

## MachineDrum Notes #1



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# MachineDrum Notes #1

## Introduction

This document is a short introduction to sound design on the MachineDrum. This is a pretty personal document as I explain my own use of the instrument and the concepts behind my music. It is also a work in progress, as concepts I am quite sure of one day can get thrown back into the loop pretty quickly. This is by no means an exhaustive guide to the MachineDrum or techno production, nor do I think that my approach is valid at all, it's just what I found out working with the MachineDrum and playing long liveshows. Everytime I turn the MachineDrum on and play with it I find new interesting sounds and methods that I then try to "formalize".

I will go through a few of my patterns and explain the different sounds I use in them. I do techno music as Wesen and focus mostly on the MachineDrum and ways of using it to play live. This doesn't mean that this document is only about the MachineDrum, as a lot of the ideas can be reused with different instruments.

My patterns are mostly four on the floor techno loops, most of them 2 bars (I have a MachineDrum mkl), which are played and looped for about 5 minutes each in a liveset, while I tweak individual sounds, mute and unmute tracks and play with the inbuilt delay. I spent a lot of time working on the sound design in order to have sounds that sound both organic and "soft", and that have a lot of potential to be tweaked live. Restricting yourself to playing a single 2 bar patterns for up to 5 minutes is a pretty interesting and creative task, because sounds have to move a lot. As you don't have pre-written breakdowns or buildups, you have to "tweak" them live. This is pretty difficult on one side, but on the other side, it allows you to have a very fluid way of building up, making it fit to the dancefloor and the general mood.

You can download the SYSEX file for this document over at our website at <http://ruinwesen.com/support>. The patterns rely heavily on the MD-UW sampling feature to load samples and tweak them, but most of the sounds are done using the normal MD SPS-1 synthesis algorithms.

Each pattern will be first presented in its entirety, with a link to a small "song" made out of the patterns. Then each part is described separately, analyzing the sound parameters. Finally, the progression used in the "song" is explained, showing how the different layers interact, and how each sound can be tweaked to help with the progression of the song. The individual track recordings of the pattern have been "maximized" up to 0 dbfS, so that the noise level is quite loud on some of them because the original sound is much much softer.

## Recording the "songs"

During the "song" recordings, I used the MidiCommand controller that I am building at my company Ruin & Wesen. I built the first version of this controller in a hurry before a show because I had started to appreciate working with the delay a lot, which was made possible using the CTRL-FX machines of the 1.50 MD OS release. However, I couldn't spare a track, so I decided to build a small controller that would allow me to control the delay effect machine over Sysex. This was really the main motivation for the MidiCommand. The additional features that came in later were developed out of the needs I had for my liveset, and the way I would interact with the controller was at the heart of all the design decisions. Some new aspects of my liveset were then themselves motivated by features I had built into the MidiCommand software. For example, I recently started tweaking the reverb, because I could lay out the Feedback and Delay into Reverb send on one patch of the MidiCommand, and tweak them in conjunction with the Filter.

Recording these “songs” for the purpose of this notes document, I tried to come up with interesting things to tweak, so this is much more experimental in a way than what I would maybe do in a club setting. Also, when recording at home I am much less stressed, taking more time to work small details out, and play a pattern for a lot longer than I would when playing live.

A lot of these experimental tweaks are usually overdone the first time I try them out, and it’s only through practice and reassessing recorded practice sets that I sort out which things I can indulge in when playing live. For example, the extensive tweaking of the RTRG on the snare in the notes song (done using C16 and D01) is way too heavy, and not really controlled. However, playing with RTRG is some thing I had discarded a long time ago because it was too risky, and I think it may be time to look into this again.

At the end of the song, I tweak the BRR of the chord sample, and it is a bit too harsh. Here again, it’s not something I will discard but rather practice more. I “discovered” while recording that practice set that turning a chord sample noisy and turning up the reverb is a good way to completely change the soundspace created by the pattern.

## Pattern C16

I started producing techno on the MachineDrum after being deeply impressed by Richie Hawtin's liveset CD "DE9 - Closer to the Edit", which mixes a different short loops from minimal techno records into a brilliantly constructed set. A lot of the sounds are very short, using simple rhythmic patterns, but the layers are constantly shifting in and out. The simple patterns produce a very hypnotic kind of feeling, and the huge dynamics and organic sounds make for music you can dance to, think to, dream to.

