and assorted wing floods on stage. I longed for the day when I could practise sophisticated lighting in a modern, well-equipped theatre. Nothing in this life is smooth and connoisseurs of the Coarse Theatre<sup>2</sup> (which, let's face it, most of us delve into from time to time) will be delighted to learn of a shortage even in the Thorndike of Ref. 484 spigots, which meant that for a couple of days two Patt. 23s with gobos had to be taped into their stands; and that, owing to a shortage of Cinemoid, No. 6 (Red) had to be interspersed among the No. 13 (Magenta) in the cyc. pit. Somehow to me all this brought

<sup>1</sup> TABS, Vol. 29, No. 2.

<sup>2</sup>The Art of Coarse Acting, by Michael Green. Published by Hutchinson. Price £1.

the whole venture on to more homely, familiar territory.

Comparison of the two rigs reveals an amazing disparity, yet because of the difference in size and atmosphere of the two theatres, I don't think that the majority of people seeing the show would notice any difference in the end product. This I suppose is the cross that lighting designers have to bear.

The show naturally revolves around Donald Swann, who sits and plays or stands and talks at the keyboard throughout the show. In addition, the company of five singers appear on stage either singly or in groups. There are several changes of clothing, but the only costume as such is for a sequence of songs from *The Bright Arcade*—an unstaged operetta about the Great Exhibition of 1851. It is the musical items, introduced by Donald's talk, that create all the changes of mood. The content of the songs ranges from settings of religious poetry to true Flanders and Swann, taking in C. S. Lewis and Sydney Carter by the way. It is part of the show's charm that these all tie together, and for a setting of the *Nunc Dimittis* to get loud applause in a theatre is to me something new.

Only two projected effects are used at present, though this may well alter. At the opening of Part Two there is a cyc./floor projection of a vaguely jigsaw pattern for the song *Metaphysical Jigsaw*. The close has a prison bar effect on the cyc.—both effects are achieved by Patt. 23s with gobos. The jigsaw pattern was back-projected at Leatherhead. The transmission factor of the cyc. did cut down brilliance but this method solved the problem of intrusive cut-off by the masking at the side of the cyclorama. A total of four jigsaw gobos were used, but I think in future this will be increased to six.

During the show the lighting is governed by area. Donald has a group of lights to himself; two backlights (F.O.H. wall slots or down-stage right perches), two on the F.O.H. bridge and two from bar 1 (one vertical to catch the hands and keyboard). In addition the bar 3 back-lighting Patt. 243s (in Nos. 50–51 and 50–53 tints) give



*Between the Bars at Stables Theatre Club, Hastings.*

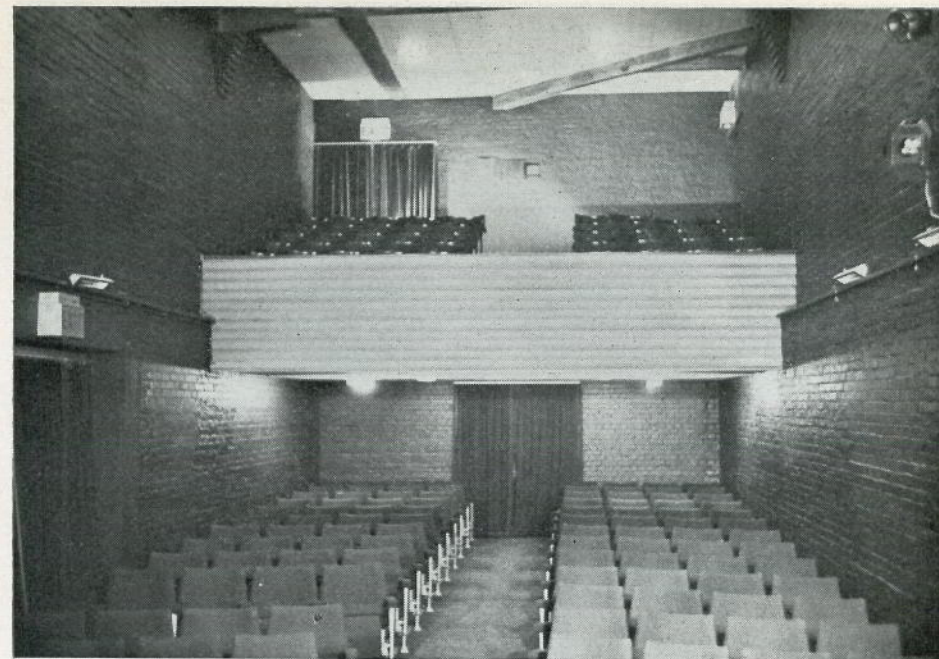
the stool, the keyboard and Donald himself a rim light. The latter were not used at *Leatherhead* because the piano was so far down stage, on the forestage in fact.

