



DON
BARBER

SOUND & LIGHTING

STUDIO VS. LIVE

I would like to look at some of the differences between studio and live sound.

Despite the fact that most elements are common - both studio and live sound involve representing the sound source and they both use microphones, mixers, control electronics and speaker systems - the specific type of equipment, its functions and the techniques employed can be quite different. The entire end product is really totally different from recording to live. The final result that the studio is aiming for is to capture the performance on tape and/or vinyl, whereas a live sound system's primary function is to get a performance across to an audience.

Live mixing could be considered as roughly the equivalent of doing a direct to disc mix - "It's here and then it's gone." You only get one chance, no overdubs, no remixing, no second takes. A stage in a bar or a theatre does not offer the separation or isolation and control of a studio. It's sort of like mixing with the control-room door open to the floor. Most of the time you're not mixing in stereo because that would mean only those seats which are covered by two speaker stacks would get an accurate mix.

For the most part, studio mixing does not have to contend with feedback or with monitor mixes leaking into open mics since they usually use headphones. A studio engineer doesn't have to worry about audience size or making his equipment yaho proof, although I know some of the studio posers can get pretty unruly too.

The studio is a relatively stable and consistent environment whereas a live sound mix must allow for constant change. The venue changes so the stage sound and house sound vary dramatically. The size and type of hall is different almost every night. The temperature, humidity and absorption factors change even over the course of the sound check and show. The equipment must be moved so you have to

contend with trucking, crews, weather, dirt, damage, vibration, etc. The power will vary from hall to hall and there's usually a light system which hogs all the power and tries to induce noise into your system. Even the equipment, particularly the speaker system will have to be different from a small club to a concert date to outdoors. With all these problems to deal with, why would you ever want to mix live?

On the plus side, a live engineer doesn't have to worry about groove saturation or tape saturation or frequency response, drop-out or noise. A live mix can have great dynamic range - an exciting phenomenon which I wish more live sound people would discover instead of just making things loud. Some halls can be a nightmare, but some halls can produce the most wonderful sound - the greatest natural reverb possible. The hall can be "played" by careful use of volume and dynamics and with proper speaker choice and location.

I have done some concerts using a main speaker system on either side, smaller "centre fill" speakers to mix primarily vocals with the sound coming directly off the stage and the "centre cluster" speaker system that was in the theatre. The three different P. A. systems all working together produced an incredibly big sound with a huge perspective.

One of the best things about live sound is the energy that is created when a band is hot and cooking. Producers would give their eye teeth to get that kind of live performance level into the studio.

So besides the challenge of the job, the auditory rewards can be great and your chances of getting a job behind a live mixer with a good group of musicians is many times greater than studio prospects. I think anyone who wants to do sound engineering or production should consider all the possibilities available live, in the studio and mobile recording.

Next issue, we'll look at speaker systems.