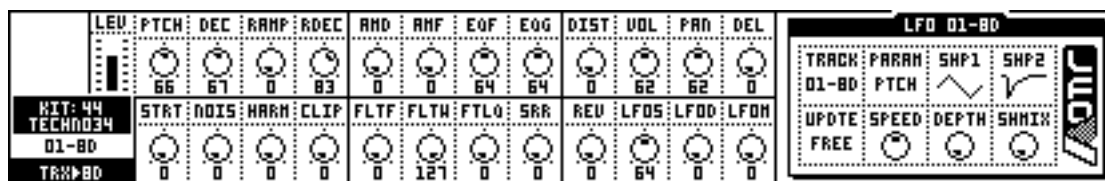
I started building very simple rhythmic patterns, and recorded each track into a loop. I then spent some time in Ableton arranging these loops, then exporting the Ableton liveset and reimporting it as different patterns into the MD (one pattern per row of arranged clips). I hacked this functionality together and will try to make it usable for other people, but it's in a very rough state. This process was a big help because it allowed me to try new things out, work out different mixes and progressions between the loops. C16 is one of the patterns that was left over from one of these exploration sessions and then constantly evolved over the next livesets. After 8 months of playing with it, it is still one of my favorite patterns because of the very "lively" nature of the sounds. The simple rhythmic patterns allow me to focus a lot on the sound of the track itself, and tweak a lot of the sounds in a subtle way.

While analyzing Closer to the Edit, I also realized that to sound like techno, it is easiest to follow some rules. Of course, this sounds obvious, but it was a big revelation at the time. It is also very important to break exactly these genre rules to move forward. But I still am using the prototypical schema of having a bassdrum on every beat (four to the floor), an offbeat hihat, and a snare on 2 and 4. Of course, I vary these rules, but this is the basic schema I follow. This is not very innovative, but it allows me have a framework in which I can work. The basic rhythm is given, and I can focus on the sounds in between, on the dynamics, on the sounds.

I am using the sound description I have on my liveset cheatsheets in the description below.

### Track 1: Bassdrum

This is my prototypical bassdrum. I usually just copy paste this sound over and over, because it turned out to be a functional one. It is quite deep, but short, and not very loud, done using TRX-BD. I experimented a bit with other

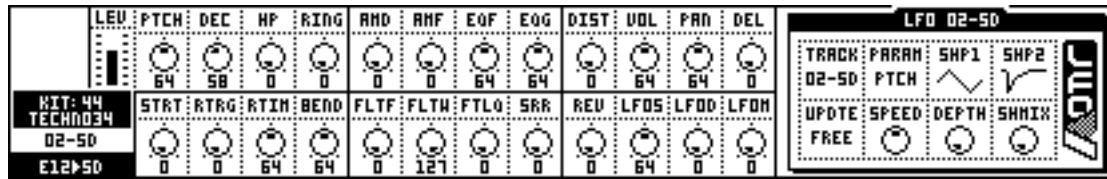


bassdrum, but decided to stick with the round sound of this one.

You can see that the volume is at 62. It took me a long time to achieve a kind of subtle organic sound on the MachineDrum (of course, I am still working a lot on it), and a key to achieve this was to turn down the volume on a lot of elements. While playing, I usually don't tweak the bassdrum, just either mute it, or high-pass filter it to make transitions and breaks.

### Track 2: Snare

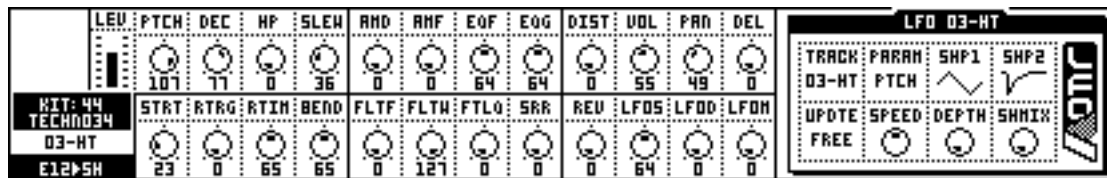
The second track features the snare, which is an E12-SD. It doesn't use any param locks in this pattern, but the



E12-SD is a snare you can really nicely tweak due to the fact that it's a sample. You can do really nice organic rolls using the RTRG and RTIM. Here the pattern is very very basic, snare on 2 and 4 and a slight prehit on the second bar.

### Track 3: Syncopated Hihat

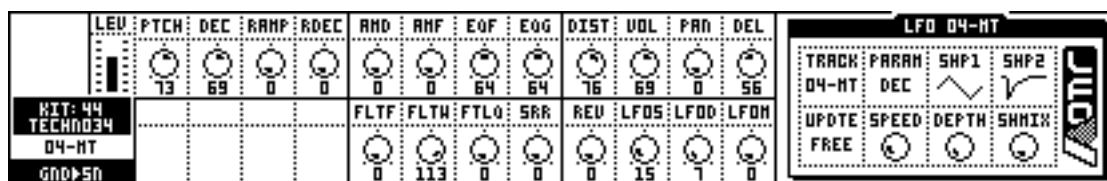
This track features a very simple hihat, which is realized using the shaker at a pretty high pitch. E12 sounds are nicely tweakable in a subtle way using the STRT parameter.