The singers group in various positions, the main ones being: leaning on the up-stage side of the piano where they are caught by F.O.H., bar 1 and F.O.H. wall slots; in the curve on the piano—the “concert” position (top lighting from bridge with a little side lighting); and stage left, level with the piano. All these are coloured in pale tints, Nos. 50, 51, 52, 53, 54. The strongest colour on stage is from the pair of Patt. 223s in No. 9 (pink) on the downstage booms. Out front the two Patt 264s in No. 36 (Lavender) drop straight down to their own corners to light the narrators for two songs in the second half. The one on stage right is balanced by a pale Patt. 264 from the Prompt side of the bridge.

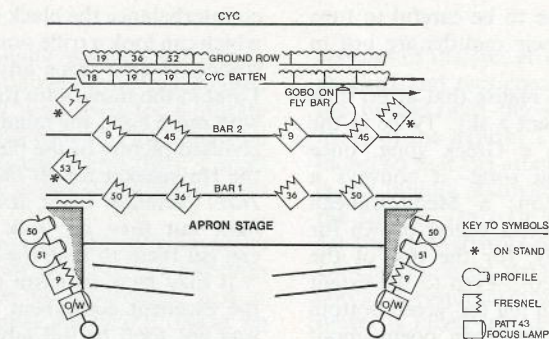
It is on the cyc. that we run into a riot of colour. Having always been in love

with super cinemas, I read Rollo Gillespie Williams at an impressionable age—though later reading of Bentham on *Colour Music* calmed me down and improved my taste. The *Leatherhead* colouring with Nos. 1, 6 and 41 at the top, and 13, 23 and 19 at the bottom ensured “variety” in the widest meaning of the word! Care was taken however not to make the cyc. too distracting and, as for some items black travellers were drawn, the eye was able to return refreshed to the feast.

Of course, some effects were just not possible at Hastings. Two Patt. 264s in No. 40 (Blue) gave two tight pools at *Leatherhead* for the two men in *Rabbinical Tale* and looked very effective. In Hastings they had to be washed by the Patt. 123s in No. 9 (Pink). Nevertheless, although there was a desperate shortage of lanterns at Hastings, there were not many occasions when the grouping had to be changed to get the cast into the light. Fewer lanterns



*Auditorium, Stables Theatre Club.*



*Lighting plan at Stables Theatre Club, Hastings*

can perform a set task but one loses the tightness on a particular group that more lanterns can achieve.

One great difficulty about a show like this is that the singers’ faces have to be seen before the words they are singing can be heard. I think the most esoteric—

and to me successful—lighting is for the song *Paradox*. In this, apart from a little light on Donald, there is just a blue cyc. and cross lighting from the carefully barn-doored Patt. 223s on the booms. The combination of shadow and No. 9 (Pink) seems to catch the mood of the song. Even



Thorndike Theatre, *Leatherhead*.

here the singers have to be careful to turn on stage, so that their mouths are not in shadow.

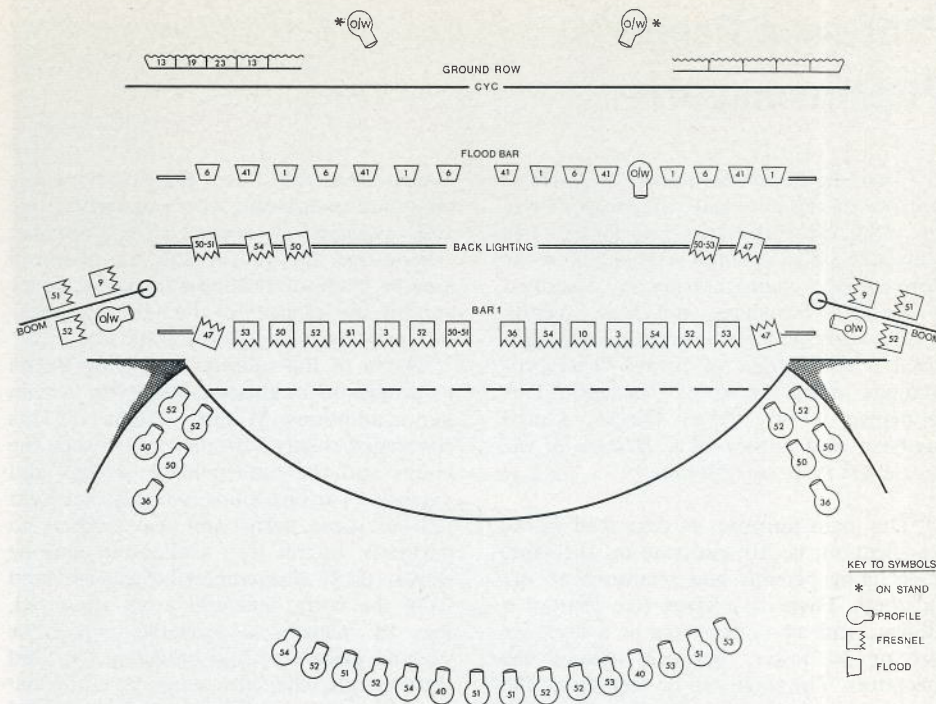
It is important to realise that at no time does the cyc. represent a sky. Twice in the show—once during a Greek song, once during an autumnal song—it conveys a mood by implication; a Mediterranean brightness for Greece, a yellow-brown for autumn. Fortunately, for the rest of the time it is simply décor—even to the extent of a snap change to a red top/green bottom for *Senex*, a John Betjeman poem about lust.

