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# The use of click tracks for drum production within the Extreme Metal genre

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hyper-realism  
aural microscope

## **Abstract**

This paper explores the use of click-tracks and the benefits they enable for drum production within the extreme metal genre. The paper will focus on the drum production of 'Sink', the second album by French act Kaizen that was produced, engineered and mixed by the first author of this paper and released through Sony in 2005.

This paper will reflect the first author's eight years experience producing within the metal genre including releases through Sony and Universal. He has worked with the likes of Colin Richardson, Andy Sneap and Jens Bogren. Contributions with various producers, as well as professional musicians from the genre will be included in this paper.

For extreme metal acts, accuracy is more important than vibe, feel or groove in the drum performance. The kick drum work and the beats, patterns, subdivisions and syncopation involved demand the very highest standard of precision and accuracy to facilitate the tightest possible production. The use of a click track provides an essential central reference point in forcing a

drummer to tighten up his beats and parts and allows the producer to accurately assess this, which enables a precise standard of drum performance.

However, to take advantage of these benefits, the use of a click needs to be a central aspect of pre-production. Here, a producer will often need to be involved, for example in the mapping out of the song's tempi, and the recording of guide tracks for the drummer to rehearse to. The drummer's rehearsal time to the clicks and guides are a vital element of pre-production and their importance cannot be overstated.

Additionally, due to the particularly fast kick drum patterns involved (double kick drums/double kick pedals are a prerequisite) and the often rhythmically intricate and complex nature of the drum parts, it is normal for the drum tracks heard on a finished production to not entirely be as performed. Often a variety of kick-pattern building, drum editing and quantisation methods will have been employed to produce very tight drum performances. This is one of the particular production challenges of the genre, and ultimately the use of clicks when recording the drums facilitates these methods and the tools involved.

This paper looks at these issues in the context of the drum production of the album 'Sink'. On commencing recording of the drum tracks it became obvious that the drummer was unable to perform the vast majority of the double bass drum work for the often-complex parts. Measures were therefore taken to minimise any bleed of the kick drums onto the other microphones, so that the entire performance of the footwork involved could be built with samples. In essence, the tightness, accuracy and consistency of the final drum performance could not have been achieved without the use of a click-track during tracking.

Clearly, the impact of these measures resulted in a complete lack of authenticity of the perceived kick drum performance of this album. In a genre where authenticity and musical virtuosity are often viewed as paramount, the artists were keen that this 'fake' element of the production was not made

public knowledge in the fear that it would affect album sales, and the band sacked the drummer involved following the completion of the album.

However, under the circumstances, this kick building was the most appropriate solution to getting the album completed on time, within budget and with a strong standard of production.

## **Introduction**

Extreme metal is a generic term for a number of related heavy metal subgenres that are considered as being faster, harsher, heavier or more aggressive than more traditional mainstream heavy metal (McIver, 2005). However, according to Keith Kahn-Harris who is an ethnographer specialising in the area, the defining characteristics of extreme metal can all be regarded as clearly transgressive, as the 'extreme' traits noted above are all intended to violate or transgress given cultural, artistic, social or aesthetic boundaries. (Harris, 2005, p.29)

Producing extreme metal can be considered very self-indulgent and will usually display a different design ethos in comparison with other genres with similar instrumentation. This is partly due to the essential 'heaviness' and weight required from down-tuned 'heavy' music, combined with a particular emphasis on definition and intelligibility to retain the clarity and high level of precision of the often complex, virtuoso performances. Additionally, these performances are often provided with a sense of hyper-realism by the production.

This paper begins with an analysis of the benefits to be gained from using click tracks for recording drums for the extreme metal genre. Specific reference will then be given to the production of the Kaizen album 'Sink'.

