Bernard Löhr

He's one of the most successful mix engineers in the business yet he prides himself on also being able to take care of symphony orchestra recordings. He shares his mixing approach and 'scheme' with ZENON SCHOEPE.

BERNARD LÖHR IS a musician who got into working in a Gothenburg studio in his native Sweden after finishing his studies in mathematical physics at university. He moved to Stockholm to work at Soundtrade and in 1987 started as chief engineer at Polar where he helped refurbish the studio from its ABBA era. He went freelance in 1989, because he liked the idea of moving with an artist and seeing what was happening in the rest of the world, started working with Benny Andersson and Bjorn Ulvaeus and a lot of the top Swedish artists, and quickly developed a reputation as a mixer.

Today he is based at Andersson's studio in Stockholm where he runs a 'portable' SSL 9000 ('We didn't have a studio so Benny wanted a desk that could be broken down, flightcased and moved easily') and a Genelec 1038 multichannel system with centre configuration models at the rear plus a 7000 series sub — 'Benny is very keen on the Genelecs and I think they're very good especially for his type of music. I'm doing a lot of surround now.'

Notable multi channel projects have included ABBA In Concert with the next big project coming up being ABBA The Movie.

His credits are impressive and include Ace of Bass, All Saints, Aqua, Backstreet Boys, Billy Crawford, Britney Spears, Celine Dion, Gareth Gates, Il Divo, Will Young and Westlife among others and the cream of Swedish talent.

He regularly lectures at music and technology courses and shared his approach to mixing with *Resolution*.

Engineer, producer, mixer... what are you most comfortable with?

I'm best known as a mix engineer but I have produced and engineered. I've also been writing a little, which I enjoy but have so little time for it. In terms of what's most natural for me, then its mixdown and the recording process when I have a big project. I enjoy recording Symphony orchestras together with a rock group because I like those sorts of challenges. I do it all from the planning to the final mixdown.

The fun part of recording is when you have time, good acoustic environments and good musicians but recording can also be boring when you're doing a lot of overdubs and you're just waiting for it to happen. But it's the mixdown that I'd say I really work on. I thought about it in the early 1990s and have now worked out a scheme of how to go through a mix. There are millions of ways to mix but I've developed my own way that I stick to because when I do I know that I haven't missed anything. It's very detailed and I give courses on it!

Share it with the readers!

The first thing is the planning of where you're going to mix, somewhere that has all the equipment you need. Do they have the machines to play back the material that you're going to be working from, is everything in good working order, is everything synced? It's basic stuff but essential.

The setup in the studio is very important to me and I always make the whole set up at the beginning of the job like the patch in the studio here — everything

is hooked up so if I need a quarter note delay it's already there and I know what send it's on. I need a lot of equipment to do my mixes but I also need to know where I have it when I sit down at the desk.

So you're saying that your desk layout and your patch is always the same. If I was to walk in on your mix in any studio what would I find on fader 3, for example?

Probably a snare. I do the same with the sends. I give the studio a list of equipment and I hook it up and that's on the usual sends and on the multitrack routing to effects. I'll have 30 sends on the list — at least. I also use the same order too — the Harmonizer should be on multitrack send 5 — I always use the same set up because then I can concentrate on the music. If you have a complicated mix and you sit there for hours and then you realise you should have a delay on this guitar and you've got a patchbay that is already hooked up with lots of cables, it'll take you time to find the hole and you lose a lot of energy. It's much better to know that I have an extra spare delay on this feed here.

Is the outboard that you're hanging on the sends always the same too and do you have them set on particular settings?

Yes. Some of the effects I use are always the same — there are always the basic reverbs and delays I need to have to do my mixes. The old AMS reverb I use on the Ambience part as a bright reverb on pianos. I always use Tile Room on the PCM70, I never use any other program on that because it works as a great short room on acoustic guitar and percussion. There are programs that I always use on the 480. So there's a list of equipment and settings that I like to have and if I don't then I have to find a substitute, which I have in mind too.

So far you've just planned out your desk and patch and you've got to the point where you can sit down and you know where everything is but you haven't moved a fader in anger yet or hit a transport key.

I haven't even listened to the song yet. The next step is to get into the music and that also has to do with the planning — with 120 channels you have to have some type of grouping so you can see the structure and that's do to with how I patch it up on the desk. The thing that I really work a lot with is vocals and I have that right at my side while percussion and effects can be further away.

I try to learn the song by moving the faders up just a bit and write a song structure list and then go into the sounds by bringing all the faders down and listening to each one for perhaps a couple of bars. At this stage it would be very easy to start EQing but because I don't know how the material will sound together I don't tend to do that unless I really fell that something should have a little more low end, for example. I'll do the first panning at this stage for the percussion with a brief thought about what each part should be in the song. At the same time with the effects I can see if a guitar needs a little help. Some of the channels take longer than others but at the start I leave out the vocals and the special effects as I'm beginning to create my backing track and to see how it will groove.