The black travellers, mentioned above, are all there is in the way of “scene change”, and draw mid-stage. For *The Ladies*—a Rudyard Kipling barrack-room ballad—the effect is rather one of a drawing room, with four Patt. 264s (two bridge, two wall slot) making a symmetrical pattern through the dust. Three fall on Donald, and one slops a pool of No. 50 (Pale Yellow) on the floor upstage of the piano. This helps to

counterbalance the black mass of the piano, which can look a trifle ominous in quietly-lit scenes. It also stops any sense of gloom. Later in the show, with the same setting but with more light, the mind harks back to the civilised picture of the blue velvet drapes at the Haymarket for *At the Drop of Another Hat*. Certainly black drapes are hard to light but they do look gorgeous if you can get them to take the light.

It may be a criticism of my design that the excellent equipment in the Thorndike was not used to full advantage. After all, in the final arrangement only five lanterns on bar 1 were used, and none on bar 2 or on the back lighting bar. In spite of appearances however I think there was adequate coverage, though I now feel I could have used a few more Patt. 264s from the bridge. This would have made balancing more difficult though and in these days of massed spots, let me be content with a touch of under-lighting!

The Patt. 243s in No. 47 (Apricot) on



Lighting plan for *Between the Bars* at Thorndike, *Leatherhead*

bar 1 were originally planned for bar 2, but I found them on the former and so used them there. They were used for a full-up snap cue near the end of Part One and added a lot of strong, warm light. I seem to share a delight in No. 47 (Apricot) with Geoff Haley<sup>3</sup>.

Back-lighting as planned proved to be impossible at both theatres; at Hastings because there was no equipment, and at *Leatherhead* because the piano, being on the forestage, couldn't be reached from bar 3. In the event as the cast were almost always on the apron, facial modelling proved to be much better than I would have thought—or deserved to attain.

The show is a lighting designer's dream and the end of Part One with a five-part fade, ending with a general dim and lagging a special on one girl, can be sheer poetry in a theatre with a good blackout. No tabs are used in the show and the stage dressing

consists of the cyc. groundrow blue slightly checked and two checked Patt. 264s from the bridge onto the stool and keyboard. Most of the lighting cues are gentle cross-fades, so that the attention of the audience is not unduly distracted from Donald and the singers. On tour I have been grateful for the SP thyristors rather than the earlier LC chokes, as on the latter there is a slight check on common circuits when the second preset is faded in. Also, after a snap BO, the choke “memory” is disturbing as in this show the follow-on is immediate.

I have not been too specific in this article as the show, and therefore the lighting, is developing and changing. The obvious answer is to come and see. I would be delighted if any interested reader of TABS would pass on his or her thoughts—or seek me out after the performance.

<sup>3</sup> TABS, Vol. 29, No. 2.

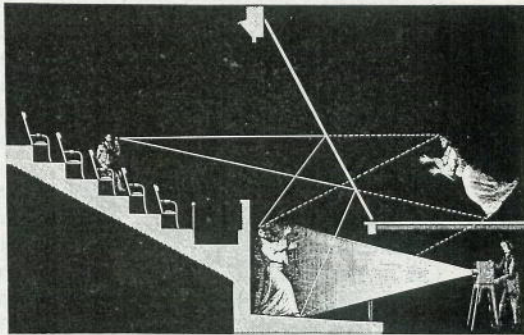
# Professor Pepper's Phantasmagoria

"It will, no doubt, be quoted hereafter as evidence of the practical tendencies of our age, that an ingenious gentleman has lately not only invented a ghost of a far more effective character than any described in the old romances, but has recently actually patented his invention, and rendered it the subject of formal legal proceedings in the Court of Chancery. This gentleman is Mr. Henry Dircks, a civil engineer, and author of a *History of the Search for Perpetual Motion*."