## **Creating the Right Foundation**

The use of click tracks has particular relevance to the extreme metal genre. Although there are styles of music where the use of a metronome is not desirable, so that the tempos are allowed to breathe slightly, generally this is not the case for extreme metal. Here, due to the nature of the drum performance, using a click track does not kill the vibe or feel. Paul Bostaph from metal acts Slayer, Forbidden and Testament feels that he's so comfortable playing to a click now, that a live feel is still retained (Modern Drummer, 2008, p.81) and Dave Lombardo (Slayer, Grip Inc, Fantomas) on the subject of whether the drum tracks for the Slayer album 'Christ Illusion' were recorded with a click-track said 'Yes. There was one tune where we wanted to speed up the ending, so we turned the click off at that point. But that was it. You have to be able to play to a click today. I really like using one. I think it's helped me a lot.' (Modern Drummer, 2006, p60)

In extreme and modern metal, the kick drum work and the beats, patterns, subdivisions and synchronisation involved with the bass and guitars, demands the very highest standard of precision and accuracy to facilitate the tightest possible production. The use of a click track provides an essential central reference point in forcing a drummer to tighten up his beats and parts and allows the producer to accurately assess as such. A much more accurate, tighter and higher standard of drum performance is therefore enabled. The following quote from producer Russ Russell, (personal communication. 10<sup>th</sup> July 2009) supports this. When asked for his opinion on using click tracks for the genre, particularly for the drum tracks he stated;

I don't always use them, but I would say more often than not these days, particularly as extreme metal has got more and more complicated, tempos have gone up and up and it has to be tight. People have a different expectation now, the threshold of accuracy and tightness has gone way up. If you listen to metal albums from twenty, thirty years ago, and if you delivered that kind of feel in metal now, people would feel that it is just not tight enough. People listen in a different way these days.

It is highly likely therefore, that from the very first contact a producer has with an extreme metal band directly that the subject of click tracks are discussed.

The following quote is from Meshuggah's drummer Tomas Haake and explains his and the bands attitude towards using click tracks for their studio productions.

I do feel we need a click...a lot of the stuff is really hard to play on guitar, which means that if I strayed over the course of a song and by the end I played 10 bpm more than at the beginning, it would be impossible to play on guitar. So I have to use a click track to maintain a steady pace. (Modern Drummer, 2008, p64)

Even metal bands with less common time signatures and challenging tempo changes, for example The Dillinger Escape Plan, take advantage of the benefits here, often spending considerable time fine-tuning the tempo-mapping to perfection. Gil Sharone from 'The Dillinger Escape Plan' states 'If you play to a click long enough, you start to have fun with it instead of being distracted or scared by it.' (Modern Drummer, 2008, p90)

Once drummers are used to them, click tracks do not usually present that much of a problem, however most drummers with no experience of a click will be surprised at how difficult it is to play consistently with one, so obviously the recording session itself is not the time or place for a drummer to be getting comfortable with one. Sometimes you have to do whatever it takes to get the right performance and recording and it is the producer's responsibility to take whatever steps he feels are necessary to achieve this. So, due to the essential benefits that the use of a click track brings to a project, it is sometimes the case that if need be, a producer will have to talk a drummer round to the idea of tracking his parts to a click.

Many producers observe that it is simply through lack of experience that the term 'click track' strikes fear in some drummers who struggle with the concept of having to follow one. However, in the initial stages the exact opposite should be the case, whereby the click should be made to follow the natural tempo of the drummer. For recording purposes, there is always a perfect groove for every part of every song and obviously the key to getting the correct tempo for a click track is to work this out.

One method of working these tempos out is to get a recording from a rehearsal where there was a great performance of the song(s) tempo-wise. From here, it is a reasonably simple process to work out these tempos and for a DAW or a drum machine to be programmed with these tempos and a

cowbell or woodblock used for the drummer to play to, or any other similarly piercing sound with plenty of 'body' that is easily distinguishable from the drum sounds being played.

Another method is to simply use a programmable product such as Tama's Rhythm Watch or Yamaha's Clickstation to provide a click track and work out the correct tempos during rehearsal, simply moving the b.p.m. setting up or down until the perfect pace is found for each part.

