

Beat

#182 / 03-2021

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THE SERUM KILLER!



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3,2 GB CHOIRS & SYNTHS

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7 GB Synths & Sounds

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AUDIO, MIDI & CV

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THE BETTER JUPITER-6?
HANDS-ON: PSYTRANCE
FROM START TO FINISH



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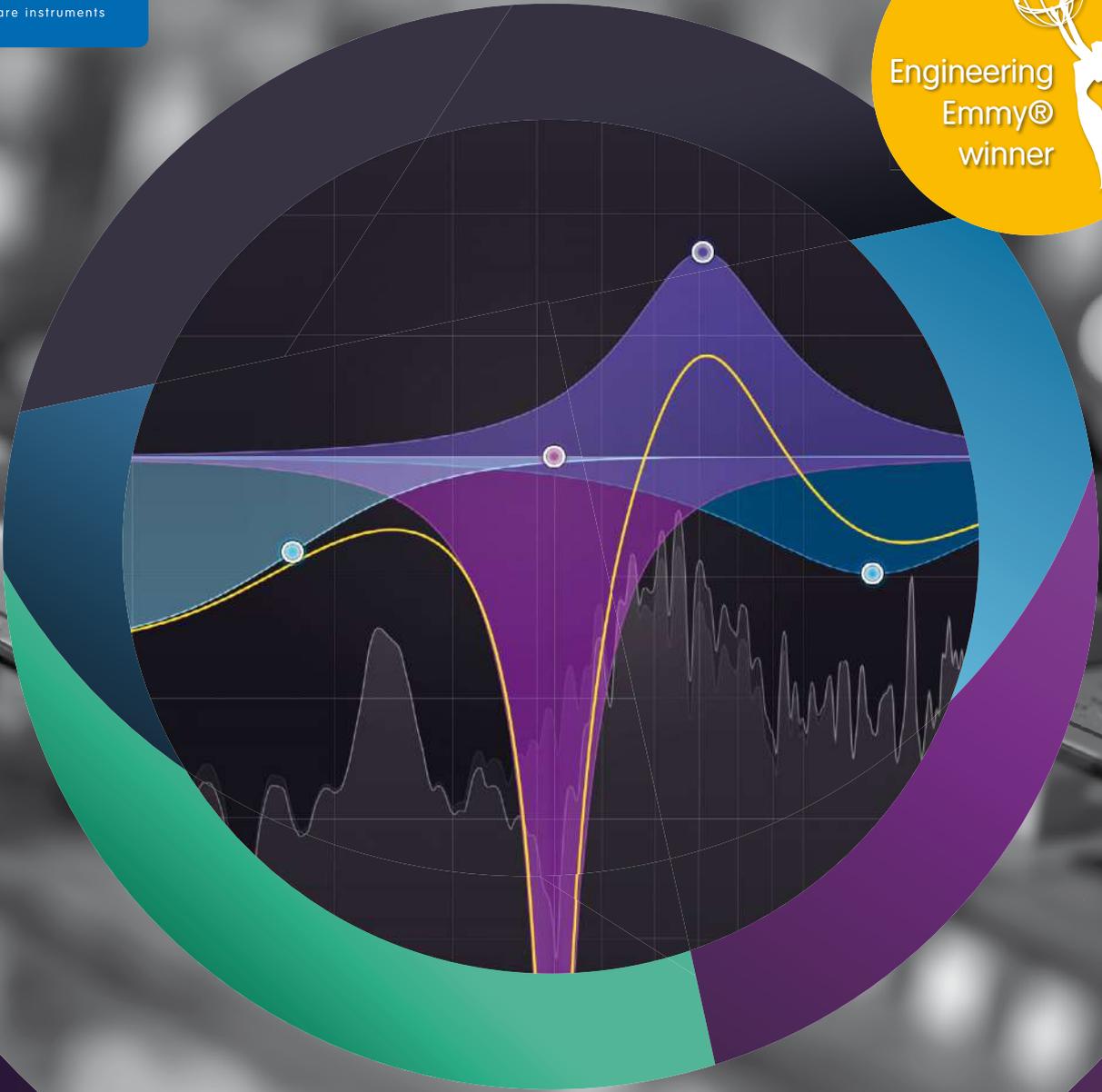
INTERVIEW

IN THE STUDIO WITH
ELA MINUS



ABLETON OLDSCHOOL SAMPLING





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3 SOFTWARE HIGHLIGHTS!



Hot competition for Massive and Serum!

Waves Codex

Wicked Dubstep basses, screeching leads, shimmering arpeggios, endlessly evolving pads, as well as impressively animated textures - all this and much more is possible with Waves Codex. This wavetable synthesizer entices with a multi-faceted sound generation including WAV import, a user-friendly interface and an inspiring arpeggiator. Our software highlight of this month is a real guarantor for fresh sounds far removed from analog standards.

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Filthbox à la Moog & O-Coast

Retromod LoFreq Wired

The RetroMod LoFreq Wired plug-in captures the sound of 11 popular analog synthesizers from 2009 to today, including Moog Grandmother, Dreadbox Erebus V3, Arturia MiniBrute 2, Doepfer Dark Energy II and Analogue Solutions Telemark V2. Look forward to powerful and multi-faceted analog sounds that do an excellent job in more than just the low frequency range! The Activation Code is **BEAT2020**

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3.2 GB Gregorian Choir and Synth hybrids

Anigma for Zampler & MPCs

Pure emotion and ethnic vocal power ... Gregorian chants have without question a mysterious and unique sound; however, since such chants also quickly sound outdated, we have sampled them by all the rules of the art, sliced and twisted through the sound grinder. The result are 64 production-ready bass, pad and lead hybrids of choir and synthesizer sounds that give each track a unique touch.

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Beat #182: Exclusive software 12 GB of valuable plug-ins and samples for download



7 GB:
Synths & Sounds
for Urban,
Trap & House



This month you can expect a very special software highlight: the versatile Waves Codex wavetable synthesizer. Thanks to its multi-faceted sound generation and intuitive arpeggiator, inspiration is guaranteed. The RetroMod LoFreq Wired plug-in, on the other hand, brings the distinctive analog sounds of modern synthesizers from Moog, Dreadbox, MFB, Analogue Solutions and Arturia into your DAW. The thrilling combinations of Gregorian chant and modern synth sounds await you in the latest soundset for our Zampler//RX plug-in as well as for Akai's MPC series. Finally, sounds and loops for genres such as House, EDM and Trance, prepared and ready for production by Audiovat, Loopmasters, Prime Loops & more, provide a breath of fresh air in your sample folder.

All sounds are cleared for your use. Please note the enclosed license terms.

Content compiled by the Beat editorial team.



Elektronik Soundlab FORT3 Free Edition

With its punchy and brilliant sound, this virtual grand piano is an excellent choice for Pop, House & the like. By combining the six effect layers, and with the integrated reverb, expressive variations such as filtered or heavily reverberated piano sounds can be achieved.

Download: www.bit.ly/BeatDL182 | Info: elektroniksoundlab.com win | mac

DSE Giant Verb

The name Giant Verb says it all: with this plug-in modeled after analog reverbs, you can create wonderfully dense reverb effects. Thanks to the extensive setting options, even modulated reverb tails are child's play with this resource-saving effect.

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Exclusive Download: The Beat Studio

3.2 GB:
Enigma for
Zampler & Akai
MPCs



Vember Audio Surge
Flexible Hybrid synth, ideal for animated sound textures

AudioRealism 606
Emulation of the cult Roland TR-606 drum machine

Thorn Solo
One of the best and most flexible monosynths out there!

Zampler//RX
REX and SFZ Player with mod-matrix & sequencer

DDMF The Strip
Musical channel strip for Mixing & Mastering



VERSATILE MORPHING SYNTH

Monoplugs Monique

Thanks to its clever morphing functions, the Monique synthesizer is a specialist for pulsating basses, impressively animated lead sounds, complex textures and wacky effect sounds.

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EXCELLENT TAPE ECHO SIMULATION

GSi VariSpeed

The WEM Copicat IC-400 is one of the most sought-after tape echo devices in existence. GSi VariSpeed recreates the sound of this legendary device in detail with fantastic, very lively sonic results!

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SONOROUS SYNTH CHAMELEON

u-he Zebralette

With a fantastic sound and lush preset offering, Zebralette is an absolute must download. The extremely flexible spectral oscillator known from Zebra 2 is a secret weapon for lively textures.

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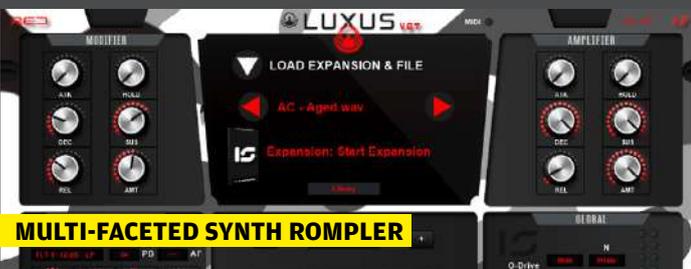
EXPERIMENTAL LOOP GENERATOR

Dynamic Tonality XronoMorph

A specialist for the creation of multilayered rhythmic and melodic loops is hidden behind XronoMorph. You can control the included samples or any software and hardware sound generators.

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win | mac



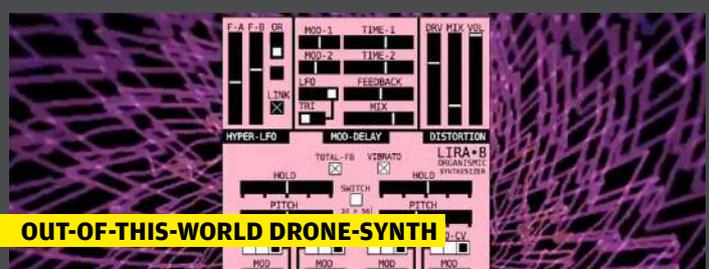
MULTI-FACETED SYNTH ROMPLER

Infected Sounds Rex Luxus

Contemporary sounds for all types of electronic music await you in Rex Luxus. The sounds can be manipulated in many ways and provided with effects. A Step Sequencer and a Trancegate provide inspiration.

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win



OUT-OF-THIS-WORLD DRONE-SYNTH

Mike Moreno LIRA-8

LIRA-8 attempts to emulate the signal path and sound of the SOMA Lyra-8 analog drone synthesizer. Like its boutique role model, this plug-in can elicit wonderfully wacky textures and space sounds.

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Whether you want to record melodies or vocals, record or sample beats, integrate a modular system or perform live, you can only really get things running smoothly with the right MIDI, audio or CV interfaces and controllers. But which ones can do what and, above all, which ones are best suited to your own workflow? In our big guide, we'll introduce you to current devices and their features, compare different models, and give you practical tips on how to optimize and perfectly expand your setup. **Page 16**



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Ela Minus' debut is inspired by the creation of simple human interactions with technology. Danny Turner dissects her minimalist approach.
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Anja Schneider is one of the most prominent spokeswomen for the members of the „Booking United“ association. This organization represents the interests of DJs and booking agencies who have been hit particularly hard by the pandemic. In her interview with Tobias Fischer, she states that the reaction of politics to this problem is a confession of failure.

Top Workshops



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Livelier MIDI Drums
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Mix Tricks: FabFilter Workshop
Noisy Beats with Live Distortion
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Portrait: Fotos

Tom Hessler used his time creatively during the first lockdown. Armed with a modular system, tape echoes and a Farfisa organ, the singer, guitarist and sound mangler of the indie band Fotos devised the basics of the fifth Fotos album "Auf zur Illumination" in his home studio in Neukölln: An album that combines electronic music with Kraut and Psychedelic Rock. In the interview, he told us with great passion about modular systems, early morning inspiration, recording on cassettes and his great influence Ariel Pink. **Page 28**





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Review: UDO Audio Super6

Hybrid Synthesizer with Roland genes: Super6 is inspired by the classic Roland Jupiter-6, but goes its own sonic way with a combination of digital oscillators and an analog filter. **Page 77**



Review: Arturia V Collection 8

Arturia has expanded its collection of virtual replicas of vintage classics to a whopping 28 instruments and has also made sonic improvements. **Page 60**

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The common thread: Issue 03/2021

For many years Beat has been inspiring its readers not only with practical and musical topics, but above all with the tight integration of editorial content. From the very beginning, Beat has been about creating, about the structured building of ideas and the common thread - in the magazine as well as in the tracks. This navigator shows you the highlights of this issue and allows you to see the big picture.



Studio insights: Ela Minus

After studying jazz drums and music synthesis, she found her dream job at instrument manufacturer Critter & Guitari. Fed up with the modern approach of using the laptop for recording and live performance, Ela set out on a mission to bring more simplicity and authenticity back to electronic music. Their debut album, appropriately titled „Acts Of Rebellion“, embodies Ela's idiosyncratic ideology and intuitive approach to making music that conveys genuine emotional resonance. **Page 48**



Review: Korg opsix

Korg wants to make FM synthesis more accessible to everyone with the opsix; and additional digital sound generators, as well as filter emulations and step sequencers, complete the concept. Is this the most accessible FM synthesizer ever? **Page 74**



Free: Waves Codex

Wicked Dubstep basses, screeching leads, shimmering arpeggios, endlessly evolving pads, as well as impressively animated textures - this and even more is possible with Waves Codex. The wavetable synthesizer entices with a multifaceted sound generation including WAV import, accessible operation and an inspiring arpeggiator. Whether you use the imaginatively designed presets or create your own sounds from scratch: This software highlight is a guarantor for fresh sounds far removed from analog standards. **Page 38**



Interview: Anja Schneider

DJs and Booking Agencies are particularly hard hit by the pandemic. Not only are they practically banned from their professions, but they also lack political representation. To give the scene a voice, 170 agencies and 2000 artists have joined forces to form the „Booking United“ association. Anja Schneider is one of the most prominent spokeswomen for the organization and represents the interests of its members with passion. **Page 90**



Digital Culture: AI

Anyone can wish for a song from Av3ry. She has written around ten thousand songs - and counting. Along the way, she broadcasts a continuous live stream in which hardly a beat is repeated. This is only possible because she is an Artificial Intelligence programmed by composer Alexander Schubert. His approach is fundamentally different from those of comparable projects: The results are disturbing, dreamlike and strangely fascinating at the same time - yet Av3ry knows nothing about music. **Page 36**

NEW

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Facts | Opinion | News | Products

Magazine

by Philipp Sterczewski

Three High-End Audio Interfaces with Remote Control

With the Red 8Line, RedNet A16R MkII and RedNet D16R MkII, Focusrite delivers three premium-class audio interfaces to the studios. Red 8Line is equipped with 58 inputs and 64 outputs. Eight of each are analog line connections. Other connections include ADAT (16 channels), Dante (32 channels), Digilink (2), Thunderbolt 3 and S/PDIF. The interface covers a frequency spectrum of 20Hz - 35kHz and has an addable high-pass filter. In addition, the RedNet A16R MkII and RedNet D16R MkII models are new to the market; they both feature a Dante interface with 16 channels of inputs and outputs. S-PDIF connections are also available here. The dynamic range is 119 dB. All interface models support resolution up to 192 kHz. The fourth innovation announced is the RedNet R1 desktop remote control, which allows the user to mix 32 inputs and outputs.

These audio interfaces are available for 2,629 Euro (Red 8Line) or 2,019 Euro (RedNet D16R MkII) and 3,639 Euro (RedNet A16R MkII). RedNet R1 is also scheduled to ship shortly for 829 Euro.