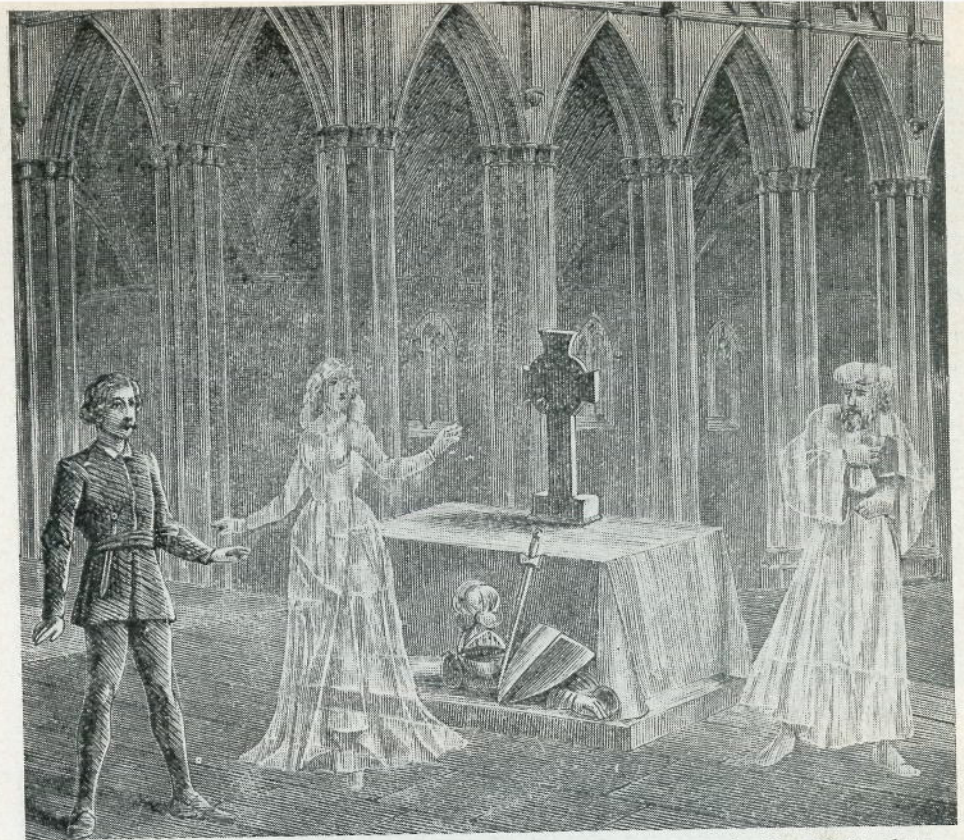
"The main purpose, as described in the specification, is, 'to associate on the same stage living persons and phantoms to act together'. There is a stage like that of a theatre; and an under-stage at a level six feet or so lower, between it and the spectators. The stage can be seen by all the persons in the hall or theatre; but the under-stage (though nearer) is so managed, by means of screens, dimness of light, and dark baize lining, that its existence is scarcely even suspected by most of the spectators. There is a large plate of un-silvered glass nearly upright, between the under-stage and the stage, so artfully framed and adjusted as to be invisible, and allowing persons on the stage to be seen almost as clearly as if there were no glass there. An actor, whom we will call the hidden actor, is on the under-stage, entirely below the level of the real stage, and out of sight of the spectators. A strong light is thrown upon his face and figure, and is reflected from the front of the glass towards the spectators, who can thus see the reflected image, but not the hidden actor who produces it. For brevity's sake, we will call this reflected image the phantom. In order that the reflected light may come in a proper direction to the spectators, the glass is placed either upright or slightly leaning forward at the top, according to the height at which the seats of the spectators are placed. If the light is very strong on the

hidden actor, and rather faint on the glass, the phantom appears with wonderful force and vividness. By means of a trap-door closing over the under-stage, the phantom may be made to disappear instantly; or by varying the intensity of the light, the phantom may seem to dissolve gradually."

"Most of the subsequent patents relate to extensions of this method, with certain minor additions. Munro's patent (1863) is concerned chiefly with placing between the lamps and the hidden actor screens and media of various kinds, so as to let light fall on some parts, and leave others in darkness. In this way a phantom may be shown as if dismembered, head severed from the body, legs and arms separated, &c. By placing a movable mirror or silvered glass near the hidden actor, and shifting this while the action is going on, the phantom may be made to go up and down and across the transparent glass. By the aid of two or more mirrors, the phantom may be magnified or diminished in



size. By other arrangements, the visible actor may seem to enter a solid cube, or may seem to give a bottle or a letter to the phantom—effects due, in fact, to the superposition of a reflected image upon an object seen by transmitted light. Maurice's patent (1865), instead of causing a hidden actor to be reflected as a phantom, makes



"The Knight Watching his Armour" as presented by Professor Pepper at the Royal Polytechnic Institution, London.

the visible actor himself become a sort of phantom before the eyes of the spectators. The phantom of a hidden object is superposed upon the real form of the actor, by nice adjustment; and then, if the light is dimmed which falls upon the actor, and the light brightened which falls upon the hidden object, the former will appear to fade away into invisibility; or the arrangements may be so managed as to make him seem to go through a solid wall, or to be suspended in the air, or walking, or flying."