Sometimes a single tempo is all that is required; otherwise tempo changes will need to be programmed for the relevant parts of the song.

Referring to this element of programming click track tempos, producer Andy Sneap, (personal communication. 16<sup>th</sup> August 2009) said 'One of the tricks is to write the groove so it lifts in the choruses and pulls back for certain parts, just to make it push and pull a little bit like it would do naturally.'

Some drummers prefer to have the first beat of the bar differentiated, perhaps with a higher cowbell or woodblock. In a situation where a drummer is having problems locking with the groove of the song, a technique definitely worth trying is to experiment with using a sound for the off beats. For example in the instance of a standard four beats to the bar rhythm, place clicks with a different sound than the down beats on the eighth notes in between. The following quote, once again from Meshuggah's Tomas Haake, demonstrates this principle;

But for this one we programmed the clicks with percussive stuff, so every one and three would be a stronger note, maybe on a cowbell, and 16<sup>th</sup> notes would play along in the background. It would be more of a swinging percussion beat instead of just a Tak, duk, duk, duk. That would just drive me nuts. To have more of a beat to play along to was really helpful. (Modern Drummer, 2008, p.62)

It is also worth considering moving from quarter notes to eighth notes for slower tempos, as the more space you have between each pulse, the harder it will be to keep tight.

In a situation where a band has neither the experience nor equipment required to take care of the tempo mapping on their own, then it is normal for a producer to join them in the rehearsal room and go through this together with them. From here, it is generally advisable that the drummer has a

period of time on his own, practicing to get his beats and parts as tight as he can with the click and getting comfortable with any tempo changes. This is a vital element of pre-production for the drummer and its importance cannot be overstated. Also, ideally, a producer should aim to have the drummer practicing along to exactly what he will hear when tracking the drums in the studio. A minority of drummers are able to practice and record to a click without any guide tracks whatsoever. As Tomas Haake says 'I actually don't have anything but the click track when we start tracking drums. I only hear me.' (Modern Drummer, 2008, p.61) Usually though, a drummer will be more comfortable having a guide guitar and/or bass/vocal-line present.

Sometimes, if a band is well experienced with pre-production, then they can be left to record these guide tracks themselves. Otherwise the producer will get together with the whole band to record these parts. As well as being the perfect time to ensure that they are in complete agreement about the song arrangements/parts, it is also an opportunity for the producer to become familiar with the songs and spend further general pre-production time with the band.

From here, the band should have the perfect template for the drummer to practice to, either with the rest of the band or without. It is usual for the drummer to be provided with a mix-down of two mono tracks with the click on one and the guide tracks on the other. The click alone can then be heard in rehearsal with the whole band (either with everyone hearing the click or just the drummer) or the guide tracks can be used as well if the drummer is rehearsing alone. Additionally, what the drummer hears when rehearsing alone to the guide tracks, should be exactly what he will hear in the studio when recording his parts.

Once the mapping and guides have been completed, a drummer should find that playing to the click track is relatively easy, and many find that once they have settled in, then the presence of the click is actually reassuring. This can be contrasted with many drummers initial perceptions of click tracks as being for pro-drummers only.

Generally speaking, if a drummer has the song arrangements memorised, he can now concentrate on making his beats and overall performance tight, hitting consistently and can forget about rushing ahead or dragging behind where the perceived correct tempo may or may not be.

Following the stage when the drummer has had plenty of time to rehearse to the clicks/guides, it is a good time for the producer to join the band in the rehearsal room to assess performance parts, how tight the tracks are sounding and discuss any problems. Here, it is interesting to note that the producer will often act as a drum tutor, despite the fact he may not actually play the drums. The expertise that the producer will have in knowing what beats, fills, subdivisions etc will work within the context of the other instrumentation and the production in general, and whether the musician in question is able to satisfactorily execute these sections, is vital.