This hihat pattern is built using my standard trick of layering a rhythm that works more in threes than in twos, to counterbalance the main binary beat. I do this by using spaces of three 16th notes between hits, and then closing by adding an offset for the pattern to work within the limitations of the MachineDrum (no real polyrhythms). A very inspiring concept to do these kinds of patterns is to look at african and latin clave patterns, which are kind of three against two in a binary setting. There are lots of cool ideas to get from these patterns, and they roll along very nicely.

### Track 4: Ping Melody

I think my most favourite instrument on the MachineDrum after ROM-Machines is the GND-SN. It is just a sinewave with ramp, but it is eminently tweakable, especially in a live set. You can modify its sound using the AMD and AMF



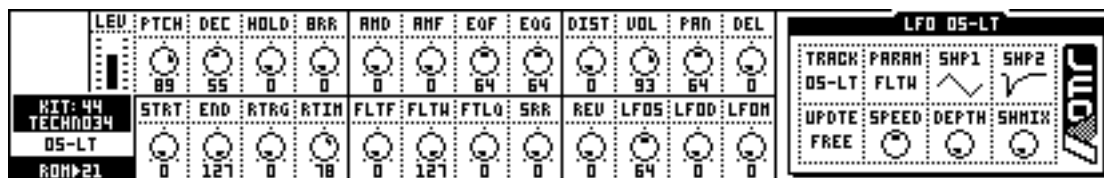
parameters. You can distort the sinewave kind of nicely (I find that most sounds don't sound good at high DIST on the MachineDrum), SRR adds a nice grit and high end noise, LFOs on pitch work really nicely to turn the sinewave into an elastic bouncy bass sound. With a RAMP and fast RDEC, and a short DEC, the GND-SN can sound percussive, while using a long RDEC will make it sound laser or sonar like. Using a longer DEC and no RAMP, the GND-SN makes for a nice sub bass (it is a bit difficult to make the attack a bit longer).

A favorite tweak of mine, which I often use when playing this pattern, is to play with the PTCH (the pattern is rather atonal, despite the C minor chord), the RAMP and the RDEC while sending the sound more and more into the delay to build up a kind of alienoid soundscape which continually grows stronger. I use param locks for the melody, and a slight LFO on the DEC.



### Track 5: Pong Delay

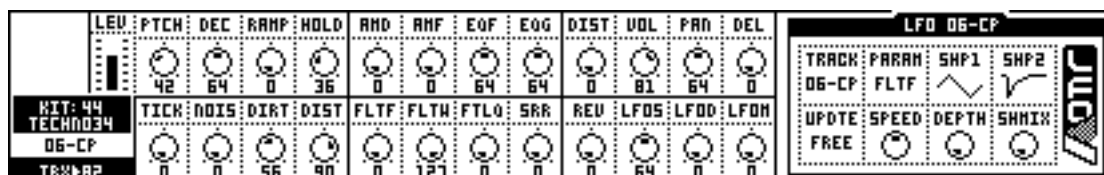
This is a sound that is both atmospheric and rhythmic at the same time. It is a bass sample and has some bottom-end content. On the other hand, it is delayed, which I usually don't do on bass sounds, and a very sharp attack. That attack then gets sent into the Reverb because the DVOL parameter is turned up, and thus adds some "room".



Adding some slight reverb on sounds is also a good way to make the pattern bounce. I tend not to use the compressor on the MachineDrum (mostly because I don't really understand it at the moment), but also because it is often easier to rely on the room distortion and the sound generated by people moving in a club setting. Also, it makes me focus more on the dynamic interaction of different sounds in a pattern. I try to "rebuild" the sound and feel of compression by using volume envelopes, volume swells and weird subtle sounds like the Reverb. For example, when I have a hit in a pattern that sounds out, I try to precede it with a sound that "leads" into it, for example a small cymbal "wsshHHH", some vocal sounds like "SSS" or reverse samples.

### Track 6: Sub

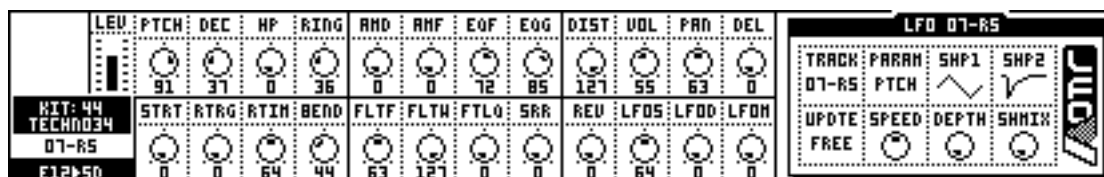
This is the actual sub bassline of the pattern. I use the TRX-B2 sound, which is a very nice bass sound in addition to being a bassdrum. Using the distortion pattern, you can turn it into a "grating" kind of bass sound. Adding LFO on pitch (or slides) makes it a very "knarzy" (bigbeat acidy in german) bass. Here I use it as a kind of weird sub sound by paramlocking the DIST and DIRT parameter. The bassline construction follows my three against two model I explained above. On certain steps, the sub sounds almost like a weird hihat.



