



INTERVIEW

Hair attitude and an SM57

Alice In Chains, White Zombie, PIL and Anthrax are just some of the fast and furious acts to have benefited from the engineering and production talents of Bryan Carlstrom. **DAN DALEY** investigates the science behind the noise that is 'metal'

METAL, the musical rubric that grew from plain old 'heavy' and has come to encompass other modifiers, such as 'buzz' and 'speed,' has been remarkably resilient over nearly 30 years on earth. Common wisdom has its genesis pegged to the release of the first Led Zeppelin album in 1969; from there the genre has wended its way through, and in some cases infiltrated into other forms of rock, many of which have come and gone.

But metal, the apocalyptic cockroach of modern music, moves ever onward, inspiring still new generations of 15-year-old boys with the notion that, while you don't have

a car, a job, any money, your own flat or a presentable girlfriend, you can still be a badass dude.

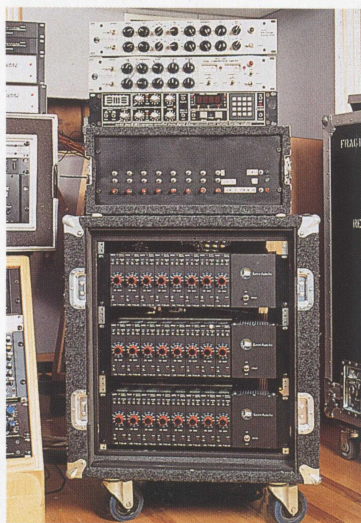
Bryan Carlstrom fell into metal, so to speak. Eleven years ago, at the age of 24, he moved from the remoteness (cultural and geographical) of Sioux Falls, South Dakota, in the heart of the heartland that is the American West, and went, like thousands before him, to join a rock band in Los Angeles. He had approximately the same level of success that most of them had during that fallow period in SoCal rock—after the days of the Eagles but before Guns N' Roses reared their ugly but successful heads, in the days when quasi-metal operations like Winger roamed the world, consuming far more hairspray than was commensurate with the level of edginess they were hawking. Which is to say, 'Nice tape. We'll get back to you, babe'.

However, Carlstrom was far from bored. Instead of reading the stringslinger fanzines and learning more than one could possibly want to ever know about Kip Winger's tontorials, he became a voracious reader of technical magazines such as *Studio Sound* in order to learn about what was going on on the other side of the glass. He chucked the guitar momentarily and enrolled in a 10-week recording class at the Los Angeles Recording Workshop. Halfway through the course, the school's owner and instructor recommended that he apply for an apprenticeship at Track Record Studios, a small 24-track studio on Melrose Boulevard in Hollywood. He got the gig, and two years later followed the studio to larger quarters in the Valley. Over the course of the next two-and-a-half years there, he got more lucky breaks than most aspiring engineers get, working with people like Keith Forsey on Billy Idol's *Charmed Life* album. His luck held when Mike Frondelli, head of Capitol Studios, used him on a recording and then hired him at Capitol as an assistant.



It was a long but fecund apprenticeship. Carlstrom did every type of session imaginable at Capitol, from small rock bands to 65-piece orchestras. He engineered award-nominated jazz records, including those for Eternal Wind and Yusef Lateef. Then came an association with producer Dave Jerden there, whose own oeuvre was considerably eclectic, with records for the Rolling Stones, Talking Heads and Jane's Addiction. In the six years since that relationship began, Carlstrom has made 25 records with Jerden. Interestingly though, he joined forces with him just as Jerden's career was heading decidedly towards the metal's edge. 'I don't know why it happened, but we were just getting call after call from metal acts,' recalls Carlstrom.

IN THOSE SIX YEARS, Carlstrom engineered a literal metallic role call for Jerden-produced anvil acts, including Alice in Chains; Anthrax; Social Distortion; Armored Saint; Last Crack, Rob Halford; Sacred Reich; Public Image; Spinal Tap; Edna Swamp; Love Spit Love; Stavesacre; Orange 9mm; Rust; Biohazard; and The Offspring. Carlstrom is the first to admit that they tend to blur together a bit in his memory. But he distinctly remembers being contacted by the members of White Zombie in New York to become the engineer and producer of their destined-to-be-platinum record *I Am Hell*. It's been quite a ride.