Despite all of the above points about the benefits that the use of click-tracks, there are numerous exceptions to this general rule with bands who prefer to track without. Extreme metal band Machine Head's vocalist/guitarist Rob Flynn and drummer Dave McClain (personal communication. December 9<sup>th</sup> 2008) explained the bands' attitude to click-tracks as follows;

Rob Flynn 'No way, for Machine Head we're totally against the use of clicks...they would kill all the feel and energy. We've only ever used a click track once on all our albums, and that was at the start of the track 'Violate' off 'The More Things Change.' ' Dave McClain; 'I record to Rob playing the guitar live with me for every take, which keeps the energy and feel we want'. When asked about how they then went about keeping the overdubs tight, when, for instance, tracking up a guitar riff over a number of bars on its' own without the rest of the band, Rob responded 'We don't bother keeping a high hat going, we just manually place clicks to the guide guitar and that keeps the feel we want, as well as keeping the overdubs tight'.

Also, although (as mentioned earlier) Paul Bostaph tracked to a click for the recording of the latest Testament album, he didn't use a click during his time with thrash band Slayer other than on their albums faster tracks, saying that he preferred the push and pull of the songs tempo when tracking without a click. (Modern Drummer, 2008, p.81)

## **From the Pro's**

However, as an example of other 'pro' drummers who have reaped the benefits of playing to a click track for the first time, the following quote is from Brann Dailor from extreme metal act Mastodon. Here, he talks about playing to a click for the first time ever for their new album 'Crack the Skye' and how the album's producer Brendan O'Brien approached the issue with him;

I used a click on this album for the first time ever. I'd always really shied away from it. It scared me to be honest. I'd always seen clicks as being for 'pro' players, and I don't really see myself in that bracket...You know I took to it as soon as we started. Brendan said 'look, let's just get it up and see how you get on, if it doesn't work, we'll lose it'. But it worked great. Brendan was very encouraging and said I was a natural...I have to admit that my not using a click had presented us with a few problems in the past. With a lot of our songs they'll start with a theme, then go somewhere else with a heavier feel, then return to the first theme again. And so I have to be careful that when we return to that part, it's the same tempo as we started...I was always a bit too fast (Without a click) when we were recording. Then you have to think very hard about slowing yourself down, then it feels too slow. It's a nightmare. (Rhythm Magazine, 2009, p42)

## **Hyper-Realism**

So far, this paper has concentrated on the benefits that using a click track provides to the accuracy and tightness of a drummer's performance and how this dramatically improves the producer's ability to accurately assess as such. However, one of the production characteristics of the extreme metal genre is that due to the fast double kick drum patterns involved, and the often rhythmically intricate and complex nature of the drum parts, it is normal that the drum tracks heard on a finished production are not entirely as performed. Often, a variety of invaluable drum editing/quantisation or kick-pattern building techniques will have been utilised to achieve the standard of accuracy and tightness required of the extreme metal genre's drum performance.

Essentially, the use of click-tracks when recording the drums facilitates these drum editing, quantisation and kick-pattern building methods and the tools involved. Making appropriate use of these techniques, which will generally fall into the following five areas, is a particular challenge for producers working within this style of music.

Although playlists are a particular function within the Pro Tools platform, the term is being used as a generic reference to recording multiple takes within the same arrangement within the edit window.

The benefit here is that various takes of the same sections of a drum performance can be quickly, easily and accurately A/B'd against each other. From here, it is a relatively simple process to assemble the best takes of each section into a composite performance of the whole song. Cross fades would then be required between the various sections from the different playlists.

These issues with compiling playlist performances not tracked to a click would be the same if attempting to paste good sections elsewhere within an arrangement. Even the slightest change of tempo within the arrangement, (which would be unavoidable without a click) would result in every subsequent section being time shifted in the appropriate direction to allow for the pasted sections insertion. The process of incorporating these edits with the benefit of a click being used, will usually consist of nothing more than pasting the section and then finding an appropriate edit point for the cross-fade between the preceding and subsequent section.