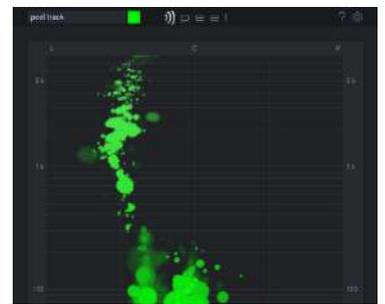
More Info

store.focusrite.com

Isolate Tracks for Remixes with zPlane Peel

To produce mash-ups and creative remixes, the search for separated tracks of popular titles is often tedious. Either you search the internet for instrumentals or a cappellas and, if you are lucky, you will find the right one or you do the separation with the desired tracks yourself. With Peel, zPlane has created an interesting studio tool for this purpose that can be used, for example, to isolate vocal tracks or instruments from an overall mix in stereo. If required, only a section can be isolated. This selected section can be soloed or muted. Alternatively, the signal can be routed to external effects units to enhance the vocals with favored effects. For example, a snare drum can be given a small reverb, or vocals can be given a chorus to add stereo width. The audio track is displayed spectrally. The spectral view also helps to identify mix problems.

Peel is available now for 39 Euro and is available to run under Windows and macOS in the VST, VST3, AU and AAX formats.



More Info

products.zplane.de/peel

Audio Interface for a Small Price from M-Audio

M-Audio has launched M-Track Solo and M-Track Duo, two audio interfaces at a low-budget price that can benefit mobile music producers in particular. Each audio interface connects to the computer via USB. On the input side, the M-Track Solo features one XLR combo input for microphone and one jack input for instruments. On the M-Track Duo, two XLR combo jacks are already the standard. An in-house Crystal preamp was installed in each of the inputs, which is supposed to be very low-noise according to the manufacturer. On the output side, there are two line connectors each with RCA (M-Track Solo) and jack connections (M-Track Duo). There is also a headphone jack on each interface, the volume of which can be controlled separately. The best possible audio quality is 16-bit with 48 kHz resolution. So that the immediate production process succeeds, there is still a software package included with the purchase. It includes the Pro Tools | First M-Audio Edition DAW, as well as MPC Beats, AIR Music Tech Xpand!2, Eleven Lite Guitar Amp and twenty AVID effects.

M-Track Solo is available for 49 Euro and M-Track Duo for 69 Euro.



More Info

www.m-audio.com





Steinberg Cubasis 3.2 – Mobile Professional DAW now with Waves Plug-ins

Steinberg has upgraded its music production app Cubasis to version 3.2. This update of the DAW app, which was recently completely developed from scratch, aims to impress with, among other things, the new effect processors Tune Real-Time and H-Delay Hybrid Delay for iOS via in-app purchase as plug-ins. A total of 45 improvements are promised for iOS and Android platforms. For vocal tracks, Tune Real-Time lends itself to natural-sounding pitch correction, while slap-back echoes and ping-pong delays, as well as tempo-sync modulation, can be realized via H-Delay Hybrid Delay. In addition to improved stability, workflow enhancements include the addition of keyboard and mouse support such as keyboard shortcuts for recording, playback, navigation, and edits. Another new feature is integrated multicore rendering support. The DAW app is compatible with iPad, iPhone, and Android phones.

The full version of Cubasis 3.2 is now available for download via the App Store or Google Play Store at a price of 54.99 Euro. For Cubasis 3 users, the update is free of charge.



More Info

new.steinberg.net



Perfect Vox with United Plug-ins Voxessor

The professional processing of speech and voices is essential for podcasters, streaming activists and radio presenters. United Plug-ins have developed the Voxessor effect plug-in with this in mind. It uses various algorithms to quickly analyze the voice signal. For this purpose, there is the Match section, via which the signal is analyzed for five seconds when the „Analyze Your Voice“ button is pressed. After that, the signal is adjusted as good as possible to an optimal voice via the internal equalizer. The characters Man, Guy, Woman and Girl are available for selection. The intensity can be adjusted to taste. There is also a dynamics section. To reduce annoying sibilants, for example, you can use the de-esser, which can be limited to a certain frequency. A one-button compressor and gate control are also included. With the autolevel function activated, automatic volume adjustment is achieved.

Voxessor is now available in VST, AU and AAX plug-in formats for the introductory price of 29 Euro instead of the regular price of 129 Euro.



More Info

unitedplugins.com



Totally Stylish: Audient iD4 MKII and iD14 MKII Audio-Interfaces

As affordable, compact USB 3 audio interfaces, Audient introduces the new stylishly designed iD4 MKII and iD14 MKII models. This new generation aims to provide more dynamic range and a more linear frequency response through its improved converters. Both models combine a dynamic range of 120 dB at a resolution of 24 bit and 96 kHz. The direct connection to a computer is thanks to the USB-C interface. While the iD4 MKII only has one XLR/line input, the iD14 MKII has two of these connections to allow stereo recording. The iD14 MKII has one ADAT and S/PDIF input and four jack line outputs. On the iD4 MKII, the outputs are limited to two jack sockets. Both have a Class-A microphone amplifier and JFET instrument input, as well as two headphone outputs. Another new product is the EVO Start Recording Bundle, which consists of the Evo4 audio interface, the SR2000 monitor headphones and the SR1 condenser microphone.

The audio interfaces are scheduled to be available from specialist dealers from February for 149 Euro (iD4 MKII) and 229 Euro (iD14 MKII).



More Info

audient.com

Bold Channel Strip Plug-in from Acustica Audio

Opal is the latest channel strip emulation from Acustica Audio. It is meant to accurately reflect the sonic character of the British Oram Sonic's Hi-Def 55 Limited Equalizer, once designed by John Oram. There are two plug-ins, a standard version and an enhanced version. The latter adds a preamp, stereo width controls, pan controls, volume controls per channel for the output signal, and a mid/side signal processing option.

The main features of the authentically designed mixing and mastering plug-in include an 8-band tone control per channel, while also combining shelf and bell curves. Apart from the Low and HighCut filters, each of the bands (Low Sweep, Low Shelf, Low Mid, High Mid, High Shelf and Hi Sweep) has a Q control for controlling the Q. Filter and EQ can be switched on and off separately per channel. An LED meter provides information about the level. The low-latency Core16 engine behind the plug-in allows recording at resolutions up to 96 kHz. Opal is available at an introductory price of 89 Euro (regular price 119 Euro) in VST, AU and AAX formats.



More Info

acustica-audio.com



Compact USB Controller with Sequencer by Behringer



As a successor to the popular BCR2000 USB and MIDI controller, Behringer unveils the BCR32 prototype. Its special feature is that, together with the Zaquencer software, it has an integrated step sequencer and 4-track sequencer for performing monophonic and polyphonic drum and note entries. This compact controller is also said to be compatible with the iPad. The BCR32's main features include 32 encoders that can be assigned manually or user-specifically via Learn mode. Four virtual groups, eight dual-mode encoders with push function, as well as 20 programmable buttons (to which note on/off, program changes or system-exclusive data can be assigned), expand the range of functions. A MIDI input and two MIDI outputs are also included. For triggering external synthesizers, the BCR32 even keeps four CV/Gate connections at the ready. Up to 192 patterns and four tracks can be stored. There is also a small multifunction display.

An exact release date for the Behringer BCR32 has not yet been announced, but it is expected to retail for \$149 US Dollars.



More Info

facebook.com/Behringer

Compacter DJ Controller with Motorized Turntables by RANE



If you want to experience the authentic feel of vinyl in the digital age, you'll love RANE's new eleven-pound DJ controller, One. The complete setup is composed of two motorized 7.2-inch turntables and a central battle mixer. The music can either be fed in via the two USB ports or alternatively via external players using the phono and line connections. An aux path is also available as an additional input.

The mixer is composed of two channels and a Mag Four crossfader. There are also 16 velocity-sensitive, illuminated performance pads with five modes per deck. Loops can be set right next to them. A 3-band equalizer and access to a high-pass and low-pass filter are available for each channel. In addition, there are six effects from the included Serato DJ Pro DJ software, which can be edited in intensity and fine-tuning. Also interesting are the Lock FX rockers to bring even more creativity into the mix. The RANE ONE is expected to cost 1,799 Euro and will be delivered in the course of the first quarter of 2021.



More Info

rane.com/one



Filtryg – Wicked Filter Effect for Creatives

While its visual appearance initially evokes some associations with Media Overkill's futuristic Waverazor synthesizer, Filtryg is a dual filter effect from the same company. The Morph knob lets you morph between the modes of the State Variable Filter for dynamic filter variation. Sonic expressiveness and rhythm should be brought into the mix this way. In total, there are three filter modes with the 12 dB State Variable Filter (low, high and band pass as well as Notch), 24 dB Ladder Filter (low and high pass) and the Multiple Biquad Filter. A drive control has been added to the ladder and biquad filters. The creative filters can be switched serially, in parallel or as a mixed combination. Using the envelope followers, sidechain-like creative effects can be created. The Auditorate Filter FM function also contributes to this process by adding harmonics. The LFO allows synchronization to the tempo. Visually, the color schemes can be changed.

Filtryg is now available at the introductory price of 34 Euro instead of the regular price of 49 Euro. This plug-in is available in cross-platform AAX, AU and VST formats.



More Info

mok.com

Ultimate All-in-One Studio in Roland's Groovebox?

Roland Verselab MC-1 aims to incorporate the latest incarnation of a complete studio setup that doesn't require an additional DAW. The standalone groovebox for the desktop generates its sounds using the 128-voice ZEN Core sound engine. Artificial intelligence also plays a role in the pattern/chord generator. The compact USB production studio with MIDI interface can also be connected to a tablet or smartphone using the Zenbeats Music Creation app.

You can record your own samples via the microphone input and place them on the vocal track. The vocal recordings can be archived to or loaded from the included SD card. There are also seven instrument tracks. Musical sound fodder is provided by 3000 presets and 80 drum kits. In addition to four vocal effects, there are also 90 multi-effect types and five master effects. Not to be forgotten is the step sequencer with its 16 velocity-sensitive steps, on which rhythms with up to 128 steps can be programmed. Verselab MC-1 is expected to be available in stores during February for 679 Euro.



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roland.com



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Carol is no longer who she used to be.

She no longer recognises Nancy, her sister, or Jim, her husband. Most of the time it's as though she isn't aware of the things going on around her.

But when Nancy carefully puts headphones over Carol's ears and plays her most beloved song, her sister's eyes light up. She gently sways to the beat of the song, she even remembers the dance routine. She may nudge Jim's arm. Or tell him what

a fun guy he is. For the duration of that song, she's back again. For 4:35, she's Carol.

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INTERFACE FINDER

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Whether you want to record melodies or vocals, record or sample beats, integrate a modular system or perform live, you need the right MIDI, audio or CV interfaces and controllers to keep things running smoothly. But which ones can do what and, above all, which ones are best suited to your own workflow? In the following guide, we will introduce you to current devices and their features, compare different models, and give you concrete tips on how to optimize and perfectly expand your setup. **by Stefan Hofmann and Marco Scherer**

They are the backbone of any setup, in the best case workflow booster and the extended arm of the user. Little is possible in the studio without audio interfaces and MIDI controllers. Sure, some ascetic producers also create wonderful hits with just a laptop and a trackpad, but the higher the quality of the audio interface used, the better the output and for a more tactile feel, controllers are simply the means of choice. At least when you play chords, a melody or other ideas, you can no longer avoid using a keyboard. However, it only gets really exciting when the hardware supports the creative process and does more than just transfer notes.

But which features are important, which criteria should be used when planning a purchase, and what kind of interfaces are

actually needed for which purposes? On the following pages we will show you various sample setups with specific information about which type of hardware is best suited to each. On five pages you will find detailed information on numerous audio interfaces and controllers, as well as information on which of them fit the setup recommendations.

And if you still have questions, you'll find them answered in the tips and personal opinions from the editorial team. For the most important technical terms concerning audio interfaces, you should also take a look at our Starter Guide, which you can find in the magazine download section. We immediately jump into the fray and get started with the first tip. Have fun!

Additional inputs and outputs? ADAT can help

In the days of tape recorders, video cassettes were still recorded and transferred using ADAT, nowadays the interface is used almost exclusively for the transmission of bundled audio streams. Thanks to optical transmission via Toslink over optical fiber cables, up to eight tracks can be transported simultaneously and without loss.

The greatest advantage of current interfaces is the possibility of cascading several of them via ADAT in order to increase the number of inputs and outputs. Devices of different types and manufacturers can be easily combined with one another. A maximum of 16 devices or 128 tracks can work in a network.



Control the modular rack via the audio interface

Musically, AC/DC is of course an insanely successful band, but from a purely technical point of view, the abbreviations stand for alternating current and direct current. While most audio interfaces are designed for pure audio playback and filter out ultra-low frequencies via AC coupling, DC-coupled devices can also send direct current via the line outs and thus qualify for sending and partly also receiving CV signals for the direct integration of modular systems.

You can find an overview of current DC interfaces in the table on the right. The CV signals themselves have to be generated using specialized software or plug-ins. For example CV Toolkit by Spektro Audio [1], Reaktor by Native Instruments [2], SQ4 Sequence Processor by dialog audio [3], Volta by MOTU [4] or Silent Way by Expert Sleepers [5].

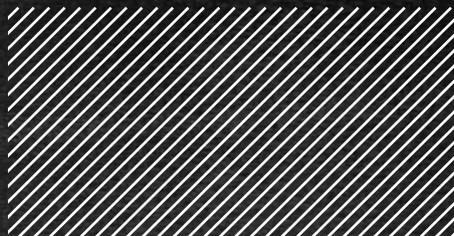
Combine several interfaces with Aggregate Devices & ASIO4ALL

What if you want to combine several audio interfaces, but not all of them offer an ADAT interface? Mac users can easily create a new aggregate device in the „Audio MIDI Setup“ and select which of the existing devices should be combined by checking the box. Then just name the new device and set it as the audio interface in the desired programs. Windows users can combine at least two interfaces with the free ASIO4ALL driver. Instructions can be found in the video in the magazine download part for the special.

Sampling from iTunes, YouTube & SoundCloud

Whatever is connected to the audio interface can be recorded with a flick of the wrist in the DAW or a sample editor. Sampling the output from programs or websites, on the other hand, is not something you can do just like that. But there are two tricks here:

In the personal tip of our author Marco Scherer you will learn on the one hand how a solution via an audio interface can work. On the other hand, thanks to so-called loopback software such as Virtual Audio Cable [6], BlackHole (formerly



SoundFlower) [7], Loopback from Rogue Amoeba [8] or Jack [9], it is possible to redirect signals in front of the audio output so that they can be recorded. The use of the tools is almost identical, because they all generate a virtual audio interface in which virtual inputs and outputs can also be routed as required. Thus, the output from iTunes, the browser or other arbitrary applications gets into the DAW or editor.

Flexible hardware sequencer for less than 200 euros

It is almost no longer a secret that the good old Behringer BCR2000 controller can be converted to a genuine standalone sequencer with up to 32 steps with a firmware update, the features of which are impressive: Four monophonic or polyphonic tracks transport not only notes but also program changes, aftertouch and any MIDI CC data.

There are also convenient recording and editing functions and the Flash ROM stores up to 192 patterns, which can also be played back one after the other via a pattern chain. The Zaquencer firmware is available for 79 Euros [10], the BCR2000 can be bought used for an average of 120 euros. A bargain for the features it offers. And if you have a BCR2000 in your setup anyway, you probably won't have to think twice.

