

Creative Sound in the Legitimate Theater

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The theatrical sound engineer must know more than his electronics. The author discusses the psychology of legitimate theater sound and gives some hints on breaking into this field.

SOMEWHERE in the deep crevices of prehistory the *Stone Age Theater and Drinking Society* presented a family situation comedy dealing with the fine art of catching a wife. Stars being what they are, even in the stone age, the leading lady undoubtedly objected to being bashed over the head, even in the name of artistic verisimilitude. The resourceful director solved this situation by faking the blow on stage and instead bashed the head of an apprentice off-stage to give the proper sound. Such activities no doubt caused some attrition in the apprentice ranks until an enterprising stage hand found that a carefully selected melon not only gave a realistic sound when bashed but had a squishy overtone that enhanced the effect. Thus was born the art of theatrical sound effects.

Over the centuries a great number of ingenious devices have been created to generate sound effects and before the

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days of recording every theater worthy of its name had a wind machine and a thunder sheet. The development of radio and sound recording saw the art of sound effects grow to a new high, and every radio station had a library of some recorded sound effects. Throughout the development of sound recorders and recordings, both amateur and professional legitimate theater has had some beneficial fallout. Almost all theaters had a record player and, more recently a tape recorder to play pre-show music and some sound effects. Even gypsy theatrical groups who give shows in schools, fire houses, womens' clubs, etc. have someone who owns a tape recorder and who can be conned into "doing sound."

In spite of the widespread availability of the magnetic tape recorder, this marvelous instrument is almost never used at anywhere near the limit of its creative potentiality. A real opportunity exists for the professional sound engineer in the field of creative sound in the legitimate theater.

A few modern playwrights have had the perception, imagination, and knowledge to write sophisticated sound plots into their shows. Best known of these writers is Tennessee Williams. Even in one of his earliest and most orthodox works, *The Glass Menagerie*, Williams makes effective use of sound to help set the mood of the various scenes. It was, in fact, Williams' extraordinary theatrical experience, *Camino Real* that first introduced me to the full potential of creative sound.

My work, over the years, has been conducted primarily at **The Players Club of Swarthmore** where a group of serious amateurs and professionals in the field of audio have endeavored to advance theater sound. We started with a portable sound console in the balcony, and when we had proven our point, the club management presented us with a permanent sound booth. See **FIGURE 1**. Using an audience location (balcony enables the sound operator to play the sound

equipment as one would a musical instrument. The operator is self-cuing since he can see all that is going on on the stage. Volume levels can be trimmed to differing size audiences and for subtle variations in the dramatic requirements as the play progresses. Operator error fluffs are reduced because the operator is in more direct contact with the stage action, and free of the normal distractions taking place in the wings. The balcony location is not entirely free of problems though, since operators are known to get wrapped up in the show and miss cues. During shows with infrequent cues, the more gregarious operators have been found backstage over a cup of coffee when the cue came.

Preparation

Hand in hand with moves to improve the ability to run sound cues is improvement in the quality of the preparation. Here the professional recording engineer makes his most dramatic initial contribution. Few tape recorder owners know how to make good dupes of records or tape.

This inadequacy starts with the records and record playing equipment. The acquisition of good records and good care is essential. People listening to *music* on scratchy records will accept this noise as a limitation of the recording or system, but present a scratchy *sound effect* and credibility goes up the flue. As a matter of fact, few things can reduce a highly dramatic moment to a laughable farce as effectively as a sound effect that's punctuated by recurring crackles. Directors have been observed with great tears streaming down their cheeks as carefully constructed dramatic moments collapse under the weight of a stylus stuck in a record groove.

Actually there is no excuse for this, since good record players are available that will not damage records. And a little effort at cleanliness will keep discs pristine.

The preparation of the final performance tapes will require skill in tape editing, since about half of the effects needed will have to be modified to get the best results. The choice of the recorder will make a great difference in the ease with which editing can be accomplished; this will be discussed later under *equipment*. The different cues on the tape should be separated by light-colored leaders. Some system should be worked out for accurately positioning the tape leader on the performance machine to obtain a uniform lead time from machine start to sound start. The leader should be applied with the dull side out and written upon, so that each cue can be identified as to content, number, and script page reference. Many a wrong cue has been played because the operator lost his place and was not able to identify where he was. (I shall not deal with the actual preparation of special material, since there are standard procedures in various tape recording texts and the professional recording engineer usually has this skill.)