Adding DIST and DIRT will make the sound have more high-end content, which allows me to send some of the hits into the delay to further add more three against two feeling (I almost always put my delay on 24 when I have a pattern without swing, and 32 when I have swing because the rhythmic displacement doesn't feel very well. Obviously, this are rules I found for myself, and I know I will have to break them in the future to be able to move forward).

### Track 7: Percussion

The next pattern is some weird percussion sound based on the E12-SD, and I am pretty certain it started as an offbeat hihat. I think I switched the sound by doing some weird manipulation, and found it to be pretty ok and kept it.



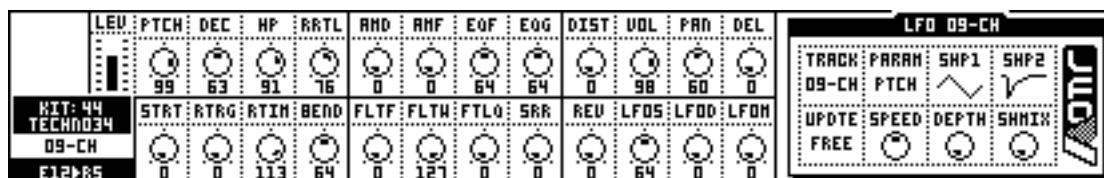
It adds a lot of nice dynamics, and I think it shows how errors can have very happy result. In fact, writing this down MachineDrum Notes #1

makes me want to explore more “randomizing” of kits by pasting different kits on top of existing patterns.

### Track 9: Offbeat Hihat

This is the ubiquitous offbeat hihat I have in my tracks, and it is the second most important element for booty shaking after the bassdrum. I must admit I am very fond of the offbeat hihat, and I often use two different sounds of offbeat hihats in a pattern to boost the dynamic. This hihat is a very aggressive one, loud and in the upper frequency spectrum. It counterbalances the rather “calm” other parts.

This is a trick I learned listening to Closer to the Edit over and over. A very sharp sound against a mellow background



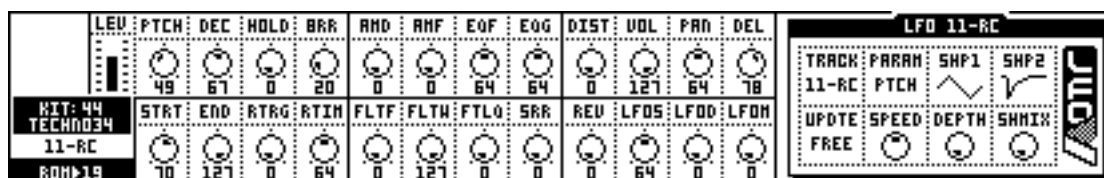
will have a very high energetic content, and if it is carefully chosen (or “known to work”, like the offbeat hihat), it can make the pattern move on its own, without having to add much. The trick to make that element stand out is to be very sparse with it, for example having a very aggressive offbeat hihat, but only on the first offbeat every 2 bar (that makes it one hit in the whole pattern on the MD-UW Mk1). This will focus the attention of the listeners, and will make them long to hear that one sharp sound again, and will give them enough “energy” to go through the 2 bars without getting bored.

I used the E12-RS machine, which shows that you can actually use every machine with some high-frequency content to create a hihat sound (if you need to remove the lower frequencies, just use FTLF at a high value). The personality of a hihat is very important, if it has a low attack, a long decay, if it sounds “real” (as in real hihat), or if it is digital. If it retriggers itself, how it cuts off, if it has some reverb trail, if it is gritty. There is a lot to be done exploring hihat sounds, and it is one of my favorite activities when building sounds and patterns on the MachineDrum.

### Track 11: Dub Chord

This is probably my favourite sound on the MachineDrum, a chord pad swell sample I have been using over and over and over. It is always C minor, mainly because I’m lazy. I got very deep into tweaking this one specific chord swell sample, and can use it to make dub stabs like in this pattern by using a big STRT value. I obviously add delay, which here adds reverb as well as the DVOL parameter is turned up.