Novation Circuit as a synth controller with 51 knobs

The Circuit is not only a handy groovebox, but also is a great controller for plug-ins, especially software synthesizers. Although the hardware only offers ten knobs, of which only nine are suitable for controlling parameters, but changing the current view also changes the assignment of the controllers so that they can be connected to other parameters

Quick check: CV compatible audio interfaces

Interface	Tested by
Alesis iO14	ihav2p
Alesis iO26	Brandon Daniel
Antex StudioCard SC-22	levlhed
Apogee Symphony I/O	Kevin Vanwulpen
Digidesign 96 I/O	Mick Glossop
Echo AudioFire2	phase ghost
ESI ESP1010	Arnoid
Eventide H8000FW	Analog>Plugins
Lexicon MPX 500	sine
Lynx Aurora 8	Jonathan Snipes
Lynx Aurora 16	Martin Kucaj
Metric Halo ULN-8	Metric Halo
MOTU Ultralite	Pete Marshall
MOTU Ultralite Mk3	Expert Sleepers
MOTU Ultralite Mk3 Hybrid	George P. Macklin
MOTU Ultralite Mk4	Fatt Grabbers
MOTU 828	justin3am
MOTU 828 MkII	Scot Solida
MOTU 828 MkIII	untinyunity
MOTU 828x	mwwm
MOTU 2408 MkII	Cary Grace
MOTU 2408 Mk3	Captain Proton
MOTU 24I/O	doctorvague
MOTU Traveller	Jim Coker
PreSonus Quantum	PreSonus
PreSonus Quantum 2	PreSonus
PreSonus Studio 1824 & 1824c	PreSonus
PreSonus Studio 1810 & 1810c	PreSonus
PreSonus Studio 68 & 68c	PreSonus
PreSonus Studio 26c	PreSonus
RME Fireface 400	UCAudio
Universal Audio Apollo Twin	UA
Universal Audio Apollo 16	UA

Source: www.expert-sleepers.co.uk/siwacompatibility.html



My opinion on DSPs Interfaces by Beat author Stefan Hofmann

Interfaces and DSP chips go together like sound tinkerers and the 500 rack. On the one hand, there are interfaces that use the integrated DSPs to calculate effects such as reverb during recording and thus save computing power, since no plug-ins have to be activated in the DAW.

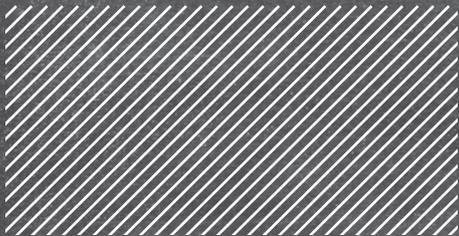
The top class, however, are interfaces that calculate plug-ins directly on DSPs even during the mixing session. Universal Audio is probably the best-known interface manufacturer that provides this technology and a large plug-in catalog. But AVID and Antelope Audio also rely on DSPs for plug-in calculation.

Also, the quality of the plug-ins from the above mentioned manufacturers is really excellent. However, there are also disadvantages. For example, if you already have a large plug-in library from other manufacturers, you will have to spend more money to buy suitable plug-ins.

depending on the selected view. You can connect knobs 1-8 of Synth 1 View to eight parameters via the MIDI learn function of a synth. If you switch to Synth 2 View, you can control eight other parameters with the same knob. The views for drum 1 and 2, as well as drum 3 and 4 are combined in pairs and each offer eight controls. The mixer and the two effect views offer six controls and filters can also be used once, so that you can control a total of 51 parameters via the circuit. In combination with the pads, the step sequencer and the internal scales, the Groovebox becomes an impressively comprehensive master controller.

More expression when playing with MPE

ROLI is the manufacturer of the Seaboard, an MPE-enabled controller keyboard that can send five expressions for each note played. Thus it is polyphonical. With MPE (short for MIDI Polyphonic Expression) you can play an instrument much more dynamically and expressively than with a normal keyboard. Of course, such instruments also have to support MPE so that you can, for example,



change the filter frequency for each note separately. In addition to the in-house synths Cypher 2 and Strobe 2, also Arturia's Pigments as well as numerous DAWs, plug-ins and apps support the protocol. A full list can be found on the ROLI website [11].

The alternative: Controlling software synths via hardware

In almost every studio you will find one or the other hardware synth and if it has a MIDI interface, chances are good that the available controls also send MIDI data aka Continuous Controller (CC).

And these can also be used to control plug-ins. It is very easy: Most soft synths offer a mapping mode for this. With the u-he RePro-5, for example, a click on the red button at the top right is sufficient.

All remotely controllable elements are framed in color. Simply click on one of them and move the knob on the hardware synth, and the two are connected. Repeat this step for each additional controller that you want to control.

Hardware controller for plug-ins

In contrast to the use of synths for other purposes, there are also dedicated controllers that are built specifically to control plug-ins. Most of them are designed for individual synths in terms of their layout in order to give them a better feel. Others - like the Stereoping Synth Controller and Electra One - are designed to be more universal, but still tailored to synthesizers. You can find some models in the table below.

Quick check: 12 current plug-in controllers

Controller	Description
Dtronics DT-800	Programmer for JX8-p, JX10 and MKS-70 with the same features like PG-800.
Dtronics DT300	PG300 clone. Controls Alpha Juno 1, 2 and MKS-50 synthesizer.
Dtronics DT200	Made for Dual-DCO and polyphonic synths like JX-3P, MKS-30 and GR-700.
Dtronics DT-RDX	A hardware controller for the Yamaha Reface DX.
Dtronics DT-01	A hardware controller for Roland Boutique D-05 and D-50 / D-550.
Dtronics DT7	Indispensable programmer for Yamaha DX synthesizer.
Stereoping Synth Controller	Variable programmer with 16-48 real-time rotary controls.
Electra One	Up to 432 MIDI parameter from several synths simultaneously under control.
Soundforce SFC-60 V3	Driverless USB MIDI controller for the TAL-U-NO-LX Juno-60-Emulation.
Soundforce SFC-5	Boutique USB MIDI controller for the u-he RePro-5 and Arturia Prophet V.
Soundforce SFC-1 Rev B	USB MIDI controller for the RePro-1 by u-he.
Soundforce SFC-Mini V2	MiniMoog controller for Arturia Mini-V, NI Monark and G-Force Minimonsta.



Tip from the editor: Just sample everything!

by Beat author Marco Scherer

As an absolute sample freak, I want to be able to record all sound generators via the sample editor and MPC at any time. But in the editor setup (WaveLab Elements) I have to decide for one input channel, so spontaneous sampling of all channels is not possible. Therefore I used the simple trick of connecting the S/PDIF output of my interface directly to its S/PDIF input. In the editor, I have specified the S/PDIF channel as the input.

To avoid feedback, I muted the S/PDIF channel in the interface's software mixer for all other outputs. As a result, every signal coming into the interface is now looped through to the sample editor via S/PDIF, so I can record anything at any time. All you need is a mono cinch cable. I connected my MPC to output 7/8 of the interface and route all inputs except S/PDIF and the MPC there. Sounds complicated, but it's easy to implement. The ideal solution!

In conversation with Dankmar Klein:

How to find the perfect interface

Opinions can differ on the subject of audio interfaces ... on the one hand, every musician, producer or recorder needs one, on the other hand, the choice is almost unmanageable. Dankmar Klein, product specialist at Focusrite, Novation & ADAM, tells us what you should pay particular attention to in order to find the perfect hardware for you.

Beat: Hi Dankmar, glad you found the time. What do you think are the most important points to look for when purchasing?

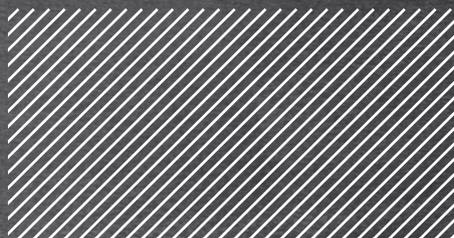
Dankmar: If you want to make high quality microphone recordings, the audio interface of choice should have good preamplifiers and converters. If you don't want to work only with virtual instruments, the number of microphone and instrument inputs should fit. Simply put: a band needs a bigger audio interface than someone who "only" wants to record vocals and a guitar at the same time. And the interface should come with good drivers to ensure stable operation. Last but not least, low latency is also important in order not to lose the fun of playing!

Beat: And what are the typical pitfalls with audio interfaces, where should you be particularly careful?

Dankmar: Unfortunately, sometimes people buy audio interfaces that are too small and then after a while you realize that you want to connect all your synthesizers and drum machines at the same time, or that you want to record with other musicians, but unfortunately you only bought an audio interface with two inputs. Another trap that I sometimes see is that you want to save 20 or 30 euros on the purchase and are „punished“ with an unstable and possibly bad sounding audio interface.

Beat: Is it possible to say in general how cheap hardware differs from high-priced devices? Do you really get what you pay for, as the saying goes?

Dankmar: A lot of cheap hardware can do so much more today if you compare it with hardware from 10 years ago. That is actually fantastic! The development in the technological field always goes ahead. Hardware is getting more powerful and better. You definitely get more for your money. And that's good. Nevertheless, as in almost all areas, there is still room for improvement: Preamps and converters could be even better, an audio interface can have



more inputs and outputs, lower latency, and a greater variety of connections. This is where I see the main differences between cheap and high-priced hardware. If you buy cheap, you don't necessarily get what you pay for. You should only consider well beforehand what you will need (possibly also in the future), what fits the existing system in terms of quality and what you can and want to afford.

Beat: How do the Focusrite Clarets differ from the Scarlett interfaces?

Dankmar: The Clarets have even higher quality microphone preamps than the Scarletts, a wider frequency and dynamic range and a larger headroom for less noise. In addition, the Claret's AIR mode changes the impedance of the preamps. This allows us to add a different "color" to the characteristics of our microphones. And all Claret interfaces have ADAT connections.

Beat: In times of slim laptop setups, interfaces such as ADAT, S/PDIF or AES / EBU seem to come from another world. Are options like these still relevant at all?

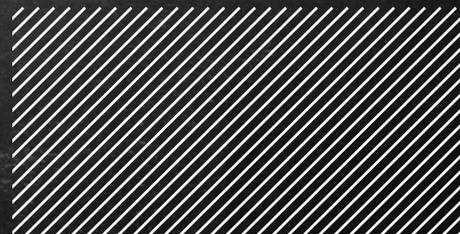
Dankmar: I think that these connections still make perfect sense in some setups. For example, if I need eight additional microphone inputs for recordings, I can easily do this via ADAT. Or if I work with effects, converters or studio monitors that have AES/EBU or S/PDIF connections, I can simply integrate them into my setup without having to go through the converters again.



Beat: If you deal with audio interfaces, sooner or later you will stumble across the term „Dante“. What is that all about?

Dankmar: Dante is a promising audio over ethernet standard that was launched around 15 years ago by the Australian company Audinate. In short, Dante is a combination of hardware, software and a network protocol that allows the transmission of a large number of channels of uncompressed audio over standard network cables with very low latency. This protocol opens many doors technologically: long cable runs are no longer a problem at all for networking and loss-free and low-latency transmission. And hardware from a wide range of manufacturers that support the Dante protocol works perfectly together in one system. As a result, Dante is currently highly recommended for the following areas of application: live sound, broadcast, education, post production and larger studios.

However, I hope that the Dante standard will eventually become more of an option for home studios as well. Focusrite has a lot to offer here, too, with its RedNet product line: highest quality audio interfaces, microphone preamps and controllers. And they all work with the Dante protocol. A little tip for testing live recording: If you want to record a concert and the mixer has a Dante interface, download a demo version of the „Dante Virtual Sound Card“ from the Audinate website [1], connect the mixer and computer via LAN cables and try out how easy lossless multitrack audio recording can be in such a situation.



[1] www.audinate.com

Tipps: 6 ideal hardware setups

COMPACT & MOBILE: SETUP FOR ON THE GO

One aspect is particularly important for mobile users who use a laptop on the go. The additional equipment should be bus-powered, i.e. not require a power supply unit for operation. Both the MOTU M4 and the Akai MPK mini MK3 have this feature. In addition, both devices are extremely compact and therefore fit in any backpack. With this setup you can record instrumentals and make audio recordings.



Akai MPK mini MK3

MOTU M4

Laptop

THE VOICE IN THE FOCUS: PODCASTS & VOCAL RECORDING

For voice and vocal recording, the RØDECaster Pro and iCON Platform Nano DAW controller are ideal. The RØDECaster Pro is designed primarily for the production of high-quality podcasts. Thus, it is also perfect for speaker recordings. With the iCON Platform Nano DAW controller, you have access to a high-quality motorized fader, making it easy to create automations for speech and vocal recordings.



Rode RØDECaster Pro

iCON Platform Nano

Desktop computer

FLEXIBLE AND CLEAR: HOMERECORDING

The Universal Audio Apollo x8 and the AVID S1 DAW controller provide a professional setup for producers. The Apollo x8 has DSP chips that calculate the manufacturer's plug-ins directly in the hardware. Thus, computing power can be saved in the studio computer. The AVID S1 is a DAW controller that plays into the hands of Pro Tools users in particular. Eight motorized and touch-sensitive faders and eight freely assignable rotary encoders ensure full control of your DAW.



Universal Audio Apollo x8

AVID S1

Desktop computer

CONTROL OUTBOARD GEAR: HARDWARE SYNTH SETUP

The ESI U168XT is ideally suited to have your hardware synth setup always at hand. So you can hardwire your synths via the 16 line inputs on the back. For vocal recordings, you can simply switch to the XLR inputs on the front panel without even unplugging. With the Studiologic SL Mixface you get a controller that gives you additional control elements for your hardware synths.



ESI U168XT

Studiologic SL Mixface

Desktop computer

NOT QUITE TRIVIAL: DAW WITH MODULAR SETUP

To bring order into your modular setup, the Arturia KeyStep Pro is perfect. Especially the rear panel has it all. Pitch CV, gate and an additional CV output - on which the velocity signal is output - are available for all four voices. To control drum modules, for example, the first sequencer track can send data to the eight drum gate outputs. For synchronization with Vintage Gear, there are outputs and inputs for analog clock as well as an output for reset pulses. The PreSonus Studio 1810c is a DC-coupled interface and can therefore output CV signals via line to the appropriate software.



Arturia KeyStep Pro

PreSonus Studio 1810c

Laptop

STABLE AND BUS POWERED: LIVE-SETUP

In order to be able to perform your tracks live without stress, the equipment used should ideally be bus-powered. So you don't have to worry about an additional power supply. Only the laptop still has to be supplied with power this way. The Focusrite Scarlett 2i2 mkIII provides them with professional outputs that you can transfer to the live mixer - and that with a very compact design. With the Novation Launchpad Pro mk3 you can intuitively perform your tracks live.