Pre-show music, overtures, and bridges are where the gulf between the potential and its accomplishment is often particularly great. The best way to get good music is to find someone with a good knowledge of musical literature and theater to select appropriate compositions, tape them and play them for the director for his approval. After the music plot is made up, the director should be asked to come early some rehearsal night to hear the selections. Under the title of the care-and-feeding-of-directors, playing selections during or immediately after the press of rehearsal problems will result in a vacant nod of assent, only to be followed after opening night by the question, "Where the hell did you get that noise you were playing"?

Fig. 1. An audience-eye view of the sound booth at The Players Club of Swarthmore. Note the rear theater speaker directly under the booth's window. A small tv camera is at the upper left. This pipes a picture backstage so that offstage personnel can see the stage action.



The audio engineer will have to recognize that the initiative for a creative sound project will have to come from him. The most effective entry is usually to volunteer to make the sound tape for the next show. Don't push new ideas too hard. Even the most advanced theater has an induction period for new ideas.

If financial remuneration can be temporarily subverted for artistic fulfillment, the most rewarding work can be found with the summer stock companies. These groups are usually made up of serious and highly-skilled actors who are interested in advancing their acting skills in some of the more challenging but perhaps less popular theatrical works. By their more *avant garde* nature, these plays offer more opportunity for creative sound work. The directors are also more open to experimentation. In a more pragmatic vein I must state that such companies may have a very tenuous financial structure and due caution should be observed before your own financial or equipment commitments are made. Nevertheless I highly recommend a summer with a stock company for anyone who has a creative bent and a good knowledge of audio techniques.

It is highly likely that there is a good amateur theater group near to anyone reading this article. Here the audio engineer or enthusiast will find an opportunity for a long-term association with theatrical sound on a less frantic schedule than the new-show-every-week routine of summer stock. The show fare of the amateur company is usually conservative and the quality of preparation given to the music and sound effects may be the only opportunity for a contribution by the sound department in many productions.

The sound engineer with an idea to sell to an amateur must walk gently. The amateur is usually not stupid but he has gotten along for many years without creative sound and is apt to be very much entrenched in his ideas. Start slowly and don't press too many new concepts at once. Directors may suspect audio engineers want to use their show for a display of acoustical pyrotechnics. You must convince them that you are subservient to his desire for the best possible show. Above all, do not try to run in on a performance something you have been unable to sell the recalcitrant director during rehearsals, for that will surely be your final contribution. Once you have proven your ability to do a good job on some relatively conservative sound work, and the directors come to trust your motives, you will find your services and opinions sought.

The Equipment

Since most modern theaters have *some* sort of sound system, the first item of importance is the tape player and/or the tape recorder. For the player, the most important features to be sought are the ability for fast *start* and *stop* and accurate cuing, combined with relative silence in operation. Silent operation is necessary when the equipment's location is in close hearing proximity to the audience. In my experience, the most satisfactory machine for this purpose is any one of a series of Ampex machines starting with the *A* series through the *960*, *1260* and ending with the recently discontinued *F 44*. At one point Ampex manufactured a play-only machine on the *960* frame. This unit with playback pre-amps was the *936*, and as a transport only, was the *934*. We use two *936's* at **The Players' Club**. These machines rest with the electronics and electrical circuits in the *play* mode so that starting the tape involves a mechanical release of the brakes and engagement of the capstan idler to start the tape. These machines have established stable tape motion



Fig. 2. A view of the stage as seen from the sound booth. The stage is set for the play *Romanoff and Juliet*. Small footlight microphones relay stage sound backstage through avc amplifiers.

within a quarter-inch of tape movement. This permits tight cuing. By wedging down the stop button (except on the *F 44*) short and fast cue sequences can be started and stopped rapidly with a simple thumb motion. Since no electrical contacts are made during the start/stop operation there is an inherent freedom from pops. In most service the head hum shield is not necessary so that it may be removed to allow for accurate cuing.

While they may be hard to find on today's marketplace, I recommend the use of a half-track format in theater tapes as opposed to the common quarter-track. This is primarily a question of safety since the left track in a quarter-track format is somewhat unreliable. (In a mono-only theater system the right channel only of a quarter-track machine may be used.)

The Hall Sound System

The over-all sound reproducing system should be one capable of handling substantial power, especially in the bass end. A passing jet plane effect (common in modern plays) loses something rather essential when accompanied by frequent contact of the speaker voice-coil structure against the rear stop. If the financial limitations of the theater permit, a multiple channel system gives the maximum opportunity of expression. **The Players Club** system is a basic six-channel system. Two large auditorium speakers are suspended on the rear wall backstage with 160 watts available for drive, two smaller speakers are at the front of the theater with 80 watts driving, and two are at the rear of the auditorium with 80 watts available.