I love tweaking chords in a few ways. By moving the STRT parameter around and playing with HOLD and DEC, I can

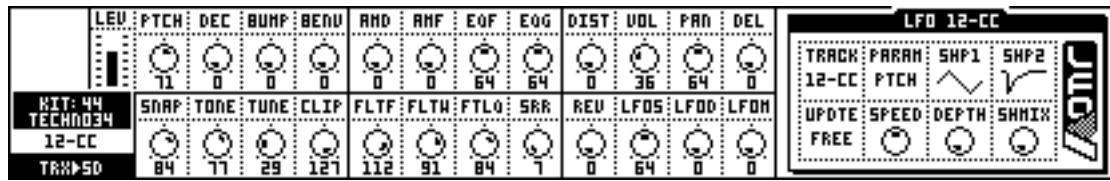


turn it from a sharp dub stab into a swell, from a sharp growing kind of bulging sound into a very soft pad, and then back again into a stab. By playing with BRR, you can turn the stab into a very noisy percussion sound, and by turning the HOLD and DEC up (and LEV down) into a noisy pad or noise background (which can then get worked by the compressor). Another very interesting way to play with chords is to send them into the Delay, and turn up the feedback, which starting with a sharp sound will create a very dense rhythmic pad because the original sound overlays itself in a lot of layers. This adds a lot of dynamics as well, and with the delay on 24 rather than on 16, it creates both three against two and the compressor feeling (because of the chords being louder when a lot lay on top of each other. You can then work the delay “pad” by using the delay filter.

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## Track 12: Woop

This is a very simple rhythmic pattern, with a hit every 2 beats on the second 16th, and it is there to add the



“compression” feeling (that’s where the sound of the pattern comes from as well). It is very distinctive, and can be used as a kind of “hook” when introducing it. It can work alone with the bassdrum during quite a long time for example (which is how I define a hook in my liveset).

## Pattern D01

This is another Closer to the Edit influenced pattern, and I built in the same way as the pattern before by relayering loops in Ableton.

### Track 1: Bassdrum

LEV	PTCH	DEC	RAMP	RDEC	AMD	AMF	EoF	EoG	DIST	UOL	PAR	DEL	LFO 01-BD			
	43	65	13	83	0	0	64	64	0	68	64	0	TRACK	PARAM	SHP1	SHP2
KIT: 43 TECHNO2	STRT	NOIS	HARM	CLIP	FLTF	FLTH	FTLQ	SRR	REV	LFOS	LFOD	LFON	01-BD	PTCH	~	✓
01-BD													UPDTE	SPEED	DEPTH	SHNIX
TRK>BD	0	0	0	0	0	127	0	0	0	64	0	0	FREE	○	○	○

Nothing really new here, this is almost the same bassdrum as on the pattern before. The rhythmic pattern is straight four on the floor. Can't go wrong with that.

### Track 2: Perc

LEV	PTCH	DEC	RAMP	RDEC	AMD	AMF	EoF	EoG	DIST	UOL	PAR	DEL	LFO 02-5D			
	54	33	27	42	0	0	64	64	0	71	64	0	TRACK	PARAM	SHP1	SHP2
KIT: 43 TECHNO2	HOD	HFRQ	HDEC	HFB	FLTF	FLTH	FTLQ	SRR	REV	LFOS	LFOD	LFON	02-5D	PTCH	~	✓
02-5D													UPDTE	SPEED	DEPTH	SHNIX
EFM>BD	64	64	32	0	0	127	0	0	0	64	0	0	FREE	○	○	○

This is a second bassdrum with a much higher pitch (and with a wooden quality I like in the EFM-BD). This is against built on three against two, but at a wider range by putting a hit every three 8ths note. It gives a lot of the drive forward, even if it is just a very simple pattern. I don't usually tweak this sound when playing, and consider it as a companion to the bassdrum.

### Track 3: Hat

This a standard hat sound done using the E12-SD and the lfo controlling the PTCH. This make the hihat swishy, and not crisp. The slightly squishy hat has much less forward drive than a normal hat would have, but it adds bounce.

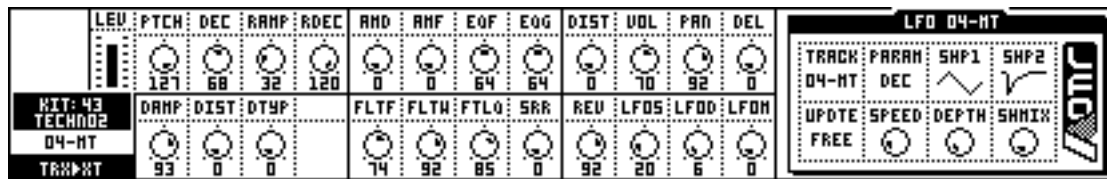
The pattern itself fits the space delimited by the percussion on track 2. It is build of a group of two 16ths note, and a