Novation Launchpad Pro mk3

Focusrite Scarlett 2i2 mkIII

Laptop

Market check: 18 current audio interfaces

Audient EVO4

Small interface, big sound! It's amazing what sound quality you can currently get in compact form for less than 200 euros. Practical features, direct operation and above all the more than convincing sound of both the inputs and outputs make the EVO 4 a real recommendation for the desktop studio or for on the road on a laptop or iOS device.

www.audient.com | www.sonic-sales.de | Street price: 118 euros



MOTU M4

With the M4 MOTU offers for the first time a USB audio interface in the low price range. This does not affect the quality. The workmanship is high quality, the converters adopted from the more expensive models sound very good, as do the pre-amps, and the equipment is practical.

www.motu.com | www.klemm-music.de | Street price: 259 euros



Mackie ProFX6v3

Mackie has put a lot of features into the small, solidly built and beautiful mixer. We really liked the two low-noise and sound-neutral preamplifiers, the USB audio interface with a resolution of up to 192 kHz and the practical connection options for the desktop studio and live jamming.

www.mackie.com | Street price: 149 euros



Interface	Audient EVO4	Focusrite Scarlett 2i2 mkIII	Mackie ProFX6v3	NI Complete Audio 6 mk2	MOTU M4	IK Multimedia AXE I/O
Connector	USB 2.0 (USB-C)	USB 2.0 (USB-C)	USB 2.0	USB 2.0	USB 2.0 (USB-C)	USB 2.0
In-/outputs analog	2/2	2/2	2/4	4/4	4/4	2/5
In-/outputs digital	/	/	/	2x2	/	/
Resolution	24 Bit/96 kHz	24 Bit/192 kHz	24 Bit / 192 kHz	24 Bit/192 kHz	24 Bit/192 kHz	24 Bit/192 kHz
Input formats	2 x XLR or 2 x Line or 1 x instrument	2 x XLR or 2 x line	6 channels (stereo output can be recorded)	2 x XLR or 2 x line / 2 x line	2 x XLR or 2 x line / 2 x line	2 x instrument or 2 x XLR or 2 x line
Output formats	2 x line	2 x line	2 x XLR or jack (1 x stereo)	4 x line	4 x line or 4 x chinch	4 x line out / 1 x reAmp
Headphone outputs	1	1	1	2	1	1
Headphone preamp	1	1	1	2	1	1
Digital In-/outputs	/	/	/	1 x S/PDIF (In/Out)	/	/
MIDI In-/outputs	/	/	/	1	1	1
Preamps	3	2	4	2	2	2
Bus powered	yes	yes	no	yes	yes	no
Phantom power	yes	yes	yes	yes	yes	yes
Suitability	●●●●	●●●●	●●	●●●●●	●●●●	●●

Focusrite Scarlett 2i2 mkIII

The Focusrite Scarlett 2i2 3rd Generation is a solid and compact audio interface for USB connection. The well-known good sound of the Scarlett series has been improved once again in the third generation, with the new AIR option making microphone recordings seem more open and assertive.

www.focusrite.com | Street price: 139 euros



NI Complete Audio 6 mk2

The Complete Audio 6 mk2 is primarily suitable for the home studio. The chic design, the solid drivers, the large volume control on the top, and DC-coupled outputs for integrating modular systems speak for themselves.

www.native-instruments.com | Street price: 209 euros



IK Multimedia AXE I/O

AXE I/O is an audio interface specially tailored to the needs of guitarists and bassists with interesting features also for music producers. The Z-Tone feature makes every input signal fatter, the direct integration into the successful amp simulation Amplitude provides the right distortion and re-amping allows you to record driving riffs on your notebook at night and post-process them with a real amp.

www.ikmultimedia.com | Street price: 349 euros



PreSonus Studio 1810c

The PreSonus audio interface has a balanced, neutral and detailed sound and is therefore ideal for mixing and mastering tasks. In terms of mic preamp quality, Focusrite is still ahead in this price range, but the output side of the 1810c offers a somewhat more analytical sound.

www.presonus.com | Street price: 399 euros



RØDE RØDEcaster Pro

The RØDEcaster Pro allows even beginners to create professional sounding podcasts without much effort or training. The integration of several people in the podcast is almost optimally solved, thanks to four microphone and headphone connections each, as well as a sophisticated function for telephone calls.

www.rodem.com | www.hyperactive.de
Street price: 509 euros



Expert Sleepers ES-8

Various rack and desktop interfaces offer CV outputs by default, but a rack-mounted unit can be more practical. With their ES-series, Expert Sleepers offer several variants with which the rack and computer can be easily connected. Thanks to ADAT, expanding an existing interface is also no problem.

www.expert-sleepers.co.uk | www.schneidersladen.de | Street price: 419 euros



Interface	PreSonus Studio 1810c	ESI U168XT	Expert Sleepers ES-8	ACL Audio Interface	Rode Rodecaster Pro	Audient iD44
Connector	USB 2.0 (USB-C)	USB 2.0	USB 2.0	Eurorack	USB 2.0 (USB-C)	USB 2.0 (USB-C)
In- / Outputs analog	8/6	16/8 (can be used at the same time)	4/8	5/4	4/2 (up to 14 tracks can be recorded)	4/4
In- / Outputs digital	10x2	1x1	1x1	/	/	16x16
Resolution	24 Bit/192 kHz	24 Bit/96 kHz	24 Bit/96 kHz	-	24 Bit/48 kHz	24 Bit/96 kHz
Input formats	4 x XLR or 4x Line / 4x Line	2 x XLR or 2x instrument or 2 x line / 2x XLR or 2x line / 12x line	4 x mini jacks	2 x XLR / 2 x line / 1x stereo-AUX	4 x XLR	4 x XLR or 4 x Line
Output formats	6xLine	8 x line (4 x stereo) / 2x Line (stereo)	8x mini jacks	2 x XLR / 2 x line	2x line	4 x line
Headphone outputs	2	2	-	1	4	2
Headphone preamp	2	2	-	1	4	2
Digital In-/Outputs	1x S/PDIF (In/Out) / 1x ADAT (In)	1x S/PDIF	1x ADAT (8x8)	/	/	each 2x ADAT (In/Out; 4x4)
MIDI In-/Outputs	1	1	-	/	/	/
Preamps	4	4	-	3	4	4
Bus powered	no	no	yes	/	no	no
Phantom power	yes	yes	no	/	yes	
Suitability	● ● ● ●	● ● ● ●	●	●	● ●	● ●

ESI U168XT

With 16 inputs and 8 outputs, ESI's USB audio interface offers an affordable and compact solution for producers who want to integrate a lot of outboard equipment such as synthesizers, drum machines and effects units into their DAW. Other practical features such as the microphone inputs that can be used twice and the hardware monitor mixer ensure a very good price-performance ratio.

www.esi-audio.com | www.hyperactive.de | Street price: 449 euros



ACL Audio Interface

As inconspicuous as the task may be – it needs tools like the ACL audio interface to enable the professional integration of a rack in the studio. The quality of the module is beyond any doubt, the AUX path is a useful addition and the headphone out is a valuable bonus. Only the price is likely to offend some.

www.audiophilecircuitsleague.com | Street price: 449 euros



Audient iD44

In terms of sound, the Audient iD44 belongs to the absolute top class of interfaces under 600 euros. In addition, it has a very extensive range of features with an endless controller that can be used as a scroll wheel and extended monitor controller capabilities. It is therefore recommended for both beginners and semi-professional studios.

www.audient.com | www.sonic-sales.de
Street price: 555 euros





Universal Audio Apollo x8

The Apollo x8 audio interface convinces in all areas. It runs stably with almost inaudible latencies and the high-quality converters, in combination with the elaborate analog circuits, deliver a pristine and natural sound. In addition, there is the option of having the excellent UAD plug-ins calculated with the built-in processors and thus relieving the music computer.
www.uaudio.de | Street price: 2.499 euros

SPL Marc One

The SPL Marc One is a monitoring and recording controller that not only impresses with its excellent processing quality and a great operating concept. Especially its sound characteristics and the well thought-out operating concept make the device a professional companion in the studio.
www.spl.audio
Street price: 707 euros



Zoom LiveTrak L-20R

In principle, the Zoom L-20R is an inexpensive and good sounding jack-of-all-trades that is good for concert recordings as well as in the home studio or as a permanent installation.
www.zoomcorp.com | www.sound-service.eu
Street price: 669 euros

Interface	Zoom LiveTrak L-20R	Arturia AudioFuse Studio	SPL Marc One	Tascam Model 24	Universal Audio Apollo x8	Roland Fantom 6
Connector	USB 2.0	USB-C	USB 2.0	USB 2.0	Thunderbolt 3	USB 2.0
In-/Outputs analog	22/4	8/6	4/7	24/2	8/10	6/32
In-/Outputs digital	/	10x10	/	/	10x10	-
Resolution	24 Bit/48 kHz	24 Bit/192 kHz	32 Bit/768 kHz	24 Bit/48 kHz	24 Bit/192 kHz	24 Bit/48 kHz
Input formats	16 x XLR or 16 x Line / 2 x Stereokanäle (4 x Line or 4 x Cinch) + recording of the sum	4 x XLR or Line / 2 x Line or Cinch / 2 x Line	4 x Line	12 x XLR bzw. Line (Mono) / 4 x XLR or Jack (Stereo)	4 x XLR or 4 x Line / 4 x Line (in addition 2xHi-Z)	2 x XLR or 2 x Line
Output formats	2 x XLR (1 x Stereo) / 6 x Line (3 x Stereo)	4 x Line / 2 x Line (ReAmp)	7 x Line	2 x XLR (Stereo out)	10 x Line	2 x XLR, 8 x Line, 4 x CV
Headphone outputs	1 (Monitor / Outs can be used as well)	2	1	1	2	1
Headphone preamp	1	2	1	1	2	1
Digital In-/Outputs	/	2 x SPDIF / 2 x ADAT (4x4)	/	/	1 x S/PDIF / 2 x ADAT (4x4)	/
MIDI In-/Outputs	/	1	/	/	/	1
Preamps	16	4	/	16	4	/
Bus powered	no	no	no	no	no	no
Phantom power	yes		no	yes	yes	no
Suitability	●●●●	●●	●	●●●	●●	●●



Arturia AudioFuse Studio

Eight analog inputs, an extensive monitor section, digital connections, MIDI, Bluetooth and USB hub leave hardly any wish unfulfilled. The AudioFuse Studio is recommended as a central control center for the ambitious home studio as well as the semi-professional project studio.
www.arturia.com | www.tomeso.de
Street price: 899 euros

Tascam Model 24

The strengths of the Model 24 lie in its versatility. Even as a simple mixer with 16 mic inputs, single-button compressor on most channels, and built-in effects unit, the Model 24 is great. In the small studio, the USB audio interface is useful for multi-channel recordings in the DAW. All functions can be combined. The price is very fair for the features offered.
www.tascam.eu | www.teac.eu | Street price: 919 euros

Roland Fantom 6

All-in-one: Fantom allows you to control software synthesizers directly via the integrated touchscreen, as well as modular and analog synthesizers via the two CV/Gate outputs. It also functions as an audio interface with up to 16 stereo outputs and three stereo inputs.
www.roland.com | Street price: 2.923 euros



Review: Symphony Desktop

Apogee has packed the technology of the highly acclaimed Symphony I/O MKII audio interface into a more compact and significantly cheaper desktop format. **by Jan Wilking**

The Symphony Desktop is “cheap” in relation to its big brother, because you have to put almost one and a half thousand euros for the small interface. But you get a top class audio interface with some extraordinary features.

Few analog connections

From the outside, you can't directly see the special features of Apogee Symphony Desktop, apart from the lack of any control elements with the exception of the large volume control. The entire operation takes place via a large touchscreen display. In the front, there is an instrument input for uncomplicated direct access, as well as the headphone output. An instrument input and headphone output are located at the front for uncomplicated direct access.

On the back there are two further inputs for instruments or microphones, designed as XLR/jack combo sockets. The second input doubles the front input and switches it off as soon as it is occupied with a cable. In addition to two balanced audio outputs, there is another freely assignable headphone output. So Symphony Desktop doesn't have much to offer in terms of analog inputs and outputs. You can expand the interface with suitable converters via the ADAT inputs and outputs, a maximum of 10 inputs and 14 outputs (including headphone outputs) are possible.

Cross-platform

It is connected to the computer via the USB-C port. In this respect, the interface proves to be very flexible and works with Windows and Mac computers as well as with mobile iOS devices like an iPad Pro. Fittingly, there is a USB host port, which is responsible for updates of the built-in



Quality instead of quantity: Symphony Desktop doesn't have much to offer in terms of analog connections.

DSP with the help of the USB stick included in the scope of delivery, thus ensuring platform-independent updates. The power supply is provided by the included power supply.

Analog preamps

The special feature of Apogee Symphony Desktop is its hybrid design. Apogee does not rely solely on a DSP for signal processing, but combines it with analog circuits. This combination enables, among other things, the „Alloy Mic Preamp Emulation“, a replica of an analog vintage microphone preamplifier with the popular, warm, round and saturated sound. At Apogee this is not a marketing gimmick either, since with good microphones, a professional recording environment and sensible monitoring, you will hear the difference in the harmonic distortion and the special type of transient processing. Symphony Desktop offers the emulation of two typical representatives of this genre to choose from, British Solid State and 50's American Tube. The “Advanced Stepped Gain Architecture” prevents unwanted interference and distortion and can also cope with high sound pressure levels. Correspondingly, the preamps work very noise-free with correct levels and offer a gain of up to 75 dB.

Outstanding sound

The analog operational amplifiers in conjunction with the high-quality converters ensure a transparent, detailed and natural sound, the same applies to playback via the output converters. This

is hardly surprising, after all, the same technology was used as in the excellent Symphony I/O MkII. Operation via the large and very responsive touchscreen is intuitive. All important elements can be accessed directly at the same time. We liked this operating concept better than the usual operation of other desktop audio interfaces via a handful of navigation buttons and knobs and a small display. Especially Logic Pro users benefit from the deeper integration of the included software package. For example, the Symphony ECS Channel Strip, a combination of equalizer, compressor and saturation, can also be calculated by the DSP in the audio interface for latency-free monitoring.