General editing benefits are also provided for all instrumentation involved - parts can be simply copied and pasted within the arrangement (again not possible if the tempo between each has varied even marginally) and loops can be used if required, as can programming (meaning alternate remixes can more easily be done).

It will often be the case that further work will still need to be done to the drum performance, even following compilation from the multiple playlists and edits to repeat the best sections within the arrangement.

Here, an element of quantisation can be employed to tighten up the drum performance. There are numerous implications here when a click hasn't been used, as even after the desired tempo has been worked out and implemented; this will often need to change for subsequent sections where the tempo will have inevitably changed. Obviously, the closer and tighter the performance has been to the click/grid, (as will be the case when the drummer has actually played to the tempo map) then

the easier, less time consuming and more natural, with less glitches, this method of quantisation will sound.

Occasionally, particularly with kick drum performances that are either very uneven or out of sync with the hand work, elastic time/quantisation will not work, or will stretch the audio in an inappropriate 'chewed-up' manner. This is because, ideally, elastic-time should be used to quantise all of the drum tracks collectively, to retain the phase relationship between these sources. Therefore, any extreme quantisation impacted on by the accuracy of the kick drums will similarly be applied to, for example, the hats and overheads, which can be quite unforgiving when being time-stretched excessively.

In this instance, when quantisation is not an option or sounds inappropriate when applied to all of the drum sources, the option of only quantising the kick work, which is usually the most challenging element of an extreme metal drum performance, can be a possibility.

Once again, if the performance in question has not been tracked to a click, then the same quantisation/edit limitations and implications as outlined in the 'Overall Quantisation' section will be relevant.

Alternatively, when the kick performance is so inaccurate as to become largely irrelevant, then samples can be used to 'build' these kick-drum patterns, by literally implementing samples into the session on its/their own track(s) and placing them throughout the arrangement as needed. These would be used in the mix instead of the kick spot mics. When doing so, this would usually be carried out by the producer, with the drummer communicating the kick patterns required.

With the benefit of relevant grid lines from a click being used, it will always be clear where the downbeat for the bass drum is, and additionally samples can quickly be placed and copied, according to whether the kick pattern is based around sixteenths, thirty-seconds, or triplets.

With having this visual advantage, samples can usually be implemented relatively quickly and time can then be spent providing the patterns with a human feel, by not pasting the bass drums exactly to the grid, or alternatively slightly nudging them randomly away from the grid lines. This will mean that the overall perceived kick performance wouldn't immediately sound to have been programmed, despite the high standard of overall accuracy and tightness. Once a section is completed in this manner, it is a simple enough process to copy the bass drum patterns over to where the section is next repeated.

When carrying out kick-building when a click track has not been used, although not impossible, it is an incredibly difficult and even more heavily time-consuming process. This is due to the absence of a relevant 'grid' or any central reference around which to place the samples, meaning that, although rough visual spacing can be attempted, a trial and error basis will largely be relied upon, whereby individual kicks are moved around till the section is perceived as being tight enough. Once each section has been completed, the ability to copy the samples to the next time the pattern is repeated would not be an option, as the unavoidable tempo drift of the new section, even when marginally different from the first, would prevent the kicks lining-up as required.

However, the success of both of these kick-quantisation and kick-building methods will often be heavily impacted on by the resulting 'flams' caused by the difference of the kick-drum spot mics that have been quantised, or the placed samples, and the bleed-over of the kick drums on the overhead mics which have not been quantised or 'built'. These 'flams' can often have the effect of making the kick drum performance sound inaccurate, and impact on how tightly synchronised the kick drums, guitar and bass are perceived to be.

Techniques can be employed during the tracking stage to remove or minimise kick bleed and the possibility of these flams becoming a problem.