This illusion became, and indeed still is, known as Pepper's Ghost by reason of its long presentation at the Royal Polytechnic Institution where John Henry Pepper was Director and Professor of Chemistry. The Institution was founded in 1838 for the advancement of the arts and practical sciences. Pepper, aided and abetted by T. C. Hepworth, his assistant, would seem to have successfully combined showmanship with instruction in popular science.

Brian Legge

Abstracts from—  
*Invention and Discovery*, by Ralph and Chandos Temple, published 1892 by Hodder and Stoughton, London.

*Chambers's Encyclopaedia*, published 1868 by W. and R. Chambers, Edinburgh.  
*The Forces of Nature*, by Amédée Guillemin, English translation 1877 published by Macmillan, London.

*Cyclopaedic Science Simplified*, by J. H. Pepper, published 1890 by Frederick Warne, London.



# “A Garden is a Lovesome Thing God Wot!”

“The Dream’ has rarely, if ever, been presented in such really ideal conditions, for the banks (on which indeed wild thyme might have grown) and the slight slopes and gentle undulations, with thick background of trees and bushes to close in the stage, formed a perfect setting for the gambols of the fairies, the antics of the crew of patches, and the nocturnal adventures of the quartet of Athenian lovers. Then, towards the close of the evening, when one might have expected to hear Philomel with lullaby, instead of the magnified sounds from amplifiers hung from trees, strong lights illuminated the grounds, or, at any rate lighted up the faces of the performers. Cunningly prepared also had been the colour scheme designed for this delightful open-air production, as presented for Mr. Sydney W. Carroll and Mr. Lewis



1933—A Midsummer Night's Dream, Regent's Park Open Air Theatre.

Schaverien by Mr. Robert Atkins as producer, with Sir Philip Ben Greet as Master of the Greensward.”

—“The Stage”, July 13th, 1933

\* \* \* \*

“I detest seeing plays out-of-doors. On the hottest summer night I prefer sweltering in a stuffy theatre to watching a play in the comparative coolness of the wide open spaces of Regent's Park, though perhaps I might enjoy playgoing in an open air theatre which seated only three or four hundred people, where all the audience were reasonably close to the stage and there was no need for microphones. In the Regent's Park theatre, which seats 4,000, the actors are not only frequently inaudible but also, from the more distant seats, almost invisible. But the success of the Open Air Theatre founded by Sidney Carroll in 1933, with Robert Atkins as his producer, proves that there are plenty of people who do not share my prejudice. . . .”

—“The Other Theatre”  
Norman Marshall, 1947



1971—Romeo and Juliet (set also used for the current Midsummer Night's Dream), Regent's Park Open Air Theatre (photo, Daily Telegraph).

“The non-theatre goer is often tempted to visit an open-air show and may be tempted afterwards to become a regular theatregoer. To my knowledge many thousands of people have seen Shakespeare for the first time through the open air theatre movement, and they have liked what they have seen, although without scenery and artificial lighting, and, in recent years, under bad weather conditions.”

—(Ib., Robert Atkins)

\* \* \* \*

“Played against the four-square multi-arched set designed by Kit Surrey for ‘Romeo and Juliet’, this production confirms my feeling that open air theatre works best when it resolutely turns its back on nature. Not for a long time have I encountered a production in the park quite so well-spoken, tight-knit and physically concentrated as this one.”

—Michael Billington  
“The Times”, July 16th, 1971

\* \* \* \*

“Purists will be horrified to learn that their theatre design must begin with the

question of scenery. Is it going to be used or not? My answer is that I know of only one form of theatre where scenery will not be used and then only because it cannot be—*theatre-in-the-round* otherwise known as the *centre stage* or *arena theatre*. Even here it may creep in: someone decides to cover up a few of the seats at one end with some kind of erection just this once. The moment some real change to another form is possible, as at the Octagon, Bolton, the stuff turns up in quantity.”

—*Tabs Book*, “New Theatres in Britain” 1970

\* \* \* \*

“Scenery can be used extensively in theatre - in - the - round (despite what Frederick Bentham says in his introduction to *New Theatres in Britain*). We have used every kind of set from bare stages with sombrely painted cloths (“*Coriolanus*”), from writing on the floor (documentaries), to elaborate composites with *rostra* providing levels for sitting eating, working at, preaching and gazing at landscapes (“*Anna of the Five Towns*”).”