Conclusion

An audio interface with just a handful of analog connections at a price of almost 1,500 euros does not seem very attractive at first glance. In a DAW-based setup, however, this is often no longer required; there the actual quality of the microphone recordings and the output converters is more decisive. And this is where Symphony Desktop scores: Equipped with the technology of the much more expensive Symphony I/O MkII, the compact audio interface offers excellent sounding preamps with lots of analog character and a transparent, detailed output in professional quality, combined with a uncomplicated operation via the large touchscreen. ❄️



Find out more

Features

- USB-C audio interface
- 10 In x 14 Out
- 2 Microphone/line inputs
- DSP with preamp emulations
- 24 Bit/192 kHz
- Dynamic touch screen display
- Optical I/O (ADAT and S/PDIF)

from MacOS 10.13, Win10, iOS 13

Facts

Manufacturer: Apogee
Web: apogeedigital.com
Distro: Sound Service
Price: 1.449 euros

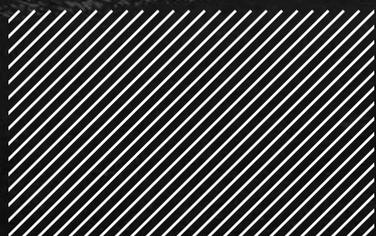
- ▲ professional sound
- ▲ hybrid technique
- ▲ preamp emulationen
- ▲ big touchscreen
- ▲ iOS compatible

Sound: ██████████
Operation: ██████████
Price/Perf: ██████████
Total: ██████████

Alternatives

Universal Audio Apollo Solo USB
718 euros
uaudio.de

Antelope Discrete 4
983 euros
antelopeaudio.com



Market check: 12 current MIDI controllers



Novation LaunchPad Pro mk3

The LaunchPad Pro mk3 is improved in every way. The Ableton integration is even deeper, the pads offer a very good feel and the custom mode transforms the LaunchPad into a freely programmable MIDI controller. The highlight is the flexible standalone sequencer, which, thanks to the built-in MIDI connections, also allows using the LaunchPad in a setup without computer.
www.novationmusic.com | Street price: 289 euros

Akai MPK mini MK3

For just under 100 euros, the MPK mini MK3 offers a convincing overall package: Very good drum pads, sensible mini-keyboard, appealing encoders, display and arpeggiator meet almost every requirement for a USB controller in a very compact format.
www.akaipro.com | www.inmusicbrands.com | Street price: 99 euros



Komplete Kontrol A49

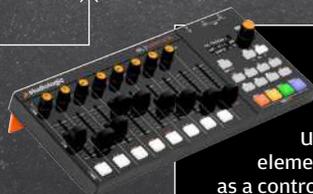
The A-series is recommended as an inexpensive and compact variant of the Kontrol keyboards. It has the benefit of a very well playable keyboard. The large graphics-capable displays and the light guide, however, have been omitted, which is why it is often necessary to look at the monitor and reach for the mouse. But the basic functions, above all the perfect integration into the in-house software, have been retained.
www.native-instruments.com | Street price: 179 euros



Controller	Akai MPK mini MK3	iCON Platform Nano	NI Komplete Kontrol A49	Studiologic SL Mixface	Novation Launchpad Pro mk3	Arturia KeyStep Pro
Type	Controller keyboard	DAW controller	Controller keyboard	MIDI controller	Grid controller	Controller keyboard
Performance pads	8	/	/	/	64	16
Keyboard keys	25	/	49	/	/	37
Velocity sensitive	yes	/	yes	/	yes	yes
Rotary control	8	6	9	9	/	8
Transport section	/	yes	yes	yes	yes	yes
Fader	/	1 (motorized fader; touch sensitive)	/	9	/	/
Connectors	Sustain pedal	2x USB; 2x foot switch, platform D2 LCD display connector	USB; foot switch	USB (micro & A)	USB, MIDI (In/Out/Thru)	USB; 8xdrumgate out; 4xCV/gate/mod out; 1xMIDI-In; 2xMIDI-Out; Sustain pedal; Clock; Metronom out; power supply
MIDI interface	/	/	/	/	yes	yes
CV	/	/	/	/	/	yes
Integrated production system	/	/	/	/	/	/
Integrated Interface	/	/	/	/	/	/
Bus powered	yes	yes	yes	yes	yes	yes
Suitability	●●●●	●●●●	●●●●	●●●●	●●●●	●●●●

iCON Platform Nano

Despite the low price and the compact form, Platform Nano offers a wide range of features that goes far beyond controlling the volume via motorized fader. Praiseworthy are the support of really all current DAWs including matching overlays as well as the switchable, multi-colored function buttons.
www.iconproaudio.com | www.sound-service.eu
Street price: 168 euros



Studiologic SL Mixface

SL Mixface is a compact and solid controller that not only complements your USB master keyboard with additional control elements such as faders and pots, but also serves as a control center between different devices thanks to its USB host function and Bluetooth. SL Mixface can be used as a DAW controller and to operate plug-ins and apps, whereby the well thought-out zone concept allows a flexible integration.
www.studiologic-music.com | www.b4-distribution.com
Street price: 179 euros

Arturia KeyStep Pro

The keyboard controller offers a compact 4-track sequencer with numerous extras and can be used as a control center to manage complete live performances on its own. KeyStep Pro shows its strengths especially in connection with Eurorack modules and other analog synths. Four Voices each with CV/Gate/Mod and eight trigger outputs for drums and percussion leave little to be desired.
www.arturia.com
www.tomeso.de
Street price: 378 euros



MIDI interfaces



TA Programming Studio MIDI And CV Interface

The Studio MIDI and CV Interface is very solid. Certainly there are also modules for the rack that convert MIDI to CV, but the interface with its tools offers much more value. Also apart from the modular world, it's a clever interface between computer and all outboard gear.

www.taprogramming.com
Street price: 139 euros



iConnectivity mio10

The editorial team was completely enthusiastic about the iConnectivity mio10. The mio10 has a very low latency and offers a high stability. Anyone who works a lot with MIDI and knows the problems, should pay attention to the mio10.

www.comline-audio.de | Street price: 350 euros



ESI M4U eX

M4U eX is an uncomplicated, stable MIDI interface for the USB port with very good timing. As there is no fixed assignment of the eight MIDI ports, it can be configured flexibly. The integrated USB hub can be used for dongles or USB controllers, for example. The standalone function is also practical.

www.esi-audio.de | www.hyperactive.de
Street price: 139 euros

MIDI-Interface	ESI M4U eX	TA Programming Studio MIDI And CV Interface	iConnectivity mio10
Interface	USB 3.0 & USB 2.0	USB 2.0	USB 2.0
MIDI	yes	yes	yes
CV	no	yes	no
Connections	8xMIDI; 4xUSB 3.0, power supply	each 1xMIDI-In-/Out; 4xCV; 1xUSB	each 10xMIDI-In-/Out; ethernet; 2xUSB

Controller	Softube Console 1 Fader	NI Maschine+	AVID S1
Type	DAW controller	Standalone groovebox and controller	DAW controller
Performance pads	/	16	/
Keyboard keys	/	/	/
Velocity sensitive	/	yes	/
Rotary control	1	9	8
Transport section	yes	yes	/
Fader	10 (motorized fader; touch sensitive)	/	8 (motorized fader; touch sensitive)
Connectors	USB, power supply	3xUSB; foot switch; MIDI (In/Out); 2xLine in; 1xMic in; head-phone output	USB, power supply, ethernet
MIDI interface	/	yes	/
CV	/	/	/
Integrated production system	/	yes	/
Integrated interface	/	yes	/
Bus powered	no	only in controller mode	no
Suitability	●	●●	●

AVID S1

Avid has achieved the next „big thing“ in terms of DAW remote control with the S1. It's a haptically essential workflow component in combination with the Control App and EuControl software. If you are thinking about purchasing a DAW controller, you should definitely take a closer look at the S1.

www.avid.com | Street price: 1.374 euros



Softube Console 1 Fader

Console 1 Fader works particularly well in combination with Console 1 mkII. With the well-made hardware controller, whose faders run easily and quietly and convinced us with a fast response time, you bring the feeling and sound of a professional recording console into software-based studios.

www.softube.com | www.audiowerk.eu | Street price: 549 euros



Native Instruments Maschine+

The Native Instruments Maschine + is the consequent development of the established machine concept in a standalone production environment. To be more precise: A Maschine MK3 that also works without a computer. This means that you can use all the advantages of the computer-based working method, but at the same time you can produce music completely independently.

www.native-instruments.com | Street price: 1.233 euros

Portrait: Fotos

Modular Illumination



I didn't understand for a long time that it's difficult to implement electronic elements when you write songs with many chords. «

When the first lockdown paralyzed Germany, Tom Hessler used the time creatively. Armed with a modular system, tape echoes and a Farfisa organ, the singer, guitarist and sound tinkerer of the indie band Fotos created the basics of the band's fifth long player „Auf zur Illumination!“ (release date: February 26, 2021) in his home studio in Neukölln. An album that combines electronic music with kraut and psychedelic rock. Other elements such as real drums and tremolo guitars were added by the rest of the band after the lockdown in studio Radio Buellebrueck Kreuzberg. An extraordinary journey that leads directly into the artist's subconscious with nine songs and lyrics influenced by William Blake, Thomas Pynchon or Rolf Dieter Brinkmann. In the interview Tom told us with great passion about modular systems, early morning inspirations, recordings on cassettes and his great influence Ariel Pink. **Interview: Sascha Blach**

Beat / „Auf zur Illumination!“ is your second album in the last ten years. Are you a band that deliberately takes a lot of time?

Tom / We had a long “hibernation” between the third and fourth album (“Porzellan” from 2010 and “Kids” from 2017 - note by the author). At that time, I spent seven years studying synthesizers and modular synthesis. I started producing and got used to electronic music - as a listener and a musician. But it took longer than I thought. Suddenly five years were over and when I had written the album “Kids”, but the rest of the band and the producer at the time, Tobias Siebert, were busy with other projects. But this time it went faster again, because it was only two and a half years and I hope that there will be more „flow“ again in the future.

Beat / „Auf zur Illumination!“ took its course during the first lockdown. From that point of view you were indeed very quick this time.

Tom / Yes, we've only been that fast on the very first album so far. This was also due to the fact that writing and production was a flowing process, since I was also a producer myself. Within four months the album was both written and produced.

Beat / What was your setup like?

Tom / As I said I had this long phase in which I worked my way into modular synthesis. I moved to Berlin in 2010 and it all began in 2012 when I started shopping at Schneidersladen. They call it „Eurocrack“ and it's true - it makes you addicted incredibly quickly since you always want to try new things. I bought a lot of stuff and was really hooked, but then sold almost everything the year before last, also for financial reasons. Then I started assembling devices myself and got the Serge Modular Systems kits from Random*Source.

They have their very own sound that goes in a tube-like distorted direction. That worked well with my newfound love of tape echoes - like Space

Echo and Echoplex - and my Farfisa organ, which I bought at the same time. Within a few months, a set of instruments was created in my home studio that is perfectly coordinated with one another. It resulted in an overall aesthetic that sounds retro-future-like. Kind of a sci-fi-esque 70s sound that inspired me to write the lyrics in that direction too.

Beat / What influence did the lockdown have?

Tom / It sparked an apocalyptic mood. The streets were empty and no more job assignments came in. It was also very quiet in the house. Therefore I got up very early every morning, started to develop something on the modular system and - inspired by the sounds - wrote corresponding lyrics. This quickly resulted in a guideline.

Beat / Music that is created with a modular system often ends in abstract soundscapes. On your album, however, it's songs in the classic sense - even if they sound repetitive and kraut rock-like. Was it difficult to channel the modular idiosyncrasies into traditional songs?

Tom / Yes, totally. I hadn't realized for a long time that it was difficult to implement electronic elements when writing songs with many chords. Unless you play very classically to it with the synthesizer. But I'm not a keyboard man. With the modular system it's something else anyway, because it's not necessarily the point to connect a keyboard and play something to it. You want to create self-generating and changing patterns that are organic and interesting. When songs have too many harmonies it becomes difficult.

But as soon as something is based on pedal tones in kraut rock style and modulates different chords on a bass note, the modular system with its drones and soundscapes fits better. Of course you can also do something with the modular to songs with complex chord systems. Aphex Twin, for example, builds the most complex harmonies with its Cirklon sequencer. It's just a lot smoother

and more intuitive when it's either atonal, moving towards noise, or if you have pedal tones. Kraftwerk's "Automat" is the best-known song in this field. If the oscillator is tuned to a key note, you have a lot of freedom with the modular system and you can let off steam.

Beat / Do you have a song idea first and add the modular or vice versa?

Tom / In general, I've always been someone who has tried to get into a playing mode in a child-like way with the instruments at my disposal and create a sound that inspires me to record the next sound on it. I'm not someone who sits down with a guitar and comes up with a totally cool chord structure. Usually this happens through sound timbres. A song then emerges from these sound worlds, usually when the first song melodies and text ideas arrive.

You can hear it very well in the second single "Rauschen", which starts with a Serge drone - like a roaring beam that runs through the song. Although the root tone D doesn't fit some chords in the song, I left it that loud, because that's what creates the threatening and cinematic quality that defines the song. In the production process with the band we tried to reduce the arrangement, make it more song-like and anthemic, because it was clear that "Rauschen" is an important song.

But I ultimately prevailed because for me the most important thing in the song is the modular drone, around which everything happens. If you reduce that to make it more harmonic, poppy and accessible, it becomes a Schlager, or at least a one-dimensional guitar-pop song that no one needs. But now there is this break between the lovely harmonies and the brave-new-world lyrics and the drone that sounds "larger than life".

Beat / Are you more effective and determined when searching for sounds or do you like to spend hours playing with the devices?

Tom / There are these songs - those that get done and good. I have a moment of inspiration when I'm not at the instrument yet. Often in the morning at 6 a.m. when it is still dark. I'm not fully awake yet, but the machine up there is already running. I then think through which cable connections I could try to create something that is fun that I haven't had before. Then I get up, go to the studio in the next room and put it into action. Those are basic frameworks that come together in a jam within an hour or two and don't change much after that.

It's more a matter of adding details like harmonies or transitions. For example, I later had to improve the continuous pulsing on the "Silver Machine". It comes from the Serge DUSG, which is like a Swiss Army Knife and can do pretty much anything, but the timing is not super clean. I had recorded the song itself twice, edited it and that was it.

Beat / *You have recorded also on cassette. Really on a cassette or on a tape machine?*

Tom / I was able to take part in the completion process of The Düsseldorf Düsterboys record last year. I had made my room available and was allowed to sit next to it when producer Olaf Opal, who now also mixed our album, wanted to check whether the band's cassette recordings weren't worse than the tape machine. The band had pulled the mixes on cassette and Olaf wanted to check whether the tape machine wouldn't be better. Then, after a long process, we decided that the cassette really sounds better.

I then incorporated this approach into my band and got myself an old Tascam cassette recorder that also has a pitch control, which was important to me because I wanted to play things back more slowly. In the mix, however, Olaf came with the very good cassette emulation plug-in Wavesfactory Cassette. That was cool because you didn't have to copy everything to tape and back again. Also, it didn't sound quite as aggressive in terms of distortion. We then worked a lot with the plugin accordingly. However, on the mastering bus it should be treated with caution (laughs), because it can cause a lot of destruction.

Beat / *So sounds were recorded with the computer, but then copied again to cassette and then back again?*

Tom / Right. In principle, we bravely and boldly transferred the complete mixes from the sound card to the cassette and then - a little slower - transferred them back again. The last song "White Waves" can be heard a little lower on the album than we recorded it. This gives it a slightly enraptured effect.

There were also individual recordings that we put on tape, but

the songs didn't end up on the album. It's amazing how much more distortion there is on a real cassette compared to the emulation plug-in. At least with my setup. This distortion can be good, and sometimes it is a little too much. Most of the time, however, the cassette was used on the mastering bus.

Beat / *Wasn't that a problem with the timing?*

Tom / Definitely. The tracks or stems then had to be cut every four bars or so on the click again, because it totally messes up. Therefore, it was only possible with spheric elements.

Beat / *Was a classic tape machine also used?*

Tom / No, because it sounds too good (laughs). Don't get me wrong, tape machines sound great. But this time around, we were keenly interested in creating an aesthetic that was bold and special. Olaf played a big part in that. It would have been too good with the tape machine. The cassette, on the other hand, produces a sound that has not been heard so often. When a tape machine is well calibrated, in the end it doesn't sound like anyone could tell directly how it was recorded.

It just sounds very well. Queens Of The Stone Age, for example, record all drums with an Otari tape machine. That sounds awesome, but not lofi, funny or special. In the case of a cassette recorder, the artifacts of a tape that has been overdubbed several times are harmonic distortions that don't actually sound pleasant at all. Treble is taken away and other treble is added in return. What's interesting about my tape recorder is the Dolby C effect, which is the noise reduction mode. It creates aggression in the peaks of drum sounds and the highs are reduced to such an extent that fine highs like an 808 hihat can no longer get through.

This gives you a very own aesthetic that is impossible to copy. This can also be heard in the song "Neue Lunge" of my solo project Der Assistent. It happened in a few productions, that I've played out mixes with the Dolby C mode again, so that a relatively aggressive mix came back quite soft and gentle, so that other people guessed for months what it could be. So in the end my mix had to be taken (laughs).