LEV	PTCH	DEC	HP	SLEW	AMD	AMF	EoF	EoG	DIST	UOL	PAR	DEL	LFO 03-HT			
	107	77	0	36	0	0	99	0	0	57	64	6	TRACK	PARAM	SHP1	SHP2
KIT: 43 TECHNO2	STRT	RTRG	RTIM	BEND	FLTF	FLTH	FTLQ	SRR	REV	LFOS	LFOD	LFON	03-HT	PTCH	~	✓
03-HT													UPDTE	SPEED	DEPTH	SHNIX
E12>SH	23	0	65	65	83	35	0	0	27	92	43	0	FREE	○	○	○

single note on the last 8th of the bar to give it some bounce. The expectation built up by the groups of two hats is broken by the last hat, doing some kind of small "turnaround". Having 32 steps per pattern (on the Mk1) is a kind of in-between thing, because the expected turnarounds (in most of western music) are awaited on the end of the bar (4 beats), every 4 bars, every 16 bars, etc... Adding too much of a turnaround at the end of two bars breaks this expected flow, making it a bit more tricky to have loops going for a long time. For example, this severely limits chord progressions (which is why I almost have none on my MachineDrum patterns), because fitting a longer chord progression in 2 bars is hard, and because the awaited turnaround comes to early. Thus, you have to focus a lot more on other sounds (tweaking in 4 bar turnarounds for example), or making the whole pattern fit in a much smaller rhythmic frame (which is why minimal techno like Closer to the Edit is so interesting to me).

### Track 4: Reverb Tom

This track is again very simple, using the TRX-XT. It is a regular pattern, using a param lock on the pitch, adding



some hypnotic feeling to the pattern. I consider the toms to be similar to the sinewave in terms of tweakability. Toms often have the additional distortion on the first page, allowing to create some weirder sounds. However the pitch range is drastically reduced versus the sinewave, not allowing to make piercing high-end shrieks.

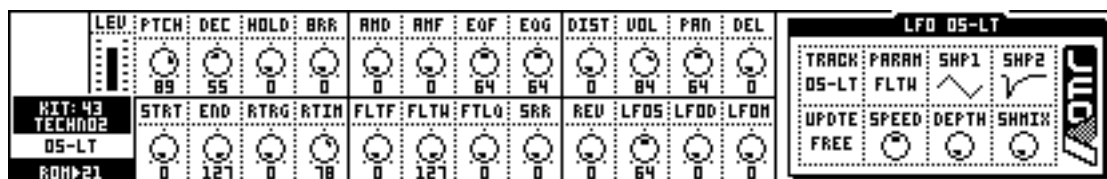
The sounds has a lot of verb on it, and the verb on this pattern is pretty industrial sounding, with quite some predelay, almost adding a kind of weird metallic second sound a 16th after the original tom hit, which seems to come from the bassdrum instead of the tom. The possibility to make some sounds like a part of them is coming from the other, or that both are actually part of the same sound is very interesting, and it's what a lot my "entry" sound (the reverse hihat for example, or the vocal "SSS") leading another sound actually do. It connects the sounds logically, although they're pretty different. Muting one part creates some very variations, deceiving the listener.

Using simple patterns for sound makes it easier to create the illusion that they're part of a bigger concept. For example, Track 4, 5 and 6 sound like they're actually part of the same bassline (to me). It is also very interesting to note how relentless repetition of the same pattern with different sounds (or small sound variation in sound) will form the illusion that they are connected logically although they're different instruments. This is still something I have to explore, and I think my best examples in this direction are the early patterns I did (after rearranging them in Ableton). Focusing on things like "bassline" or "melody" make it very hard for me to build this kind of patterns, and I rather have to think in terms of pure sound (and rhythm of course).

I found one track by the Don Ellis Bigband called "The Magic Bus Ate My Donut" very interesting, because the section arrangement works following the same principles. The overall dynamic shape of the sound is very important, and similar to what I try to achieve trying to sound like a compressor, and the sections seem to answer each other in non-obvious ways, the saxophones taking over the buildup of the sound built up by trumpets, just to be cut-off by the trombones. The rhythm sections plays the same riff over and over (always in weird time, the main section is 4/4 followed by 5/4), similar to the bassdrum in techno. Modern music builds a lot on these interactions of sounds, but often lacks the groove and the funk :)

### Track 5: Syncopated Plonk

This is again a very simple pattern, repeating every 2 beats, and syncopated against the bass drum. It is one of my bass samples, and takes over a role similar to the previous pattern. I probably took over the same kit at some time, or reused one of the loops in Ableton. It seems to answer both the reverb tom on Track 4 and the sub bass on Track 5. None of these sounds land on the same step, and in the end you more interleave sounds like this, the more you

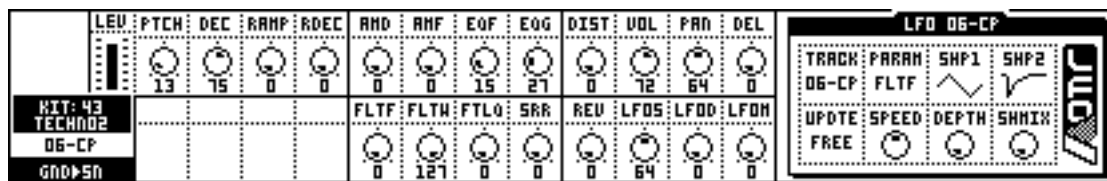


are going to fill up every 16th in the pattern, making for a kind relentless rolling which is very hypnotic.