The next pass would be to try and create a good backing track without any fader moves. Throughout my process I use different ways of listening and when I'm doing my backing track I always go down to my NS10s in mono, so my first basic mix of the song is in mono at very low level even though when I was going through the sounds I was listening in stereo. When it sounds right to me, I start the automation and go right through the track together with any obvious moves and cuts but still no vocals and I leave out solo instruments and effects. If it's a big pop song with a string section then I'll probably leave that out too because it can take all the energy out of the track.

After a couple of passes with the backing track I start on the vocals.

Are you EQing on your backing track by now?

Maybe a little but I don't EQ a lot because there's a lot more to come. The vocals are the main thing and that will set the tone for the whole track. I listen to the vocal in Solo and do the main processing for what I think is a good main processing — most of the tracks I mix I use two or three equalisers at different stages of the song on the vocals. What I try to find first is a good main sound to the vocals — the start of the song is often lower pitch with more proximity and what I do on the 9k, which is very easy to do, is to use a good outboard EQ as the main — something like an API and maybe an 1176 — and to get rid of a few of the low frequencies on the desk EQ using the automation. Then when I come to the last choruses, when they'll be singing very hard, I use another EQ on the insert to maybe take some of the high mids out and low end too.

I have a very complicated method of building up the environment around the singer, which is a combination of five things. It's a combination of the 480, the ambience from the AMS, different delays — often one in the area of 200ms or an eighth as

a predelay for the plate — and other programmable quarter note delays for the long phrases. I also have the sends and returns of the lead vocal automatable because it never happens that it's the same straight through the song — probably it needs to be very dry in the verse with a little environment with more in the chorus, bridge and middle parts.

So have you now sorted out your vocal?

I've got the sound of it but I still haven't done the important thing, which is the levels. I go back to mono again and listen with my backing track and that's when I write — a lot. I don't want to take out the dynamics of the song but there's always things you can do to make the vocal come through a bit better. I consider things like breaths, esses and I do a lot of passes and it will take me from one to four hours to do the vocal part.

You are working in a linear fashion running from Pro Tools?

Yes, 90% is Pro Tools but I work a lot in Logic too. Things like the de-essing I do in Pro Tools or Logic — I go straight in and I can see them.

Doesn't having to go into the workstation detract from your creativity flow?

I do most of my main work on the desk but for some of the leveling for certain words I'll go into Pro Tools. I do very little with plug-ins — only when I have a BV part, which I have good EQ on but there's a middle part that needs some bottom taken out of, then I will.

I'm comfortable working in the workstation but I choose to work on the desk. I'll edit on the workstation when it's the quickest way to do something.

Once the level is there on the vocals then the fun part starts because you then have something to paint around. Once the vocal is there, then it's the BVs and the solo instruments and maybe strings, which can take a lot of time particularly when it's a crowded song. I do a lot of moves on those. At the end I'll put in all the extra effects. I'm working mostly on the NS10 but I'll go over to the big monitors for the low end.

When everything is there I go through everything again and optimise every track. If there's a rhythm guitar and it does a fill in one spot at the same time as the bass and the piano I make a choice as to which

is the most musical and I'll drop the others and let the piano come through. This is the part that I really enjoy and I'll sit for hours and work out what I can do to make the parts obvious to the listener and add the little tricks and bits that make it all sound more expensive and interesting! I like the [Roland] RSS effect and I use that not on main parts but on synth pads. If you have the MIDI information you grab another synth that has almost the same sound, put it through the RSS and let that pan in tempo and you get a gorgeous sound. It's a small part but it adds so much to the track.

How does that transfer to mono?
Quite well, you won't hear it in your radio in the kitchen but in cans it works. At this stage there is often still a lot to do with the vocal and the backing and I again I do a lot of moves. When you look at my faders at the end, maybe they're not going up and down all the time but you'll see lots of small changes. At the start you can feel like 5dB here or there doesn't really matter but by the end a quarter dB makes a big difference. At the end of this when I think I've done what I can I call the producer in. Because I've been through everything there often isn't much to do — a bit more reverb on the snare, more of the loop here or there — and it maybe takes an hour to fix and it doesn't really hurt the picture. It becomes a matter of taste. It's also not so much of a problem at this stage if they want, say, more piano than acoustic guitar, because you can do a little switch and the quality of the mix is still there. But it takes time.

How much time, from coming in in the morning with the desk setup correctly for you to you calling in the producer?

The next day at around 12 noon. One song. It depends on the number of tracks but most of the big songs are around 100 tracks. I need that time because then I know that I have gone through everything and I'm sure I haven't missed anything.

The problem today is that the producer comes in and you agree on the mix and we often put it down on a CD, take the car, go for lunch, go to the producer's studio and listen to it, come back and maybe take the tambourine down 1dB or whatever. Then you have to send it to all the other guys in the world that have to approve it. It used to be easier before!

How do you find the quality of feedback that you get?
It differs but it's often very small changes. It also depends on the status of the producer — when I work with Benny he just doesn't ask anyone else! ■