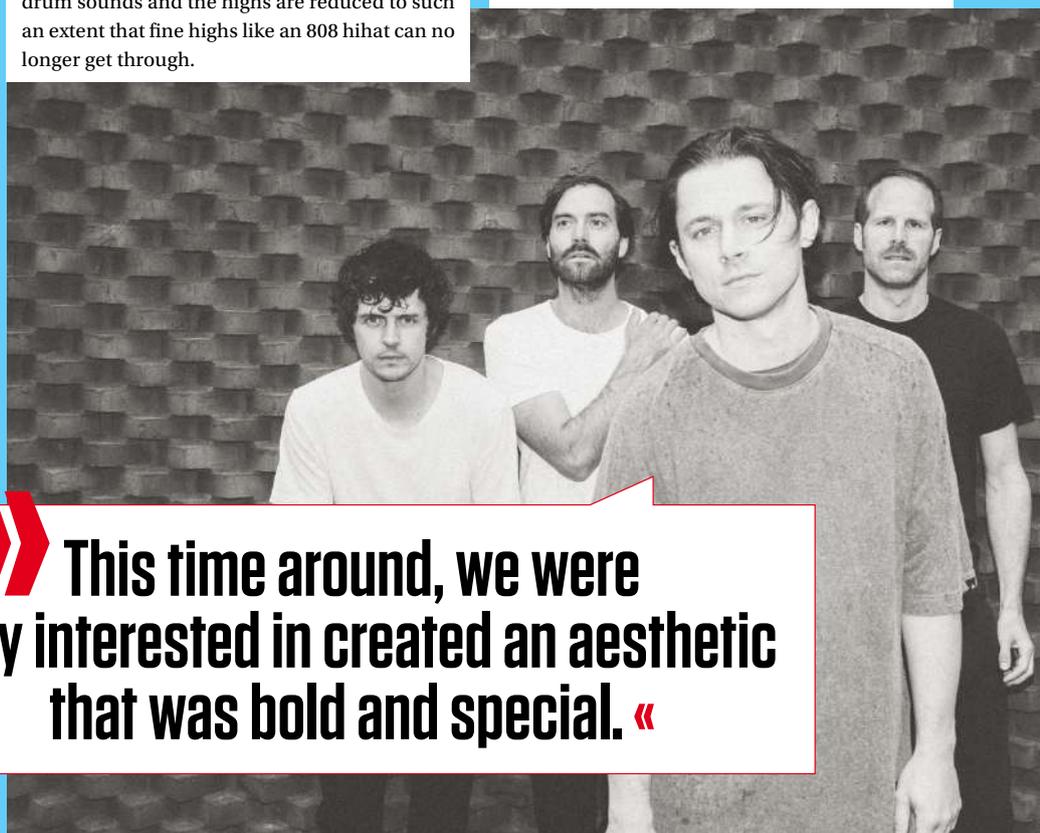
Beat / *Well, stupidly you gave it away (laughs).*

Tom / Yes, but that's because the music, which has become popular primarily through streaming, sounds more and more similar and interchangeable so that it fits into the playlists. These are pieces that have to fit the algorithm and mostly come from a small group of songwriters who supply countless performers. Anyone who has a good computer, a bit of know-how and a few plugins can now do good productions, but what is becoming more and more difficult is to distinguish oneself.

The listener shall have the feeling, what's going on here?! Then you have to look for the right tools that can generate that. Since I was at an Ariel Pink concert ten years ago, he has been a pioneer of this methodology for me - working with trash, lofi and other things that are actually forbidden if you want to create good sounding experiences. But this creates a metaphysical quality that reaches the subconscious.

Beat / *Just like Fotos, because after all, their record title „Auf zur Illumination!“ doesn't come from anywhere ... ❖*

www.fotosmusik.de



» This time around, we were very interested in created an aesthetic that was bold and special. «

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Discovered: Egopusher

The Art of Waiting

Using the unconventional instrumentation of violin and drums, Tobias Preisig and Alessandro Giannelli have created something remarkable: Pulsating sequencers meet tidal tone waves, mantra-like rhythms bleed into sensual soundscapes. On their new album, *Beyond*, the pieces are more danceable than ever, but they're even more intensive. Words can not do this band justice – in fact, they tend to get in the way. **by Tobias Fischer; Photos: Simon Habegger**

Beat / You met as part of the group for Dieter Meier's „Out of Chaos“ project. How did you get to play with him?

Alessandro / One day Tobias left a voice mail on my phone. He told me that Nick Cave drummer Thomas Wydler was unable to play a few shows and Tobias asked me if I could stand in for him. I agreed and that was the beginning of our journey.

Tobias / For months, we made use of every single minute of free time to meet in our rehearsal basement to jam, experiment and try things out. Finally, we got our first gig: 30 minutes as the opening act for the band „Trabant Echo“ at the art space „Perla Mode“ in Zurich. This was all the way back in 2013.

Beat / What were some of the things you learned from „Out of Chaos“ which turned out to be useful for Egopusher?

Tobias / Dieter is a great storyteller, but he also loves punk. Combine that with a production team made up of Patrick Christensen (PC Nackt), T. Raumschmiere and Ben Lauber and you've got an exciting combination. They all combine electronic music with pop and punk. PC in particular loves turning things upside down first and then finding his way out of the maze he created. We were like one big family and the music was a huge playground. We were performers and instruments at the same time. The sessions were raw, creative and truly special, without ever losing that pop angle.

Beat / Thanks to Meier, the project had a natural connection to the Swiss scene. But the recordings took place in Berlin.

Tobias / Correct, we recorded at Chez Chérie, a big, open studio. It was an exciting time for me. I was able to work with amazing producers and to get a feeling for Berlin's electronic pulse. A year later, I moved to Berlin myself to discover this city in more depth.

Beat / Violin plus drums is not exactly a conventional instrumentation. So it's interesting that you had no concept whatsoever when you founded Egopusher. What gels this project together?

Alessandro / We hardly ever talk about the music we want to make. Before beginning work on *Beyond*, we met for a walk through the forests around Zurich to plan the direction we wanted to take. The conversation was difficult and there didn't really seem to be common ground. So we decided to just return to the basement and start a session. That day, we laid the groundwork for the album opener „Blue Moon“. Music will somehow show us the way.

Too many notes

Beat / Tobias, you have a pretty personal approach to playing the violin. Can you talk about that a bit?

Tobias / I used to play a lot of jazz and classical music in the past – styles which ask for a lot of notes. But at some point, I lost interest in playing fast cascades of notes. I started to get bored by technical virtuosity. As a violinist, you don't need to breathe, you can just indiscriminately play tones forever. It didn't feel natural to me. Instead, I started to search for urgency, for the existential aspects of music. I want to express something that really means something to me.

Beat / So you changed your technique?

Tobias / Part of the solution was to imitate singing. I would do that for years. Breathing, phrasing, narrating – these were the qualities I considered important. What I discovered was that intonation is one of the most fascinating things. I can take a tone and play it just a tiny fraction higher, and it will create an entirely different emotion in me. It doesn't even have to be mathematically correct. I will also often keep changing a sustained tone in the moment of performance. This allows me to minutely sculpt each single note and award it the attention it deserves.

Beat / Alessandro, on your self-titled EP the first two pieces are great examples for the extremes you'll go to with Egopusher: On „Purple Air“, the percussion sounds electronic and minimal. On „Sunbeam Scream“, on the other hand, it is complex and jazzy. Why these radical contrasts?

Alessandro / I'm glad you mention these two tracks. For me, they are excellent examples for my drum palette in Egopusher in 2015. Back then, the drums would take on a different role in the band. Before I met Tobias, I would mainly play other people's songs in various formations. With Egopusher, I could fully express myself as a musician and drummer. I experimented a lot. On „Sunbeam Scream“, for example, I placed cymbals on top of the toms to create a sort of industrial aesthetic.

Beat / So, essentially, you consider the drums as an integral part of the composition.

Alessandro / Precisely. I've always primarily been interested in albums, bands and artists and less in individual instrumentalists. I've also always been fascinated by big beats and breakbeats and have tried to recreate them live on the drums. I would play along to tracks by artists like Propellerheads or the Chemical Brothers for hours.

More colours

Beat / You're still playing violin and drums. But keyboards have become more important of lately. How would you rate the importance of electronics in your music today?

Alessandro / In the past, we had a basic setup. Tobias had his violin and the Moog Taurus. I had my drums and the Arturia Micro Brute. Our ambition was to get the most out of this equipment for our songs, particularly in a live setting. This was also why we recorded our first EP live and using very few overdubs only.

It feels as though we've outgrown the duo limitations and turned into a full-fledged band. There are no limits regarding the equipment anymore. «

Swiss duo Egopusher met as part of a project by Yello's Dieter Meier.



»» There is a certain fascination in small changes. «



Photo: Nuel Schoch

Tobias / What has changed since then is that we are both playing leads now. We're no longer just using the synthesizers as a bass or an arpeggiator.

Beat / Did the violin-and-drums-set-up begin to feel tiresome?

Tobias / Maybe. We did want to look for more colours. For a while, we would only play synths in our impro-sessions and only allow in the violin and drums at a later stage.

Alessandro / It feels as though we've outgrown the duo limitations and turned into a full-fledged band. There are no limits regarding the equipment anymore and we'll work on a track until we're satisfied.

Beat / What are some of your favourite pieces of equipment in the studio?

Tobias / We'll use what we can get our hands on in that moment. When we're working with our producer David Hoffman, we really appreciate his classic synths, including the Korg MS 20, a Mini Moog or the Prophet 8. In our own studio, we enjoy playing the Juno 60 from Alessandro's father. And when we're on the road, we'll use soft synths. We've had the Arturia Micro Brute and the Moog Taurus for bass lines since the very beginning and we still cherish them.

Alessandro / On our new album Beyond, we also used the Oberheim SEM a lot. When we discovered it in David's studio, we were instantly hooked. You can now hear it on almost every track, either as a lead or for arpeggios.

Beat / Beyond marks a new beginning for you in my opinion. On pieces like „Sheen“ you sound more urgent, dense and even cinematic than ever before.

Alessandro / Yes, „Sheen“ really opened up an entirely new world for us. It is without doubt

the most „exotic“ track on the entire record. The story of how it got made is actually quite interesting. We wrote it as part of the same session which resulted in „Faint“.

Beat / Which is the nine minute long ambient piece preceding it on Beyond.

Alessandro / Exactly. In a way, „Sheen“ is a remix of „Faint“. At some point, we had the idea of programming a beat to the music and pushing away the wall of sound using sidechaining. This inspired us to keep working on the track. Gradually, we added layer on top of layer, introduced a melody and arranged the piece. Most of it was created with David in his studio. First, we'd work on our individual laptops using headphones. Then, we put everything together in David's Pro Tools.

Beat / „Faint“ is a remarkable piece: Nine minutes long, pure soundscapes, no beats, but it feels anthemic nonetheless. How did that piece come about?

Tobias / It was one of those magical moments. What you're hearing on the finished album is exactly what we put to tape in one of our endless improv-sessions. We will often withdraw to a defunct restaurant by the name of „Grünenwald“ in the Swiss mountains. It's the perfect place to work without being disturbed. It was an extremely hot Summer night, the lights were out in the restaurant. The only lights were our synths and pedals. And then it just happened.

Alessandro / It was truly an incredible experience. I still remember that I kept getting

goosebumps during the session. When we had reached the end, we looked at each other and instantly knew that this track would have to be on the album.

Beat / There are less tracks on Beyond compared to your debut. Interestingly, the total length is almost exactly the same. Have you become better at working with time?

Alessandro / The tracks are more clubby and danceable. Wir realised that you can almost sustain the tension forever if the vibe is exciting enough. There is a certain fascination in small changes. This is what unites club music with minimalism.

Tobias / If you allow the music to just be, it takes on the qualities of a mantra, of a trance. The art lies in waiting for the right moment, to keep pushing it back until you arrive at the right turn. Then, something as simple as a chord change can feel like a revelation. ::

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DISCOGRAPHY:

// EgoPusher EP / 2015
// Blood Red / 2017
// Beyond / 2020



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Hi Av3ry! I need a love song

Digital culture: AI

Delightfully inhuman



Anyone who wants can request a song from Av3ry. She has already written around ten thousand songs - and the number is increasing every day. In addition, she broadcasts a continuous live stream in which hardly ever a beat is repeated. This work is possible because it is an artificial intelligence that the composer Alexander Schubert programmed. His approach differs fundamentally from those of comparable projects: The results are disturbing, dreamlike and strangely fascinating at the same time - but Av3ry doesn't know anything about music at all.

by Tobias Fischer; Photo credit: Pedro Gonzales

Beat / *Av3ry, in contrast to many other AIs, has a more clearly defined personality. On the one hand, there is the visual representation ...*

Alexander Schubert / I developed it with Pedro Gonzales Fernandez. It was originally a kind of alter ego of mine, but I wanted a portrayal that was more feminine than I am. Finally we came to a subject that stands for itself, which I understand as nonbinary. Av3ry's personality lies in a gray area between male / female, machine / sensual person.

Beat / *You can also hear a certain style musically.*

Alexander Schubert / Yes, Av3ry has a certain tonal language. When I originally programmed it, it was much more heterogeneous. Before the album was released, I tried to narrow it down a bit so that Av3ry was perceived more clearly as a single entity. The exciting thing about it is the form of the agency - that is, projecting what you hear onto a subject.

Beat / *Why were you attracted to the project of designing a composing AI?*

Alexander Schubert / I wanted to create an entity that surprises me and does the things that I wouldn't do in that form. And I wanted to create a

mode for the audience that allows for personalized interaction, i.e. in which the users were concretely involved. I didn't want to use AI in such a way that it is a tool with which I generate material and then I go to the studio for half a year and finish the pieces completely. Rather, for me it was about: I want to do something that is emerging at the moment and that I no longer have access to. I wanted to pull myself out of the process as a person.

Beat / *That's why you decided to have a continuous live stream and an album with ten thousand tracks?*

Alexander Schubert / Exactly. The aim here was to make a proof of concept - because it would obviously be impossible for me to edit all of these pieces afterwards.

Idiosyncratic and inspiring

Beat / *The music that is created this way is fascinating. But it also seems very strange.*

Alexander Schubert / Many of the decisions Av3ry makes may be inhuman or radical. For me, too, this is part of the attraction: That decisions come out of it

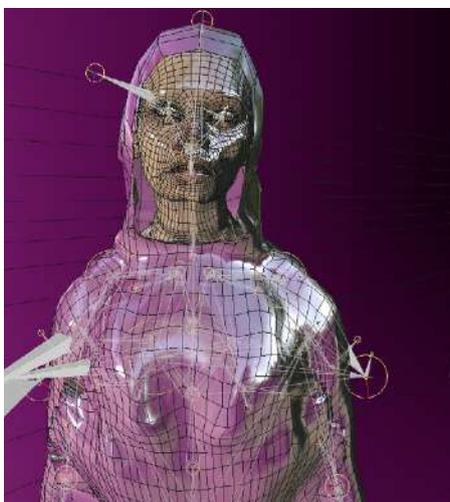
that are so idiosyncratic that I feel inspired by them. An example: A piece starts with a slight noise. Then there is twenty seconds of silence. Then comes a scream. These are, of course, relatively extreme musical decisions and sometimes I imagine what it would be like if I came into a concert hall and found people there playing this kind of music live. For me, that's a positive dream connotation.