—Peter Cheeseman  
“Theatre Quarterly”, January 1971

## Book Review

"Beginners Please—working in the theatre", by Elizabeth Sweeting. Educational Explorers, Reading. £1.50.

This book is published as one of a series "My Life and My Work" on careers. It is not, therefore, a schedule of jobs in the theatre—that is an appendix—but a lively autobiography of Elizabeth Sweeting's work, both in and out of theatre. The common link is her equable enthusiasm and "passion for people". If the other thirty-odd career books communicate the same pure enjoyment of working, then youth has huge encouragement but a difficult choice.

After First Class Honours at London and two years of thesis research, Miss Sweeting set out to teach but soon joined the English Department of University College, London, and was quickly embarked on a secure academic career. Flat sharing led to vocational A.S.M. work and the academic mind was influenced by plays in performance.

In 1946 Miss Sweeting "held her nose and jumped" to work in the theatre. She landed with the Company of Four at the Lyric, Hammersmith, and from then on has looked back only in this book, and this to our advantage. Let readers have the pleasure of reading out what she did.

Miss Sweeting seems to have the gift and

application to leave the most enjoyable job for another which becomes more enjoyable. The challenge of the new job must have been the magic ingredient.

The "firsts" are predominant and usually by invitation—and what a list—Glyndebourne; English Opera Group; Aldeburgh Festival, a sort of sorbet with Marks & Spencer and so to Oxford. It is an exciting description of what had to be done and how, with a chapter on how to set about becoming an administrator. In Miss Sweeting's own words:

"So if you like a full life, a busy life, if you admire the creative above everything else, then the world of the arts is for you. It demands the digestion of an ostrich, adaptability, physical and mental ability to change plans, opinions and personal arrangements at a moment's notice, and unending patient attention to detail. You must like people, and understand them as fully as you can, and you must, above all, *enjoy* it. It is not outrageously rewarding in terms of cash, but, if that is not all you seek, what you will find will be the satisfaction of spending your life doing work you like. The more closely my life and my work are identified, the happier I am, and so may you be if you join the world in which I live."

B. E. BEAR

## Correspondence

### Contracted Time

Dear Sir,

At a recent meeting of the ABTT Lighting Committee mention was made of the difficulties sometimes experienced in opening shows early in the week, and of the protracted time taken for fitting up and lighting in the West End. Readers might be interested to hear of a recent case which shows the other side of the coin.

*A Voyage Round My Father* moved into the Haymarket Theatre on Sunday, August 1st, after a week's try-out at Brighton, the set and electrical equipment arriving in London about 0900 hrs. Michael Codron's production manager having done his homework, the set (as usual more complicated than it looks) and the electrical rig went up smoothly, and by 19.45 it was possible to start focusing lanterns. 114 units were pointed in the right direction by 23.15—an average of under two minutes per lantern. After a good night's rest plotting started at 10.10 on Monday, and I was able to complete 42 cues in 3 hours 20 minutes of working time. No time was lost in plotting because the Haymarket is equipped with an IDM switchboard capable of recording a state of lighting instantly. In many theatres it takes the electrician as much time to write the cue down as it does the designer to decide what the cue should be.

As soon as lighting at the Haymarket was completed we flipped through the cues and were more than ready to start a full rehearsal at 18.15. Unfortunately, a gremlin put a spoke in the wheels of the IDM during the rehearsal, but this was quickly rectified the following morning. We could have opened Tuesday night but because of another first night already booked we actually opened Wednesday.

I was particularly pleased that although there was no rush to focus or to light it was possible through decent equipment, careful planning and co-operative staff to demonstrate that Monday or Tuesday opening in the West End is by no means difficult.

Moaners and groaners, please note!

Yours faithfully,  
ROBERT ORNBO  
*Theatre Projects, London.*

### Brief Encounter

Dear Sir,

I would like to write to endorse your editorial "Brief Encounter" in the June edition of TABS, in which you comment on the inglorious vagueness of so much so-called thinking about Arts Centres—that multi-purpose panacea for everyone of our undiagnosed spiritual ills.

Certainly the nature of an Arts Centre remains unclear but may I suggest that there is no need to seek to define it in terms of a building; but rather in terms of its activities in and for the community.

I think we may lay claim to being one of the very few permanent and professionally run Arts Centres in Britain, serving a region of some 1,000 square miles. We have our own theatre company yet we do not possess a multi-purpose auditorium or, indeed, the complex of buildings with which the word "Arts Centre" is usually associated. The communities we serve have some excellent and largely underused buildings—churches, town halls, ballrooms, theatres, cafes, cinemas, school halls, etc.—in which we promote our many activities.