Producer Ron Vento from Nightsky Studios uses blankets or something similar to cover the outside of the kick drum to stop as much kick drum bleeding onto the other mics as possible. (Tape Op. 2009, p.14) The drummer can be asked to simply stop playing on particular sections where the kick work will need to be built from scratch, thereby removing kick-bleed completely. This technique works well, but in many instances will be confusing for the drummer, who simply will not be used to playing without using their feet, which in turn can cause them to lose the groove and feel of the section with their hand-work. Packing the kick drums with additional pillows or blankets, and pushing them right up against the batter head, so that the only noise that the bass drum makes is the slap of the beater hitting the head, but with no weight or resonance, can provide a solution to this problem. This minimisation of sound level being emitted from the kick drums will be enough so that the kick bleed-over on the overheads becomes irrelevant.

Although in other genres a producer will frequently be involved in some aspects of the composition and the arrangement of certain songs, it is usually only the arrangement aspect that would have any relevance to a producer working in the extreme metal genre. However, the knowledge and experience often required to carry out the various editing, quantisation and kick-building techniques can be viewed as a specific skill that producers in the extreme metal genre need to develop. With this in mind, the producer could be viewed as performer, particularly when it comes to effectively and convincingly building the kick performance with samples.

Similarly, when the production involves a significant degree of these techniques, then due to the level that the drum performance will have been scrutinised and put under the studio 'audio-microscope', this can be viewed as the blueprint for the live version of the songs, particularly from a tightness and accuracy of performance perspective.

Clearly, questions can be raised as to the ability of some drummers to reach this standard of live performance when their standard in the studio was far removed from that required.

## Case Study – Kaizen

As a case study regarding the issues already discussed, Kaizen's sophomore album, produced by the first author of this paper, will be used. In the instance of the production of this album, it was unfortunately not possible for the producer to join the band in their rehearsal room for pre-production, as the budget was not sufficient to allow for the return flight to Paris from Manchester. For this reason, the pre-production that was carried out with the band was done with demo recordings via email.

One of the first points of discussion with the band was the performance and production on their debut album 'Clear the Path'. The drum performance in particular and the standard production overall was nowhere near tight or professional enough, and sounded more like a good quality demo than an album being released through Sony.

Because of the numerous benefits to using a click track as presented here, click tracks were therefore right at the top of the pre-production priority list. As the band had agreed with the comments provided to them regarding the areas that their debut album was lacking, they agreed to start mapping out the tempos of the songs for the album, and to have their drummer practicing to this as soon as possible. The band went about this by programming the drum parts into a drum-machine and fine tuning the tempos, with a degree of tempo-mapping, until the perfect groove (particularly for the rhythmically challenging guitar parts) for each section was reached. The rest of the band then recorded their respective parts to the drum machine and these recordings were MP3'd and mailed to the author.

On analysing these, it was immediately apparent how much more complex the drum patterns and guitar parts were than on their first album. This was particularly the case with the double-bass drums, which not only featured particularly fast subdivisions and sections, often sustained over long

periods of time, but the fact that these were often synchronised with the guitar riffs, which frequently 'locked-in' and played the same rhythm as the kick drums.

On the first day of drum tracking in the studio, after spending a full day on mic positions getting the tone required, the clinical 'aural microscope' provided by the studio environment confirmed the producer's fears regarding the drummer's abilities to perform the particularly complex bass drum parts accurately. The difference between the kick parts being performed when tracking and the parts as heard when programmed was great enough that the options of using playlists, copying and pasting good sections, or using 'elastic-time' for quantisation were not possible or was not appropriate. For this reason, the approach adopted was to record the drum tracks with the kick drums completely packed and dampened and then to 'build' the kick performance with samples. Due to the time efficiency and accuracy benefits of a grid reference when building these kick patterns due to a click track being used, time could be spent providing the kick-patterns with a human feel.

## **Authenticity**

Building kick-patterns in this manner, so that it is not only effective, but also perceived as authentic and natural enough to convince the listener that it has been performed as part of the drum recording, is an art in itself and it takes skill and experience to achieve this.