There are some very interesting drum books on linear drumming which are based on this approach of using only sound at every 16th, but interleaving those so the whole pattern starts to emerge from the different sounds and accents. Using this approach in electronic music is very interesting, because it avoids overlapping sounds, making it much easier to create a powerful and dynamic mix. You don't have to worry so much about frequencies clashing, for example about the melody muddying up the bass.

### Track 6: Subbass

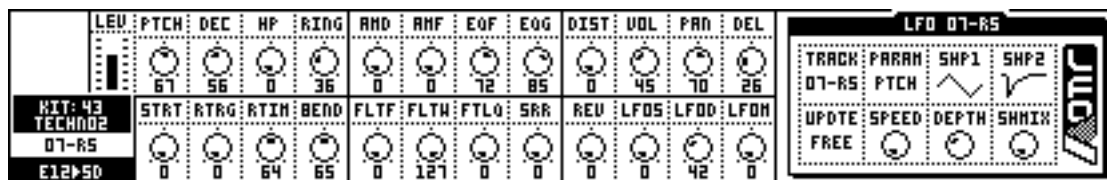
I use the GND-SN as a sub bass, with a pretty short decay and no RAMP. The one thing that annoys me with the



GND-SN on the MachineDrum is that it has a pretty sharp attack, probably because it doesn't start at a zero-cross in the waveform, and this makes for an "impulse" kind of sound at the beginning. This gives the subbass a bit too much rhythmic impact, while I would often like to have more rounder and more powerful bass. I can do that pretty well on the MonoMachine, but you have to use samples to do it on the MachineDrum. Also, because it has no harmonics, the subbass may sound a bit dull despite its strong energy. Another danger is putting the sub too low, and having it vanish completely from PAs that don't have a big bottom end. Because the sub has no higher harmonics, you don't hear it at all anymore.

The subbass pattern is written so it hits around the bassdrum, but not at the same time. The bassdrum is always part of the bassline, and more so because I use this round and deep bassdrum sound. This is something I derived from reading on linear rhythms in jazz drum books.

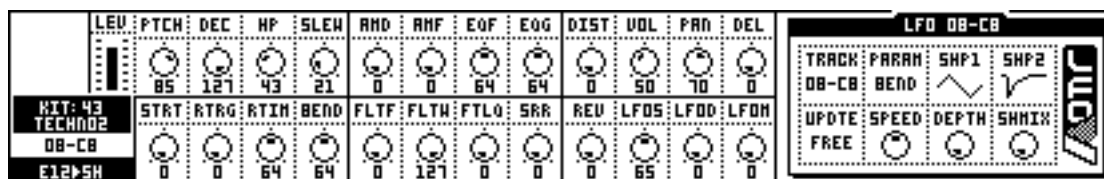
### Track 7: Syncopated Snare



This is a track I changed completely while writing this document, because I found it to be quite weak. I changed it from a very identifiable weird snare pattern to something shorter and simpler rhythmically. Identifiable patterns are dangerous because they tend to be quite tiring on the ears, especially if they are two bars long (and not 4 for examples) and looped continuously. The snare sound is a very standard sound, a short E12-SD sound. I tried playing with the RTRG in my practice set recording, and it definitely has some potential, but being new to it I naturally overdid it, and will have to practice that again.

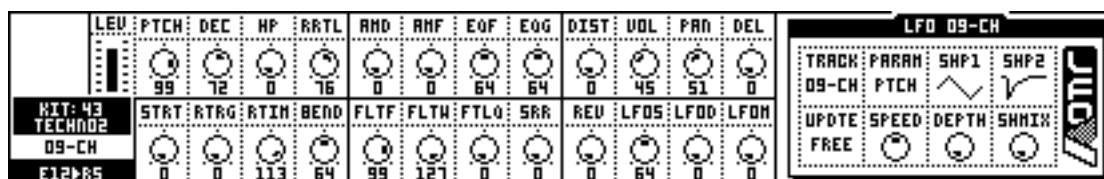
The rhythmic pattern is based on simple three against two again, with a very slight delay to make things a bit more lively. Putting this pattern into prominence is pretty effective (like I do in the practice set), because from being hidden under other layers, the three against two goes into the foreground and puts a whole new drive forward to the pattern. You can then tweak the sound to attenuate that prominence again and revert into a more binary rhythm, or put still more accent on the three against two (by tweaking the sound or adding other three against two patterns) to make the pattern more interesting.

### Track 8: Offbeat Hat



This is a squishy kind of offbeat hihat, again realized with E12-SH, and probably started out as the same loop in Ableton being reused for a different pattern. Nothing much to say about the pattern, it's one of the three fundamentals I rely on to make people move.