Perhaps, then, an Arts Centre needs to be redefined in terms of a centrifugal rather than a centripetal activity: an infusion of regenerative energies moving out into the community. Or in other words in terms of people doing things rather than a building.

Yours sincerely,  
JOHN LANE  
*The Beaford Centre, Devon.*

### Lovable

Dear Sir,

Two things cheered me—more than usual, that is—in the June TABS; the letter from Philip Edwards pleading for a return to "a nice wooden cabinet" and then the photograph on p. 53 of your illustrious self sat at what looks suspiciously like exactly that. I do hope that it was not either wood-grained plastic or a "mock-up" prototype to be translated in production into yet another cold stove-enamelled bench.

### Importance de l'individu

Le rédacteur, tout en accueillant avec l'EEC la pratique continentale de dépenser des sommes importantes pour la construction de théâtres, espère que notre individualité sera sauvegardée au sein de cette communauté élargie et voit dans le théâtre une plateforme d'où l'individu peut s'exprimer.

### Quel genre de théâtre

Les plans d'une telle plateforme demandent à être préparés avec soin; la représentation et les spectateurs doivent y avoir priorité. A cet effet, il est important de maintenir l'équilibre entre les exigences d'un minutieux planning et l'enthousiasme seul, de peur que l'un ne détruise l'autre.

### Préparer les plans d'un théâtre

Une chose est certaine, le théâtre doit être construit d'une façon pratique. A cet effet, une bonne maquette et le concours d'un expert en matière théâtrale sont indispensables. L'un aide l'homme du théâtre à tenir compte de l'architecture et l'autre rend l'architecte attentif aux nécessités d'un théâtre. Il existe maintenant une Société Consultative du Théâtre en Angleterre.

The majority of the sound consoles we design and make are "nice and wooden" (there have been architects who insist that we encase it all in laminated plastic). Not all, however—export orders providing most of the exceptions. Even here it isn't all gloom; we've overcome the Australian's fear of importing some frightful wood-boring insect to the extent that a lovable mahogany sound console was shipped out for the new Twelfth Night Theatre in Brisbane.

You, Sir, undoubtedly export more than we do, and equally undoubtedly you find more often than not that the overseas specification calls for all-metal construction. It is sad, unlovable, and like most exporting, not *fun*.

Yours sincerely,  
R. BERNARD BIBBY  
*Stagesound (London) Limited.*

### Bars for F.O.H. Spots

Dear Sir,

May I raise a protesting pen about the photograph at the top of page 66 of the June issue of TABS. "Bars to decrease lamp life" would have been a more appropriate title.

It is of course possible to keep the lamp filament in the correct plane using "G" clamps on a vertical boom as shown, but surely it is a job for boom arms. Perhaps this is a silent plea from Mr. Haley for a much needed redesigned boom arm.

TABS should set an example and ban such photographs! (or is the Ed. on a percentage of Class T sales?)

Yours sincerely,  
P. A. BLEASBY  
*Allesley, Coventry*

## Synopses

### Das Individuum Soll sich durchsetzen

Der Redakteur begrüsst die in den EEC Staaten herrschende Gewohnheit, viel Geld für das Bauen von Theater auszugeben und hofft zur gleichen Zeit, dass unsere Individualität nicht in der vergrößerten Gemeinschaft untergehen wird. Er sieht im Theater das Podium, von dem aus das Individuum sprechen kann, sich ausdrücken kann.

### Was für eine Art von Theater

Solch ein Podium für das Individuum muss sorgfältig geplant werden, sodass sein Auftritt und seine Zuschauer die Hauptsache sind. Zu diesem Zwecke muss ein Gleichgewicht gefunden werden zwischen den Notwendigkeiten sorgfältiger Planung und den Forderungen eines unbedingten Enthusiasmus, damit nicht eins das andere schädigt.

### Wie man ein Theater entwirft

Eins ist klar, das Theater muss praktisch sein und dazu braucht man ein gutes Modell und die Dienste eines Spezialtheaterberaters. Das Erstere erklärt die Architektur dem Theatermenschen, der letztere zeigt dem Architekten die Bedürfnisse des Theater auf. In England gibt es jetzt die Society of Theatre Consultants.

Francis Reid, les cheveux en bataille, défend l'honneur des projecteurs devant les adeptes du jeu d'orgue et insiste que là, où les doigts brûlent de guider un rayon de lumière infini, l'important travail de l'éclairage se fait.

Francis Reid verteidigt mit Emphase die Vorteile des Spotlicht, gegen die Verehrer der Lichtsteuerung und besteht darauf, dass hier, wo man sich die Finger verbrennt um den endlosen Lichtkegel zu leiten, hier sind grosse Werke der Beleuchtung zu leisten.

