RECORDING SAXOPHONES & OTHER WOODWIND

STUDIO RECORDING FOR SAXOPHONES

This article is based on my experience playing the saxophone on recording sessions, and also recording saxophones while working as a producer along with some of the best sound engineers in the world in some top studios. I do not call myself a sound engineer *per se* as most of my experience engineering has been in my own studio, where I can do things the way I like to. These methods work for me and are based on a *lot* of trial and error as well as years and years of observing great engineers and asking questions.

MICROPHONE PLACEMENT

A very important question to ask yourself: "Do I want to include the sound (ambience) of the room with the saxophone?"

If the room sounds "boxy" or too reverberant for your taste you should place the microphone close to the saxophone in order to eliminate the room sound as far as possible. In modern recording artificial reverb, ambience or delay (echo) can be added afterwards. These days artificial reverb can sound very good and natural, especially the "sampled" reverbs such as *Altiverb* and Emagic's *Space Designer* which are sampled from real spaces.

If a room has a good sound, then you may want to record it. This means placing the microphone further away from the sound source. The further it is the more ambience it will pick up. However, once you have recorded this, it is almost impossible to get rid of it.

To a certain extent, you can alter the sound of a room. If it is too reverberant or live, draping heavy curtains or other absorbent material

such as bedding will help. Acoustic panels (or eggboxes) can be stuck to the walls for a more permanent treatment. Note that this type of acoustic treatment does not do any soundproofing, it just cuts down the amount of reflected sound within the room.

How close?

For close micing the microphone is often place about 6 inches in front of the bell. This can be a problem as the lower (bell) notes will probably be disproportionately loud. A solution is to place the microphone slightly to one side or else to use one or more other microphones further up the instrument. Cardioid (directional) mics may exhibit the "proxoimity effect" if place close to the source, this results in a boost in the low frequencies, which may be compensated for by equalisation (EQ- tone adjustment)

How far away?

A good rule of thumb for less close placement (if there are no problems with the room sound) is too put the microphone the same distance away from the front of the instrument as the length of the instrument. This should pick up the entire range of the saxophone evenly. Any further away and you are likely to get a very ambient recording unless the room is particularly dry or dead.

What about "spill" from other instruments?

The same parameters for room sound apply to spill from other instruments if there are any playing at the same time. Many engineers prefer to record one instrument at a time to completely eliminate spill, however this may not be possible for performance reasons, which may also dictate that players are close together (otherwise screens or separate rooms can be used). If you are going to need absolute control over the balance of individual instruments in the miux, you will need to eliminate as much spill as possible by close micing. If all the players are getting what you consider to be a good balance naturally, this may not be such an issue: you can place the mics further away or even share one mic between two or three players, e.g in a horn section. If there is any spill at all, you are

unlikely to be able to repair or “drop in” on any wrong notes or other mistakes individually.

Hint:

If you are recording someone other than yourself:

- Go into the live room
- Ask the player to move around the room
- Listen to the saxophone from all perspectives
- Set up the mic appropriately
- When listening back in the control room try to remember the sound of the saxophone - that is what you are aiming for

MICROPHONE TYPE

The polar pattern of the mic can have a bearing on the above. Generally speaking an omni or figure of 8 microphone will pick up more of the direct sound comparedwith the room or spill. An omni may have a more natural sound than a cardioid, but will need to be a bit closer to the source in order to eliminate the same amount of unwanted sound as a cardioid.

Condenser Mics

Most types of good quality studio condenser microphones are good for the saxophone, subtle differences between makes and models are often a matter of individual taste. I have got good results from AKG 451, 414, CV12VR, Neumann U87, U47, Rode NT1 and many others. I currently use an AKG C12VR, I like the ability not just to switch between three polar patterns but to choose more subtle combinations - you can gradually switch from omni to cardioid.

Dynamic Mics

Electrovoice RE20 and the good old Shure SM58 are fine for saxophone recording. Even if you can’t afford a top quality condenser, there is no reason not to get a great sound from either of these

Ribbon Mics

The classic Coles 4038 is great for saxophones. It has a figure of 8 polar pattern so best when room anbience or spill from other instruments is not an issue.

Stereo

Generally an individual saxophone is recorded in mono, but stereo recording can be very effective, especially for solo saxophone or tracks that have only a few instruments. A stereo pair of mics will inevitably pick

up more room, so either make sure you like the sound of the ambience you are getting, or use some damping material on the room.

OTHER WOODWIND

FLUTES

For close micing place the microphone above the lip plate. This is where most of the sound comes out. If you put the microphone in front of it you will have a problem with the player's breath hitting the capsule of the microphone and causing noise. You may get a more natural sound with the mic further away, observe the "length of instrument rule" above.

CLARINETS

A microphone in or near the bell will get similar problems to the saxophone as far as bell notes are concerned, only more so. Either place a microphone at a distance or use two or three: one low down, one near the middle and one near the top for the tricky notes (A and Bb) which can be quite weak.

LIVE SOUND REINFORCEMENT

Many of the same parameters apply to live situations, there may need to be a compromise between the most natural sound you would get with mics further away and the need to get separation. In addition, there is the problem of feedback. This becomes more of a problem if you need loudness but are getting a lot of spill, often the only solution is to use cardioid microphones close up, although there are electronic feedback eliminators available. Dynamic microphones are often best for live work as they are more rugged than condenser mics and can take the inevitable knock or two.