Beat / *What does the term "intelligence" mean in connection with music?*

Alexander Schubert / Perhaps the simplest way to define intelligence is that a system is capable of learning something. With Av3ry, there is a training process. A function tries to optimize a problem, for example the reproduction of a certain style or the continuation of a certain musical passage. The higher level creative and intelligent achievement would then be the assessment of the results on the aesthetic level or the ability to make new suggestions on the aesthetic level. However, we are not at that point yet. For this, one would have to assume a much more comprehensive consciousness and a much more detailed description of the world by an AI.



The composing AI Av3ry only learns what music is through exchanging ideas with listeners.



Beat / You made a conscious decision against programming an AI that writes notes on virtual music paper. Instead, Av3ry combines existing fragments of a database into new pieces. Why this approach?

Alexander Schubert / On the one hand it was clear that there shouldn't be scores because Av3ry should generate and distribute these pieces itself. However, within the system there are actually purely sonic, sample-based processes as well as structural, event-based processes. This is not a classic notation with staves or sixteenth notes. But there are stochastic processes that trigger events and generate something like notes.

Beat / How does this work in concrete terms?

Alexander Schubert / You can imagine that the system consists of a large number of modules that can all be linked together. So a very modular synthesizer, except that the synthesizer not only contains oscillators and control voltages, but also sound libraries, audio samples and complete songs from the Internet. The special thing about the system is that it has absolutely no prescribed stylistics. That is, there is no original evaluation of which of these whole links are favored. Rather, this is done through a process that is optimized and adjusted as the system works. So the system is able to produce very different things.

Beat / If I got it right, Av3ry uses a database of sound sources that it pulls from the internet. How does it create finished compositions from these elements?

Alexander Schubert / Av3ry uses a combination of different modules and sources. A large part are stochastic processes or modules that make certain functions and transformations possible. Other modules, in turn, are able to access instruments, audio files and songs from the Internet. There are maybe 50 modules. And each of these modules has an average of maybe 30 parameters. And each of these modules can send something to the other 50 modules. Each module is determined by its parameters and its

possible links. These values are initially chosen randomly and then evaluated, favorited, and learned through user interaction.

This means that the complete parameter set of the connections and the module parameters reflects the state of the system and in the end a corresponding piece of music comes out.

No feeling for Jazz

Beat / So in a way Av3ry doesn't even know what music is.

Alexander Schubert / The system has no idea of styles, rhythms, or any music theory. It doesn't know what a time signature is, or that a particular setting is "Jazz", or that a particular module is responsible for rhythm. Even that is not clear: is not stated at all, which module is connected to drum sounds or which module triggers speech samples. A module that triggers hi-hat rhythms in one piece can be responsible for creating a flute melody in the next piece. The system only knows what it gets as feedback and it will only learn which connections are responsible for what.

Beat / And it learns this through the exchange with the listeners.

Alexander Schubert / Depending on what kind of reaction this piece gets at the end and how this is described, the neural network is retrained in order to take the associated parameters of the system into account in the training process. Quite simply spoken:

If the parameters are set in such a way that in the end a piece comes out, which is extremely bad, then this parameter combination is not included further or if a certain parameter combination comes out, which is often assigned to the value „loud“, then the neural network can learn that this combination represents a „loud“ result.

Beat / How about questions of copyright when the program pulls musical data from the net?

Alexander Schubert / In fact, problems can arise when materials are downloaded from the Internet and these are recognizable in short sequences. It has happened in one or two parts that tracks have been blocked because of this. But often the elements are so short and mostly changed in such a way that it is unproblematic.

Beat / In media articles, AI is often seen as competition to human creativity - mostly out of ignorance, but sometimes with very good arguments. You are an artist yourself. How would you describe your personal perspective on the subject?

Alexander Schubert / This question does not only arise in the music sector, but in general. AI will definitely take over simple tasks, in all areas. That will happen in music too. The underlying question is how to deal with wages and the welfare state in the 21st century. Answers must be found to this. Specifically in the musical area, I can say that some easily reproducible forms of music - background music, elevator music - can definitely be created by AIs sooner or later. I don't think that's a bad thing, because it's more about a craft, so it's a working off of certain processes.

From a positive point of view, people are relieved here because they no longer have to do things according to the "scheme F" and can concentrate on creative and fulfilling activities. For this, there must then be fair payment and social income modes, which do not require that every person carries out a mechanical activity. Relieving the burden on people here is an opportunity - we just have to dare to understand this freedom as an anti-capitalist possibility. ❖❖

www.av3ry.net
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Plug-in-highlight: Waves Codex

Hot competition for Massive and Serum!

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Wicked Dubstep basses, screeching leads, shimmering arpeggios, endlessly evolving pads as well as impressively animated textures - all this and much more is possible with Waves Codex. This wavetable synthesizer entices you with multi-faceted sound generation including WAV import, accessible operation and an inspiring arpeggiator. Whether you want to use the imaginatively designed presets or create your own sounds from scratch: our software highlight of this month is a guarantor for fresh sounds far removed from analog standards. **by Mario Schumacher**

Wave Scanning

The core of Codex is formed by two oscillators based on wavetables. These can actually be thought of as a kind of table with different waveforms per line. In the simplest case, they are played back one after the other at a certain speed. But the real fun starts with the fact that the speed can vary and the playback can move not only forward, but also backward. A 3D view gives visual feedback about the waveform and the current playback position at any given time.



Sound generation

Codex offers 64 factory wavetables and allows you to import your own WAV samples. In the formant mode, you can change the resonance of the sound and also modulate them. In addition, the resolution of the wavetable can be modulated. The lower, the more it sounds like old digital synthesizers. Both oscillators can be balanced via mix crossfader and enriched with a sub oscillator and noise. Thanks to the ring modulator, as well as the oscillator frequency modulation, the creation of aggressive and metallic sounds is also possible.

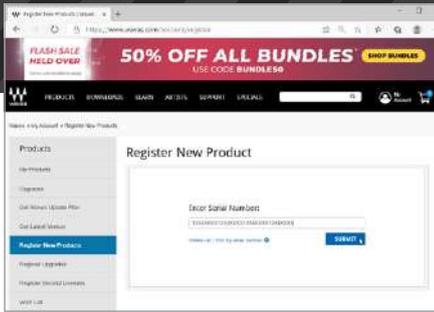
Filter and modulation section

A resonant multimode filter is available for sound shaping. With the FM control, you determine the intensity with which the filter frequency of Oscillator 1 is influenced. To the right of the filter are the envelopes for controlling the filter frequency and volume. The third envelope can be used for modulations, as can the four LFOs. Here, LFOs 1 and 2 always oscillate freely, while numbers 3 and 4 are synchronized to the host tempo.

Arpeggiator/Sequencer: The synthesizer's arpeggiator is simple, but nevertheless smart. In addition to the usual up and down patterns and a random option, the sequencer mode is particularly impressive, allowing you to create basslines and riffs in no time. The step sequencer is also available as a modulation source.

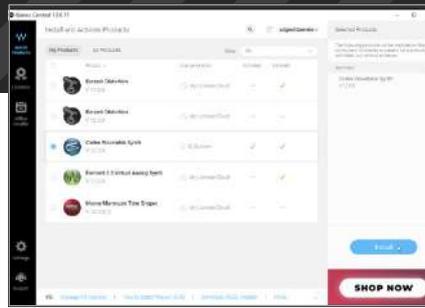
Sound enhancement

Codex's effects section features a bitcrusher, distortion, delay effect, chorus, reverb and an equalizer. The distortion effect can be placed before or after the filter at the touch of a button.



1 Registration

To install Codex, you first need a user account at Waves [1], so create one if you don't already have one. Click **Register New Products** and enter the serial number you received after registering the plug-in through our Serial Center [2]. Then click **Downloads** on the Waves website. ❖



2 Installation

Here you can download the program **Waves Central**, with which the Waves products can be installed and activated. Select the Codex Wavetable Synth plug-in under **Install Products** and then click Install. After successful installation, you're ready to go! Start your DAW and load Codex as a virtual instrument. ❖



3 Let's go!

If you want to try out Codex's patches first, it's a good idea to show the hidden **Preset Manager** by clicking **Load** and then **Preset Browser**. You can switch between patches by clicking on the plug-in's arrow buttons, or by using the vertical arrow keys on your computer keyboard. ❖



4 Init preset

Use the horizontal arrow keys to move to the next or previous preset category. We now want to create a brand new pad sound with Codex. To do this, select the Patch **Init**. Currently, only Oscillator 1 can be heard, as the **Mix** Crossfader is in the left position. Below the waveform display of Oscillator 1, you can select the wavetable. ❖



5 Riding the waves

Use the **Start** knob in the left Scan section to cycle through the wavetable. The result is a lively sound progression. In order to have your hands free for playing while trying out the sounds, it is advisable to modulate this controller movement. For this reason, activate the **Sync** function in the **Scan** section. ❖



6 Scan tempo

This causes the wavetable to be traversed in sync with the host tempo. We set **Speed** to **1**, so that cycling through the wavetable lasts one bar. Also, activate the **Loop** function and now experiment with the **Start**, **Mid** and **End** controls. **Start** determines from which position the wavetable is traversed and **End** defines the end point. ❖

[1] www.waves.com/account; [2] www.serialcenter.de

Recording Solution

Fluid Audio offers you a professional recording solution with everything you need to get started right away with your next production. The FX50 studio monitors are perfect for home recording and are great to place on the DS5 desktop stands. And the SRI-2 audio interface with its integrated monitor controller is the perfect complement, so you can focus on what's important: your inspiration.

**FX50
DS5
SRI-2**



7 Sound variations

If the **Loop** function is activated, the range between **Mid** and **End** is played back in a loop (forward / backward). Are you more in the mood for a grainy LoFi sound? Simply reduce the resolution of the oscillator. You can also influence the formants of the waveform if you activate the mode of the same name. ❖



8 Audio import

This allows for more interesting sound variations; however, we deactivate the formant mode again to try out the different wavetables. By the way, for fresh sounds, you can import your own audio files. To do this, click **Import** and select a WAV file, ideally with a length of 1-5 seconds. ❖



9 Ideal sound material

Sounds that change drastically in a short period of time often yield the most interesting results. The results are often only remotely reminiscent of the converted audio file, opening up a playground for exploring new worlds of sound. For short drums, it can be useful to play back only a short wavetable range in the loop. ❖



10 Oscillator 2

In the same way, you can select a wavetable for the second oscillator and modulate the playback position. You can also use one of the LFOs, an envelope or the step sequencer to modulate the wavetable position. Or how about selecting a new wavetable randomly and tempo-synchronously? ❖



11 Random Progressions

To do this, define **LFO 3** as the modulation source and **Osc 1 Table** as the destination in the matrix, then turn up the modulation intensity fully. For **LFO 3**, select the **S&H** waveform as shown and set **Time** to **1/8**. This randomized modulation is a good trick for creating tempo-synchronous progressions with a drum loop. ❖



12 Filter

By combining several modulation sources and by cycling through the wavetables at different tempos, you can create very complex sound progressions in no time. Of course, you can tame the very overtone-rich sound with the soft filter and modulate the filter parameters, for example, with an LFO. ❖



13 Softer sounds

You can also use the **Unison** function and the **Chorus** and **Reverb** effects to soften the sound. For your pad sound, set long **Attack**, **Sustain**, and **Release** times for the volume envelope as shown. Modulating the filter frequency, such as with the corresponding envelope, makes the pad sound even livelier. ❖



14 Gripping sequences

Save your pad sound if you want to keep it. How about still trying out the arpeggiator? Set the filter and envelopes as shown and activate the **Mono** playback mode. Then, reduce the intensity of the **Reverb** effect and select **Seq** mode in the **Arp/Seq** section. ❖



15 Variety

Now you can determine the pitch for each step of the sequence. Click the corresponding digit to mute a particular step. You can also use the step sequencer as a modulation source, for example, to modulate the wavetable position. Have fun exploring Codex further! ❖



Find more Cubase workshops and video courses at www.MeinHomestudio.de

Power Producer: Cubase

Create vital drum patterns

When producing with virtual drums, the result can sometimes sound a bit static. In this workshop, you'll learn five practical techniques that can make your MIDI drum loops sound more varied. You'll start with a simple loop of just two bars, which you'll expand and bring to life in this workshop.

by Paul Marx

Project info



Material: Cubase Pro

Time required: about 30 minutes

Content: Varying a MIDI drum loop in the Key Editor.

Difficulty: Beginner/Advanced



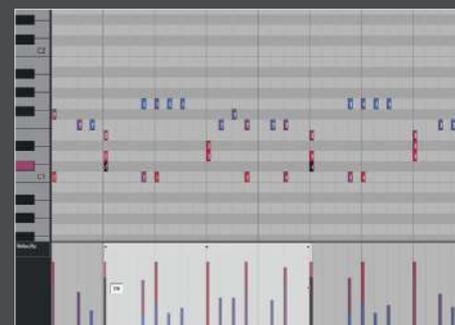
1 The project

First, create a new project in tempo 90 BPM. Add an instrument track in it with **Groove Agent SE** and load the preset **R&B Kit 01**. Then, import the enclosed MIDI loop **In The Grid 90 BPM** into your project by dragging it into the track with Groove Agent SE while holding down the mouse button and releasing it there. ✨



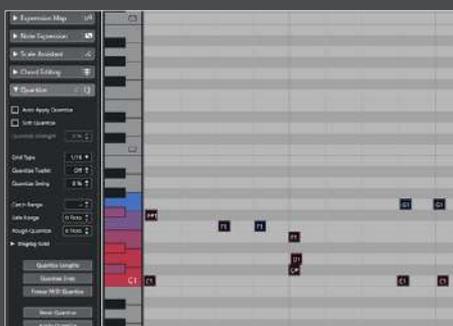
2 More samples

Open the drum loop by double-clicking in the Key Editor. Additional samples should make the snare sound more interesting. Add 1 - 2 additional sounds on the **C#1**, **D#1** or **E1** keys for each stroke of the snare drum. Also use additional samples for the hi-hat and shaker by distributing the notes on the **F1**, **F#1** and **G1** keys. ✨



3 Velocity

Change the velocity within the pattern of a sample to emphasize rhythmic focal points. At rhythmically unstressed positions, reduce the velocity to create dynamics. To edit only individual velocities in places with multiple samples, you can select individual notes before editing. ✨



4 Humanizing

Deactivate the grid with the **shortcut J**. Now open the **Quantize** area in the left zone of the Key Editor. Enter a value of **8 ticks** in the **Loose Quantize** field. Now select all the notes in your loop and use the Quantize **Shortcut Q** to randomly offset the strokes slightly from each other rhythmically. ✨



5 Variation

Often MIDI drums sound static if they have too little variation in the arrangement. Close the Key Editor and duplicate the MIDI event of your drums twice using the **Ctrl + D shortcut**. Vary the drum loop in the copies by thinning out or changing the rhythm on individual samples, for example by adding a break in the second bar. ✨



6 Time For a Break

Play other instruments in your project and arrange the drum loop variations over several measures. To add impact to more complex rhythms, you can use rests in the arrangement. For example, a full measure of rest in the last measure of the drum loop creates an effective contrast just before the chorus. ✨

Power Producer: NI Maschine+

Nifty automation hack

The Maschine+ has recently become available in stores. The standalone production system impresses with a great workflow and its inner values. In the third episode of our Maschine workshop, we'll show you an automation hack that you've probably never heard of before. by Stefan Hofmann

Project info



Material: Native Instruments Maschine+

Time required: 20 minutes

Content: Convenient automation of effect parameters with macro controls.