Half of the Producer's Secret: between mics and onboard, great records are shaped



There are those who cast metal as a 1-dimensional music and would question its ability to offer much in the way of variety. Contrarily, Carlstrom claims consistency of recording techniques and variety in the music itself as the key to its appeal.

'I had to develop new techniques for

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recording,' Carlstrom says, in contrasting metal with other musical genres. 'The thing is, those techniques do tend to be the same from record to record. What really makes one record stand apart from another is the songs, the vocals and the playing—because we tend to use the same amplifiers, same microphones and the same miking techniques with each act. White Zombie and Alice In

Chains were both similarly recorded, but they're very different records.

'Almost everything is recorded using close-mic techniques,' he elaborates. 'I put a Shure 57 right in on the speaker, and then run it back through all tube equipment—I have 28 Summit tube mic preamps—and I don't go through the console. For processing, I'll run it through a tube compressor, usually a Summit again, and then into the tape machine, which is running at 15ips with SR. I use analogue for recording drums and bass, and then we go to a Sony 3348 digital deck for guitars and vocals. I don't really hear a difference between analogue and digital for those instruments, and digital is better at giving you back what you put in. I only use the console for monitoring. It gives you the most direct signal-path run.

'I almost always use one Shure 57 on the guitar amp speaker cabinet, placed really close in. I place it dead centre, straight on. I've experimented with off-axis placement, but straight on really has worked the best. I'll listen to each of the speakers in a cabinet—in most of them there's usually four per cabinet. But most of the time it's the lower set of speakers that give you the best response, certainly in a slant cabinet. It might be that they're lower and closer to the floor, and they give you more bass response, but those are the ones that almost always sound best.

'As for the amplifiers themselves, the bands

use our amps, and we have a pretty wide selection of the ones that work best for metal. The main three are Matchless, Marshall and Bogner. The Bogners are the secret weapon of metal. We have some classic Vox AC30s, but those three are the ones everyone wants.'

Despite Carlstrom's claim that each project has its own sound, the consistency of equipment and technique beg further explanation.

'It's the songs, the playing and the vocals,' Carlstrom insists. 'It really is as simple as that.'

There's also the opportunity to customise the sound somewhat later, since almost all the guitars I record are overdubs. During basic tracking, the bands all play live while we get the bass and drums, which, as I said earlier, are recorded to analogue tape. But when I set up for basics, I setup for

Just one product of the Dave Jerden & Bryan Carlstrom partnership: Love Spit Love



Studio Sound

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El potentially having every track as a keeper; there are times when you use a little bit of the basic track guitars and mix them in a little with the individual guitars. But other-wise all the guitars are overdubs.

'I don't put any effects on rhythm guitars, ever, even in a mix. I don't generally even use the ambient room sound, except occasionally on a solo sound. The whole thing is microphone placement. The key to creating a sound is layering and panning, and the way the player plays. Everything is put hard left or hard right. The Alice In Chains record was really unique in that; it was a whole new approach in layering guitar tracks. On that record there are six individual tracks of guitars—three hard left and three hard right—all individually recorded using three different amplifiers and three different guitars. They all have different frequency ranges that they accent and highlight, so the combination of guitars and

**The acceptable face of metal:
Bryan Carlstrom
at the helm**



IT'S A TUBE THING

'MY KNOWLEDGE OF ELECTRONIC GEAR started at a young age. My father was an electronics engineer and he brought all sorts of gizmos home that I would take apart to see what was in them. At the age of eight I got my first reel-to-reel tape recorder—I was fascinated by the fact that I could record the sound of my own voice and play it back. I loved electronics and started building things from tube testers to shortwave radios. I was notorious for tearing apart everything around the house from our television to the old tube radios. Most of the time these things never worked again unless my father could figure out what I had done.

'By the age of 12 I was sure that I wanted to be in electronics; that was when I met my best friend Mickey Monger. He did something that would change my life forever—he began playing me the Beatles, Led Zeppelin II, Jimi Hendrix and Cream. Starting puberty and hearing this stuff for the first time created emotions in me I did not know I had. My passion became divided: in love with two things at once, music on one hand and electronics on the other. To me these seemed like oil and vinegar I never thought they could mix.