In addition to the basic system there are extra lines for special effects such as an FM wireless microphone and extra



Fig. 3. A view of the sound console at The Players Club. The telephone headset connects with the lighting panel backstage. The Gralab photography timer is used to backtime music for synchronized-with-action endings. The two recorders are Ampex 936 units. The integrated stereo amplifier (upper left) and the stereo preamplifier (to its right) are both Scottkits.

speakers. Stress should be placed on the necessity for at least one wide-range, high-power-capability channel. Such systems can be found on the used-equipment market if budget considerations prevent the purchase of new equipment.

In building the system for a theater, allowance should be made for expansion to a multiple channel system if such a system is not already extant. The system of the **Players Club** auditorium allows many special effects. *Guys and Dolls* has a telephone sequence to advance the plot and to cover a scene change. For this sequence we wrote some additional dialogue and played the scene across the theater on two different channels. During *Auntie Mame* the fox chase scene was played with a four-channel joy stick level control which permitted directing the sound to the point of the theater desired. The operator simply followed the action around the theater thus creating a spectacular effect. Such effects are only limited by the imagination of the sound engineers and the directors.

System Operation

Operation is by no means the least important part of the story. As in all phases of theater audio the operator must remember that the primary purpose is to be a part of a total effect of several arts combined to tell a story, convey an idea, and entertain. As such, sound is rarely an end in itself. To this purpose the sound must blend with the total effect. The balcony or rear-theater location allows the sound engineer to sense differences due to differing sized audiences and variations in the performance. Simple sound effects such as car sounds, airplanes, shots, etc. are easy enough, but must be at proper loudness and of course sound in simulation of what they are intended to be.

Sounds such as crowd noises, factory sounds, thunder storms, all of which are supposed to run under a scene are a special problem. These sounds must be started at a level high enough to establish their nature to the audience and then faded into the background so as not to interfere with the speaking. A more complicated example of this occurs in a play called *The Human Voice* where New York street sounds ride under the entire action. Conversation pauses occur during which the level of the street noises is raised to provide a bridge between phone calls. Occasionally a sound must run under for a period and then fade. Unless the script calls for an abrupt cessation, these effects should sneak out so that the audience is not aware of the cessation. The best way is to find an intense moment in the action of a noisy period and fade the effect gently out.

Frequently, when a particularly appropriate bridge selection is available, the music bridge may be bled into the scene after the curtain opening to cover initial action without speaking. One example that comes to mind is a scene from *Auntie Mame* where a paper hanger is seen several seconds before a character enters to speak. The bridge was continued until the second character entered and was about to speak. Such methods can enhance the sense of continuity in a play.

Cues and bridges should be run so that they are tight up against the stage cue. The operator reaction and recorder delay should be taken into consideration so that the operator leads the actual stage cue by a few words. This practice helps the pace of the show and gives the actors confidence. (One occupational hazard is getting clobbered by the director because you got so interested in the show that you blew the cue. So stay alert!)

The sound engineer should avoid certain types of cues. Doorbells and telephones should be real sounds operated from the prompter's box. A telephone cue on tape is hard to reproduce properly and a muffed cue must be rewind, recued, and played if on tape. The prompter has only to come to and press the button. Taut operation of sound cues is a mark of professionalism.

For the most part affiliation with one theater will either not support a sound engineer full-time or will involve a time commitment beyond the capability of one man. Often the person preparing the sound tape will not be willing, or able, to operate for all shows. The solution is to enlist the services of the serious amateur. In almost any area there are serious amateurs who have good recording equipment. These people are often anxious to utilize their equipment and sharpen their skills. In addition they usually have a good knowledge of music and artistic sensitivities which give an appreciation of theater arts.

With a little searching, people can be found who are not equipped to prepare tapes but who are interested in becoming operators. In a short while a staff can be built up which will permit a whole season of shows to be staffed with out an excess load on any one person. This procedure has worked out well at **The Players Club** for the past five years and has provided the directors with the confidence to undertake plays with complicated sound plots as well as experimenting with new and special effects.

In summary, the sound engineer, either professional or amateur, will find much satisfaction and the opportunity to learn new skills. The publicity associated with such activities will afford the professional with many new contacts, opportunities such as the sale of sound systems, consulting jobs, preparation of special tapes for commercial use, recording engagements, and a host of other profitable work.