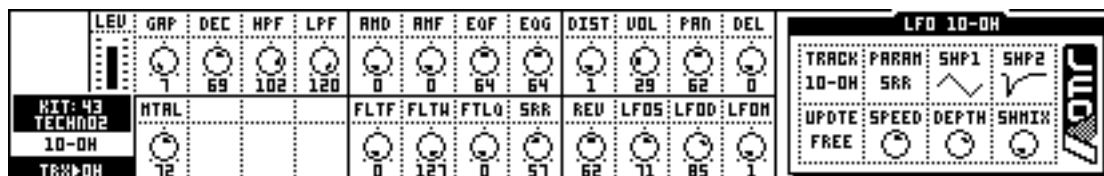
### Track 9: Hihat



This is a much more interesting hihat pattern, as it is very “asymmetrical”, playing only on the first bar. The pattern itself is very simple, three rhythmic hits. The pattern is so simple actually that is kind of like a “basic language word” in rhythm. Everybody has been playing out that kind of rhythm at one time or another, so it is a very strong element. I use such very simple marking elements (the simplest one being a single hit) on different tracks to echo themselves. Making the rhythmic pattern asymmetrical gives the whole loop a nice kind of bounce, without overdoing a turnaround.

The sound is a very simple E12-RS based sound, not really departing from the standard settings. It is very soft and pitch a bit higher, and most of the low frequency content has been removed using FLTF.

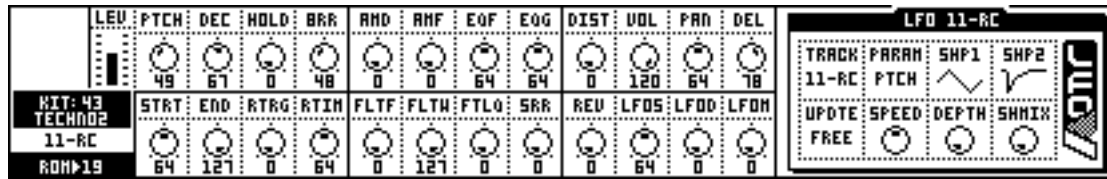
### Track 10: Weird SRR Open Hat



As with Track 7, I also redid this track because the pattern was a bit boring and annoying. It is now still a very identifiable track, but it is much more sparse than it was. It is using an open hat with a lot of SRR on it, and a lot of param locks on the LFO that is directed to the LFO. I also param lock the DEC to make certain sounds short. Basically, all the hits on this track are used as sounds leading into another one to give the whole pattern a bit more dynamic. Muting the sounds that this track leads to (like I do in the song) allows to completely shift the dynamic.

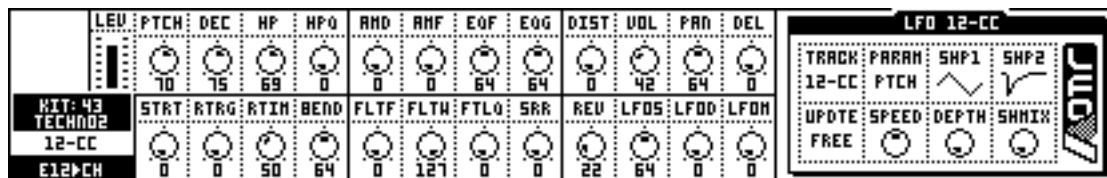
Playing with LFOs is something I haven't done a lot, but I'm more and more convinced that they are the key to more organic sounds and more interesting hypnotic patterns. However, using them in a controlled fashion takes a lot of knowledge and experimentation that I haven't acquired yet, so they don't usually show up in my patterns. I regularly use LFOs on the pitch of bassline however, with LFOD set to 0, in order to param lock some nice slides or fast wobbly accents on certain notes.

### Track 11: Dub Chord



This is a very simple dub chord pattern, basically a chord on the offbeat. However, due to the delay usage, this sounds more like a galloping rhythm because of the single echo to each chord. This is the actual “hook” of the whole loop, and I like to take a lot of time before introducing it, because it gives the whole pattern a very strong and smooth “rolling forward” sensation. In the practice set I forgot to mute the track so it is there right from the beginning. This is a very tweakable pattern. For example, moving the STRT around will move to a part in the pad swell (the original sample) where there is much more high frequency content, making for a much more defined hit. Moving the STRT knob in rhythm with the track allows to set specific accents without having to param lock them. Using the BRR allows you to transform the offbeat chord pattern into a very aggressive and noisy offbeat snare kind of sound. Similarly, opening the DEC and lowering the LEV will turn this into a very soft chord pad.

### Track 12: Hihat



This is a very simple and frank hihat pattern. I love using the E12 closed hat sample for a very “real” and aggressive sounding hihat sound. It is great to replace a soft offbeat hihat with a E12-CH offbeat hihat for example to push things forward.