'By the end of high school I learned to play guitar. I went to college majoring in sciences following my strong love for electronics, but one day after studying the sex habits of rats for two weeks—which I found to be beyond boring—I changed my major to music. After college I played in a few bands and then decided to move to Hollywood with the band that I was put in but the day before we were to leave the rest of the band backed out and I went alone.

'After being in Hollywood about a month, I began looking at recording magazines and going to the Los Angeles Recording Workshop. After five weeks I got my first job assisting in a studio. I loved what I did and it seemed so natural, a marriage between music and electronics. After being there four years I got a break and began working on a Billy Idol record. It was then that I had opportunity to hear every type of gear imaginable API, Trident, GML, Neve that is when I heard my first piece of Summit gear, it really stood out from the crowd. From its sound, down to its design, I was very impressed.

'A year later producer Dave Jerden asked if I would be interested in engineering for him. I had always hoped to work with him because I was a big fan of the records he had done. We started by opening a new room on Sunset Boulevard, the Eldorado Recording Studio. We stocked the place with Summit gear—two TLA100 compressors, four Summit preamps, two Summit shelving EQs and two Summit parametric EQs. At the time I was only able to do overdubs through the Summit gear, it sounded amazing and so real, as if I could reach out and touch the sounds. And I noticed that Dave Jerden and the artists I was working with commented on the sounds as the best they had heard.

'I found myself recording straight through Summit gear and straight into the back of the tape machine, never going through the counsel unless I had to. The Summit gear made things so easy and the sounds they get sounded like those records that I loved and had listened to so many years before. In the past three years we have added three DCL 200 stereo compressors to our arsenal, which I use on the snare top, snare bottom, hi-hat, toms, room, bass, guitar and vocals.

I also recently purchased a rack of 24 Summit M210 tube mic preamps so that every microphone and every instrument from the beginning of a record to its very end is recorded through tubes. After listening to every Mic Preamp on the market, I found the M210 to be the best I have ever heard. Summit Tube Technology is my secret weapon for high performance audio.'

amps and panning makes the sound on that record. [Dirt]

'On Armored Saint's *Symbol of Salvation* there is one stereo track, each side recorded individually, using vintage Marshall amps. What you're going for is to make the guitar amp sound as though it was in the living room of the kid who's listening to it. That's the kind of presence you're after, and the only way to get that is to mic the amp very closely and not put effects or a lot of processing in between the speaker in the studio and the speaker at home.'

Another important element in defining a recording is miking the drums.

'I use an AKG D112 on the kick inside the drum about halfway between the front

"The snare is always miked from top and bottom with Shure 57s. The hat gets an AKG 451 and a Shure 57 taped together on one stand"

and back,' Carlstrom reveals. 'The snare is always miked from top and bottom with Shure 57s. The hat gets an AKG 451 and a Shure 57 taped together on one stand so that the capsules are aligned and are the same distance from the cymbal—that gives it a very fat sound, but one with a lot of top end and presence.

'Rack toms get 57s across the bottom, and 421s across the top. I use a Neumann U87 set about 12 to 16 inches over each cymbal, and I put a pad on the mic. Finally, I use an AKG C24 stereo tube mic above the drum kit, setup between five and ten feet, and a pair of AKG C12s for a left-right room image. Oh, and one other important thing—I take a 251 and put it on a low stand and aim it directly at the kick drum from about ten feet away to get the kick from that angle.

'For processing, I compress the snare and the top and bottom rack tom mics, usually using a Summit compressor on them, which I also use on the room mics. I don't compress the kick drum mics.

For bass, I take the layering approach again.

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I use two direct sounds and two amplifiers. One of the directs is clean off the amp, the other passes through a Tech 21 SansAmp to get a very growly DI sound, and both of those sounds are mixed together to one track. Then I'll use some combination of an Ampeg SVT, a Westminster or an old Vox bass amp for the live sound, with mic placement very similar to that of the guitars—I put a 421 on the SVT very close in, or a D112 on the Westminster because it has an 18-inch speaker and needs to be captured in a different way—it picks up the super lows from that. I run the mics in from the studio into four tube mic preamps, sum them to a pair of Summit parametric EQs, then through a pair of LA-2As, or a Summit DCL200 stereo compressor, and then straight into the tape machine.