Authenticity is discussed in Allan Moore's "Authenticity as Authentication," where he speaks of authenticity of expression arising when '...an originator (composer, performer) succeeds in conveying the impression that his/her utterance is one of integrity, that it represents an attempt to communicate in an unmediated form with an audience' (Moore, 2002, p.214) Moore also discusses authenticity of execution that 'arises when the performer succeeds in conveying the impression of accurately representing the ideas of another, embedded within a tradition of performance.' (Moore, 2002, p.218)

This sense of authenticity, reflecting realness and credibility is an essential concept for fans of metal music, where ideals such as manufactured bands and auto-tune are the anti-thesis to closely held principles for fans of the genre. With the case study for this paper, clearly this raises several issues regarding authenticity and it could be argued that there are parallels with a highly auto-tuned pop production here.

It is doubtless that most producers would prefer a scenario where the drum parts are performed live with the necessary accuracy. Clearly, a more organic, more natural overall production would likely be created, with considerably less time spent on any slight edits required. However, in the scenario outlined above, this was the most appropriate solution to actually getting the album completed on time, within budget, with a strong standard of production.

In the event of mixing a project for this genre where purely an acoustically recorded kick drum performance source is used, this would usually be heavily compressed in a bid to achieve the desired level of dynamic consistency.

In most instances, when replacing acoustically recorded kick drums with samples, between one and three samples would be lined up and used simultaneously (perhaps with one providing the weight and another more of the attack, for example), but without any change in dynamics on each track. This is to provide consistency and power to the mix. In this instance, the five Physical Dimensions and the Perceived Parameters of Sound, as highlighted by William Moylan, which are frequency, amplitude, time, timbre and space (Moylan, 2002), become largely consistent. This consistency of bass drum dynamics and tonality is very important for helping provide the overall weight and power to the mix. This is an essential principle for a high quality of production for this genre.

Even In the instance of utilising samples to reinforce, rather than replace, this will still contribute to the dynamic and tonal consistency of the kick drum. The degree to which would be dependent on

the percentage of volume contribution the sample has in comparison to the acoustic source when they are combined.

## Conclusion

It is important that click tracks are used for pre-production and tracking of the drums for this genre of production. The use of a click track provides an essential central reference point in forcing a drummer to tighten up his beats and parts and allows the producer to accurately assess as such. This enables a precise standard of drum performance. Additionally this enables the more effective, easier and more efficient use of the five outlined quantisation/editing/kick-building techniques, which, when appropriate, can be used to create a high standard of kick drum performance most effectively. Precision of performance, particularly concerning kick drums, is at the core of the very nature of a high quality extreme metal production.

If click-tracks are used, then these numerous drum editing and kick-building techniques in combination with the use of drum samples can be seen as contradictory to the following statement from Stanley Alten, which can be viewed as naive;

(you) cannot change a mediocre performance into a good one, compensate for poor microphone technique, or make a sloppy recording precise. In most instances it is the quality of the recording session that determines the overall quality of the mix. (Alten, 2002, p. 421)

When producing bands in this style of music, the most suitable approach to provide the pre-requisite ethics of precision, accuracy and tightness should be given priority over the reality of the drum performance event.

In the instance of an extreme metal album production where a considerable level of the kick drum patterns are relatively fast and complex, but a vast quantity of the performances in question are significantly far enough away from the levels of precision and tightness required, then it is appropriate to completely disregard the drummers footwork performance, to the extent of not

actually recording the kick drums with spot mics. This was the chosen route when producing the Kaizen album 'Sink'. By taking steps to either remove or heavily minimise any acoustic kick-drum bleed onto the other mics (particularly the overheads), then kick-patterns can be built with an appropriate sample, without flams impacting on the production.

With all of the above in mind, it can be proposed that without the use of a click-track, the production quality of Kaizen's 'Sink' album, would have suffered considerably.

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