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SHOW SOUND IN THE BRITISH THEATRE

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INTRODUCTION

Over the last ten years Autograph Sound Recording have been involved in the design, installation and operation of sound systems for a wide range of theatrical events from exhibitions and audio visual presentations through all branches of drama, musicals, ballet and opera. It is this background as well as my own experience with the Royal Shakespeare Company over seven years and the National Theatre Company during its first four years in the three auditorium complex on the South Bank; that forms the basis of the observations that I would like to put forward to you.

I would like to outline the role of sound designer in British Theatre since this is my own primary function in the company for which I work. Since my own experience is mainly in the artistic use of sound systems for various types of productions I hope that what I have to say will throw some light on the sound requirements of the various shows that will use the auditoriums and permanent systems that those present at this meeting are responsible for providing.

British Theatre divides into two sections. The subsidised theatres and the commercial theatres. In the main the subsidised theatres have permanent companies performing a variety of productions and in view of this their sound systems tend to be permanently installed. The commercial theatre, on the other hand, is the exact opposite and systems are hired in by the producers of the shows to meet their particular specific needs.

It is in the commercial field that my company tends to specialise and it is therefore the designer's role to identify the type of sound system a specific show requires to supervise it's construction, installation, commissioning and long term operation.

In general, I believe we can divide sound systems into three categories, though productions may require a little of each type.

DRAMA SYSTEM

The first category is the drama system, already outlined to you in a previous paper that relates to the Royal Shakespeare Company at the Barbican. I feel the main requirements for this system is the ability to reproduce high quality sound from both tape and microphone sources.

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Sound will be used in the main to create a specific atmosphere and environment both on the stage and in the auditorium - a sort of sound scenery if you like - relating to the style of the play being performed. Not only will high quality sound be required but extremes of level will be needed along with the ability to hear sound from specific and general speaker directions. The equipment installed will be asked to reproduce the full range of music from traditional instruments, brass and orchestral works through to popular music, and music concrete.

In addition to music reproduction sound effects will be made great use of to create a realistic thunderstorm for example or to produce the echoey atmosphere inside a church. The drama system is a creative tool rarely if ever used for vocal reproduction but needing to have sophisticated routing and level control to ensure flexibility and reliability.

THE MUSIC SYSTEM

In this second category the main requirement is the reproduction of live music. These systems range in requirement from orchestral sound to rock bands and the more avant garde musical performances. The sound will be viewed as part of an overall technical and artistic 'experience'. A constant high level of sound will be required generally only from the direction of the stage, with very little attempt being made at naturalism. These systems will usually be specified in terms of quantity of level since the designer will wish to cocoon the audience in a sound world of their own.

It is important for designers to understand the principals of sound from large stacks of speakers, as well as the problems of providing artists foldback since rock sound often figures in British Theatre either in the scores of modern musicals or because popular music performers take singing roles in conventional theatre shows.

THE VOCAL SYSTEM

In the third and final category of system design the main function is the reinforcement of live sound, usually vocal but sometimes musical. The object of the exercise being to reinforce in as naturalistic a way as possible a live performance. This is done by introducing additional sound signals in all parts of the listening area while maintaining as much live sound as possible.

Since it is this third category of system that I am principally involved in setting up, I would like to go on and examine this in some detail in particular in relationship to musicals.

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THE MUSICAL SOUND DESIGNER

The musical sound designer on being presented with a new show has to design a rig that will adequately fulfil two roles. The first being the consistent collection of sound signals from both actors and musicians and secondly to produce good even distribution of the sound to all of the listening auditorium. The collection of sound, of course, is strongly influenced by the production itself and research by the designer will stem from reading the script, looking closely at the set, the staging and the casting of the actors, the orchestral arrangements, in fact every area of the production. The overall artistic 'look' of the show will significantly influence the sound equipment used. Will microphones and speakers be able to be visible? Is one of the first questions that will have to be asked and if the answer is no presumably they will have to be hidden in the scenery or under costumes. This process of achieving the best possible technical conditions in which to collect sound signals will take some four to six weeks and will involve considering the use of every different type of microphone and speaker to produce the best results. The microphone techniques used will generally be of three types:-

1. Float microphones along the front of the stage for general pick-up.
2. Radio microphones on each principal actor to allow the performer complete freedom of movement with as little technical hinderance to their performance as possible.
3. Rifle microphones - for specific area pick-up that is not covered by the float microphones.

Once the designer has achieved good collection it is then possible for the mixing engineer to exert some control over the balance of different strengths of sound signal. It also allows for the controlled treatment of this sound in a recording studio type of situation. However, unlike the recording studio engineer the theatre designer also has the responsibility for the reproduction of his material and so great consideration is given to the auditorium into which a specific show is to be performed. To achieve realistic distribution of sound in a theatre some appreciation of the acoustics of the room is needed. Nowadays, it is unacceptable in the vast majority of shows to blast sound from the stage at high levels giving the first four rows of audience a headache, while only just being audible in the back rows of the theatre. Many designers currently resort to delay systems, small speakers positioned in the auditorium simply providing that little extra level and clarity of sound information that is lost by the large distances involved or by unhelpful staging or actor projection. The use of multiples of speakers all over the auditorium allows for low level and high distribution of material and in the best cases the signal source is often undetected by the audience who continue to receive a stronger more directional live

signal from the stage.

I regret to say that in the large majority of cases it is extremely difficult to use reinforced sound in a subtle way. The average theatrical producers sees sounds as a technical solution to the problems of his production, the casting of a weak singing voice in a leading role, the choice of an enormous three thousand seater theatre for an intimate play or more frequently these days because composers and arrangers give little thought to whether a professional singer could hope to sing unaided over their orchestrations for six nights every week. It is fair to say sound is still treated as a last resort in many branches of show business.

You will no doubt be aware that I have avoided discussing any detailed technical points, nor have I covered the mixing engineer's role in show sound. This is because the designer is part of a team that includes a systems engineer who is capable of building well matched, highly reliable, high quality control equipment and with mixing engineers who are able to listen and balance a live show eight times a week and achieve consistent level and clarity despite considerable variables in level and energy of performances from both actors and muscicians.

CONCLUSION

You will see that it is necessary in show sound to appreciate the fundamental uses of different types of equipment and their performance and to have a good knowledge of all branches of this technology both in terms of pure acoustics and electro-acoustics, but together with this basic technical knowledge there must be an artistic and political appreciation of the variety of demands from all the other individuals involved in creating a new and entertaining theatrical experience. Adapting the sophisticated sound equipment available today to meet the often strange theatrical demands is really what show sound is all about.