'You need to define the bass a bit more to make it sit in the track the way you want. The guitars are mostly defined by the guitar player's own technique.'

Vocals are the third, and often the most identifiable, part of the trinity of defining elements. Here also, the recording process meets the most fragile artists' egos, and the approach to recording becomes as important as the choice of equipment used to execute it.

'Vocals can be different on every record,' Carlstrom agrees, 'but there are some common techniques to them, as well. For starters, we know that there are going to be a lot of tracks of vocals, all layered. As many as 12 to 14 tracks per song, many of them doubled. You have leads, harmonies, call-and-response tracks, all doubled. And sometimes I make a trigger track from the kick and snare to fire sampled kick-and-snare tracks during the mix.'

'One trick I use is to run vocals through guitar amps. On Alice In Chains I had some of the vocals through a Pignose amp with

'The rules are knowing miking techniques and keeping the sound as in-your-face as possible,' he asserts. 'When kids put these records on they want to feel like they've just been run over by a lawnmower'

light distortion on it. When you mix an amplifier voice in with a straight track of vocals, it really beefs them up. On White Zombie's records, I had lead vocalist Rob [Zombie] sing 'Feed The Gods' through a Shure SM58 plugged into a Pignose, which was miked with a Shure 57 right on the small speaker. There were six tracks of lead vocal on that song, all sung through the Pignose. Sometimes I'll plug the mic right into some foot-pedal, guitar-type, effects boxes, like a reverb or a chorus, or a fuzzbox or a digital delay.


'I'm also processing the vocals during the mix by using band-pass filters. I use the EQ on an SSL console to chop off the very top and very bottom of the vocals, which is where you lose the junk sounds of these kinds of vocal recordings. I cut off the top at between 5kHz and 8kHz, and lop off the bottom below 300Hz. It cleans it up to the point where you can almost understand what he's saying. You know, whether you're listening to Rob through an amplifier or right next to you in the control room, I don't know if anyone can understand him.'

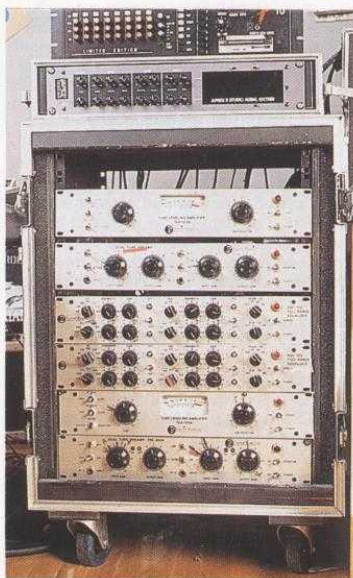
Carlstrom was working with Anthrax when he was contacted by White Zombie with the offer of production duties. After witnessing a few of their live performances in New York he felt comfortable enough to accept the challenge.

'I realised that there was little to change musically speaking,' he recalls. 'As producer I get to determine along with them which songs go on the record, and which takes are keepers, but otherwise it's an engineering approach to production. There's not that much artistic input. It's just like with the guitar sounds—it's the player that determines how it sounds by the way he plays.'

Logically, an engineer and producer who is allowing the songs and the playing to differentiate one song from another could run into limitations set by the band itself. But Carlstrom claims not to have encountered such a problem.

'The rules are knowing miking techniques and keeping the sound as in-your-face as possible,' he asserts. 'When kids put these records on they want to feel like they've just been run over by a lawnmower. A large, noisy lawnmower. I kind of fell into this niche of metal. But when I was a kid all I ever listened to was AC/DC; Jimi Hendrix; The Rolling Stones, The Beatles; and Led Zeppelin; so this is a logical extension of that music. Now it's become like second nature.'

And with 30 years already under its belt, we can expect to be hearing a lot more metal—some of it in studios, some of it on stage; and some of it through the walls. 



Carlstrom's choice of outboard processing is heavily orientated towards valve technology and Summit equipment