### Meilleur éclairage scénique Résumé

Brian Legge décrit la nouvelle variété de lampes construite pour exploiter les avantages d'une lampe moderne runstène halogène.

### Hellere Bühnengeleuchtung

Brian Legge beschreibt die neue Sammlung von Leuchten, deren Zweck es ist, die Vorteile der modernen Tungsten Halogenlampen auszunutzen.

### L'apparence est trompeuse

Les organisateurs désiraient présenter le théâtre aux enfants; de leur côté, les acteurs voulaient rendre vivant le drame. Mike Doyle décrit la confusion qui en est résulté lors d'un récent Festival International pour enfants à Leeds.

### Es erscheint besser als es ist

Die Organisierenden wollen Kindern das Theater vorführen, die Schauspieler wollen ihnen das Drama nahebringen. Mike Doyle beschreibt die daraus hervorgehende Verwirrung in dem Internationalen Festival für Kinder, das unlängst in Leeds stattfand.

### Scènes dans le théâtre

Frédéric Bentham se lance dans une description, en deux parties, de son dernier jeu d'orgue: développement logique de ses travaux précédents et portée de ce nouveau système, le premier du genre. Ce jeu d'orgue figure sur la couverture de ce numéro de TABS. Il se sert réellement d'un computer et ce n'est pas là une simple astuce publicitaire.

### Scenen im Theater

Frederick Bentham beginnt die zweiteilige Beschreibung seines neusten Stellwerks. Er erklärt, wie dieses die logische Konsequenz seines vorhergehenden Werkes darstellt—das erste Exemplar einer ganz neuen Serie von Lichtsteuerapparaten. Es wird in der vorliegenden Nummer von "TABS" abgebildet. Der Verfasser erklärt, dass dieses Stellwerk wirklich einen Computer anwendet und dass er dieses nicht nur für Reklamezwecke behauptet.

### Academic Theatre

Percy Corry a plaidé pendant des années en faveur d'un équipement approprié pour les théâtres scolaires et universitaires. S'appuyant sur deux récents exemples, il cherche à concilier la prodigalité des dépenses impliquées avec sa propre situation de septuagénaire, contribuable retraité.

Percy Corry, der sich seit Jahren für ausreichende Ausstattung von Schul- und Universitätstheater eingesetzt hat, versucht es, den fast verschwenderischen Aufwand bei zwei derartigen Theatern, die er vor kurzem besucht hat, mit seinem jetzigen Standpunkt als siebzigerjähriger Steuerzahler zu vereinigen.

### Quand je considère l'emploi de ma lumière

Un dessinateur d'éclairage compare les expériences faites en utilisant les installations existantes du Thorndike Theatre à Leatherhead et du Stables Theatre à Hastings, lors d'une récente tournée avec Donald Swann et sa revue autobiographique "Between the Bars".

### Wenn ich mir überlege, wie mein Licht verwendet wird

Ein Beleuchtungsmeister vergleicht seine Erfahrungen bei der Verwendung existierender Beleuchtungspläne im Thorndyke Theater Leatherhead und im Theater "The Stables" Hastings, wo er unlängst auf Tournee mit Donald Swann in dessen autobiografischer Revue "Between Bars" tätig war.

### Professor Pepper's Phantasmagoria

Une note historique sur les origines et l'emploi de ce phénomène naturel connu sous le nom de Fantôme de Pepper.

Ein geschichtlicher Beitrag über den Ursprung und Gebrauch der natürlichen Erscheinung, die sich Pepper's Ghost nennt.

### A Garden is a Lovesome Thing, God Wot

Les articles sur "Le songe d'une nuit d'été", en 1933, 1947 et 1971, font ressortir le contraste entre les divers emplois du théâtre en plein air de Regent's Park. Dans une des représentations, la nature forme la scène, composée d'arbres et de buissons réels; dans l'autre ceux-ci sont cachés et remplacés par la "vraie scène": une maison à trois étages.

Kritiken des "Sommernachtstraum" in 1933, 1947 und 1971 weisen auf verschiedenartige Gebrauchsweisen der Freilichtbühne im Regents Park London. Im Ersten wird die Natur mit richtigen Bäumen und Büschen dargestellt, im Zweiten ist sie verdeckt und es gibt "wirkliche" Kulissen in der Form eines dreistöckigen Hauses.

### Courrier

Une réputation rétablie, une lanterne remise en place et un peu de son pour s'harmoniser avec la lumière.

### Korrespondenz

Ein guter Ruf wird wiederhergestellt, eine Leuchte neu aufgehängt und etwas "Son" dem "Lumiere" zugefügt.