Difficulty: Advanced



1 Create a mix bus

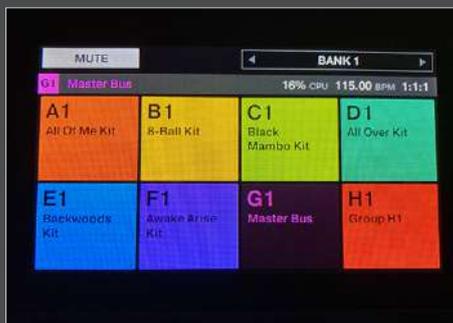
In our automation hack workshop, we'll show you how to create a Mix Bus for all groups, allowing you to edit each sound simultaneously. First, select an empty group to act as the Master Bus. You can name it that way, too; however, to route other groups to it, you must first place an effect on a free pad. ✨

2 Select effects

Now we have to assign one or more effects to our **Master Bus**. In our case, we choose an EQ. For example, we can automate the Bell EQ and apply it to the entire session. Click on **Browser + Plug-in** and select EQ under Effects. By the way, a reverb or stutter effect also looks very good here. ✨

3 Routing like a pro

Now we need to route all instrument groups to our **Master Bus**. Go to Channel MIDI and select the **Output** item. Under **Audio - Destination** you can now select the **Master Bus**. Now click on each group individually and select the effect bus. Our **Master Bus** remains set to Master. ✨



4 Control is better

To check if you have made all settings changes, there is a simple trick. Now mute the group that you have designated as the **Master Bus**. Now all instruments should be muted. In order to be able to realize an automation, you should now create a new pattern that extends over the range that you want to effect. ✨

5 Define macros

In our case, we have chosen one EQ. But, of course, you can also switch several effects one after the other. In order not to get confused, you should now connect the most important controls with a macro. To do this, hold down **Shift** and press the **Macro** button. Now turn the knob of the effect you want to set as a macro. ✨

6 Manage macros

In our case we connected the frequency and gain parameter of the center bark EQ to a macro. If you now press **Macro**, you will see all the macro controls and can control them. This way you can easily manage and automate all effects. Now click **Shift** and **Auto** to arm and record the automation. ✨

Power Producer: Akai MPC

Hard-House in no time

The fact that MPCs now have a drum synth is no longer new, but the fact that you can create entertaining Minimal and Hard House recordings with just one instance is. So, don't waste any more time, let's get down to business ...

by Marco Scherer

Project info

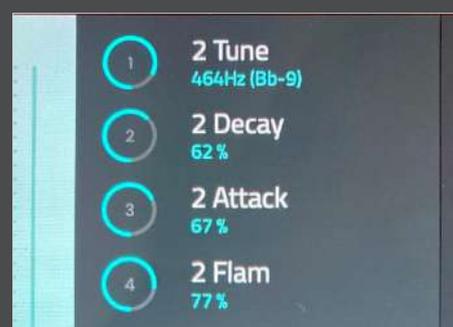
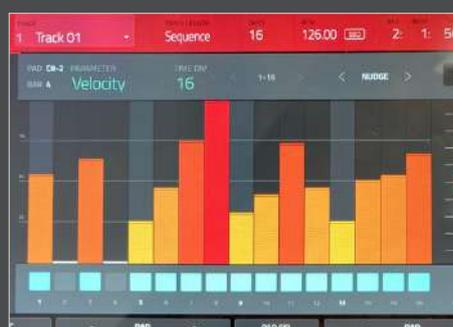


Material: MPC Live, X, One, Touch, Studio, Renaissance, Force, Software 2.x or MPC Beats

Time required: 1 hour

Content: Create an entertaining Minimal and Hard-House playback with an instance of DrumSynth.

Difficulty: Advanced



1 Load DrumSynth

Create a new project and load the **DrumSynth:Multi**. As a starting point, we choose the preset **Grimey Reaper**, but exchange some of the sounds. We turn **DRUMSYNTH 2** into a percussion synth with **MODEL Conga 8** and connect **VELOCITY 2** to **100%** with **Param 1** (Tune). We turn the latter knob fully up so that Velocity plays at maximum range. ✨

2 Create a loop

Thus, the conga can be used melodically, although this quickly becomes arbitrary by hand. So, we limit the **SEQUENCE** to **1 bar** for the time being, open the step editor and program a sequence. For the beginning we design the four bars identically so that no chaos arises. As soon as we find a good pattern, we go to the variations. ✨

3 Program a pattern

Here, we change the velocity of the bars slightly and skip a step here and there so that we don't make any more drastic changes. To thicken the sound, we switch back to **PROGRAM EDIT** and set Drum 2 **Attack** and **Flam** to **3 o'clock**, which makes it sound as if several congas are being played at the same time. ✨



4 Sounddesign

This creates even more groove. We also activate **Distortion**, which makes the sound harder and dirtier. Just let your taste decide how much. For Drum 4 (an open Hi-Hat) we also connect **VELOCITY 2** to **Param 1**, this time only at **30%** and reduce the intensity of **VELOCITY 1** to around **20%** so that the volume of the hi-hat is less affected. ✨

5 Additional open hi-hat

We record a typical offbeat rhythm as a pattern, but with increasing velocity (that is, increasing pitch). We also add a Kick and Clap to the usual positions so that we have a basic beat. In order to keep the **SEQUENCE** from getting boring, we duplicate its length to **16 bars** and switch to **MIXER** in **PROGRAM EDIT**. ✨

6 Automation

Press the button three times to get to the **SENDS** and activate the Write mode for automation. Select the second DrumSynth channel via **Q-LINK** switch and record knob movements for Delay, Diffuser and Reverb. This allows you to make the 16 bars interesting and exciting despite minimal instrumentation. ✨

Power Producer: Ableton Live 10

Sampling with old-school vibes

Due to technical limitations, early hardware samplers had a very unique sound. While this was considered a shortcoming at the time, today these shortcomings are intentionally incorporated into sound samples to give them more vibe. In the following workshop, you'll learn how we do this in Live. *by Maya C. Sternel*

Project infos

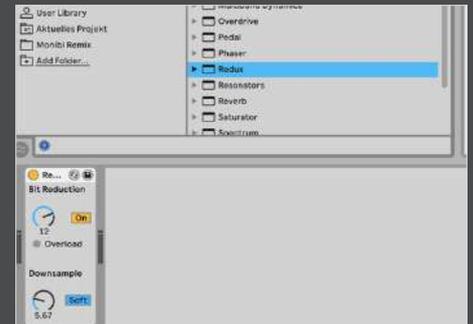
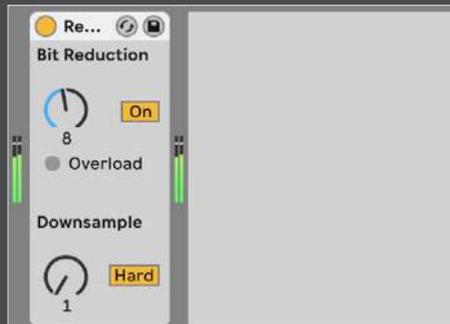
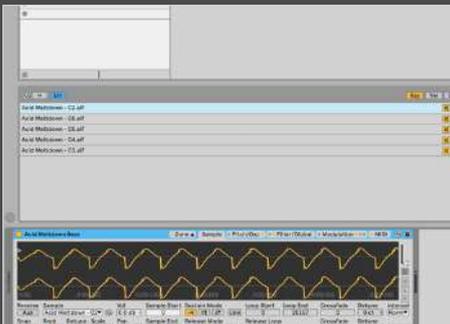


Material: Ableton Live 10 Suite

Time required: 30 minutes

Content: give sampled sounds the old-school sound of old hardware samplers, dynamic reduction by changing sampling rate and bit depth, re-pitching, resampling and down-sampling of audio material.

Difficulty: Advanced



1 Dynamic reduction

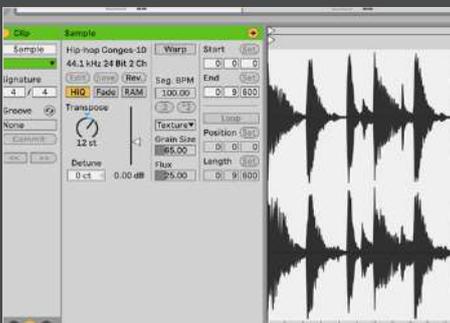
The samplers of the 1980s, like the Akai S1000, MPC 60 or E-MU SP12, worked with a much lower sample rate and bit depth than we are used today. Instead of the 24 bits that are common today, 8 or 12 bits were used in those days. This had the effect of reducing the mapped dynamic range of a sample. ✨

2 Decrease bit depth

This effect is very easy to imitate. Load a sample and then place the **Redux** audio effect in the track. Switch on **Bit Reduction** and select a **Bit Rate** of 12, 8 and then 4 bits as a test. While you hear a significant reduction in dynamics at 12 and 8 bits, digital artifacts take over at 4 bits. ✨

3 Reduce sample rate

Furthermore, you can reduce the sampling rate. If the **Downsample** parameter is set to 1, every sample is output. If you move the slider to a value of 10, only every tenth sample will be played back. Select **Soft Mode** to reduce the sample rate in fine resolution steps and with interpolation. ✨



4 Re-pitching

Since the sampling time of early hardware samplers was very limited, samples were often recorded at a faster tempo and, therefore, higher than the original pitch. You then tune the sample back down to the original speed in **Simpler**. This method also reduces the sampling resolution. ✨

5 Resampling

You can also achieve a characterful sound with Resampling: take a sample and load it into a **Simpler**. Load a **Saturator** into the track. Select **Waveshaper** as the curve type. Set **Drive** to 18 dB, the waveshaper intensity, or **Depth**, to 30-70% depending on the sound you want, and **Period** to a value between 7 and 15%. ✨

6 Downsampling

Alter the pitch of the sample in **Simpler** using **Transpose** to **-12 steps**. Freeze the track and select **Fix as Audio** from the Edit menu. Create a new MIDI track with a **Simpler**, load the sample you just generated into it, and set **Transpose** to **+12** so that the sample plays back at its original pitch. ✨

Power Producer: Apple Logic Pro X

Synth recording made easy

Because there are so many good hardware synthesizers, you'd naturally want to record their sounds in Logic Pro and, thus, enhance your music production. How - and how fast - this can be done classically with two tracks we will outline with the polyrhythmic Moog Subharmicon and the wave-morphing ASM Hydrasynth synthesizer. Of course, any other instrument can be recorded as well. **by Mathias Sauer**

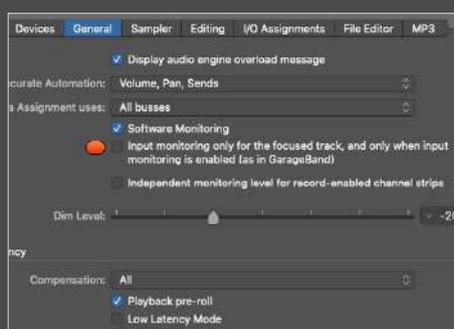
Project info

Material: Apple Logic Pro X
Time required: 20 minutes
Content: Integrate sounds and phrases from external MIDI sound generators into a project.
Difficulty: Beginner/Advanced



1 Create a MIDI track

To record MIDI notes, first create a new track: **Select external MIDI**. Now select a MIDI port. While the Moog Subharmicon is accessed via a separate MIDI interface, the ASM Hydrasynth is directly accessible via USB. Be careful, the Moog interprets incoming MIDI notes in a surprising way; it is primarily a sequencer. ❖



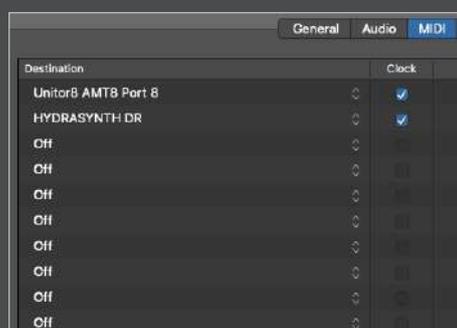
2 Create an audio track

The 2nd track is an audio track that records sounds from external devices via an audio interface with a stereo input. In the settings, we provide more flexibility and **uncheck the Input monitoring** only when track is selected and only when input monitoring is enabled (as in GarageBand), which can be found in **Audio -> General**. ❖



3 External instrument

If an audio interface is available, you can skip steps 1 and 2 and create an **External Instrument** directly. All you have to do is check the **Use External Plug-in** box when creating an External MIDI track and select the desired audio input. Now the MIDI hardware behaves like a software instrument. ❖



4 Send MIDI clock

The Moog Subharmicon and any other sound generator with an internal sequencer should, of course, run tempo-synchronized to the Logic project; therefore go to the preferences and select the MIDI tab Sync, where you click on **MIDI Sync Settings for Project**. It is now sufficient to specify the destination (MIDI port) and to activate the clock. ❖



5 Separate editor

Creatively adjust the sounds to the song: Especially LFO speeds and envelope times of the synthesizer need to be readjusted from time to time. In fact, a software editor can be run parallel to Logic Pro if you don't want to tweak the device directly. Specifically, for the ASM Hydrasynth, the **Hydrasynth** editor is a recommendation. ❖



6 Post-processing

Finally, reverbs are deactivated before recording and later replaced with DAW plug-ins. In principle, longer passages (8, 16, 32 bars) should be recorded, if possible. Annoying „clicks“ when looping the audio regions can often be quickly ironed out with crossfades. The MIDI regions are exported as MIDI files for reconstruction purposes. ❖❖

Power Producer: Studio One

Live with Studio One – Part 2/2

Live performance with a DAW is usually associated with Ableton Live; however, Studio One users should listen up because Version 5 offers its own show page for this very purpose. In part two, we'll show you how to conveniently control a performance with a controller and integrate external gear. **by Marco Scherer**

Project info

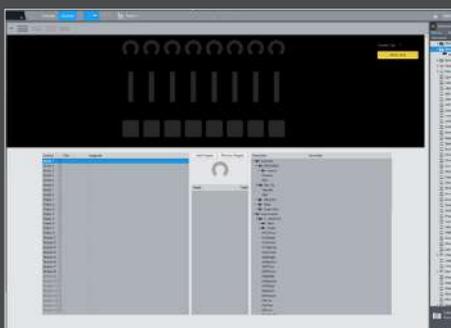


Material: Studio One 5

Time required: 1 hour

Content: Add external hardware to a live show and control parameters via a MIDI controller (Part 2/2).

Difficulty: Advanced



1 Studio One show

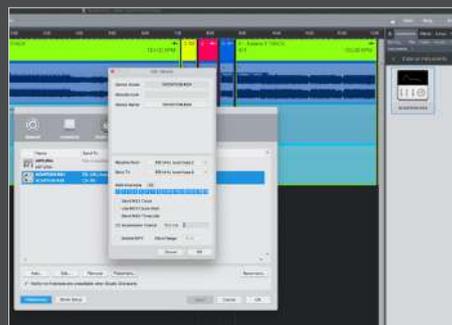
The Live Set is ready, audio tracks and synths are loaded (see workshop in previous issue), but if you don't play a traditional instrument or sing vocals, you will either have external gear running for the performance or want to control the integrated synths and effects. That's not a problem for Studio One's Show Page. 🎧

2 Set up macros

We make the assignments of the macros on the Controls page. Here you have the choice between four different layouts, which offer different combinations of knobs, faders and buttons. You can switch these layouts at any time after assigning parameters, and Studio One will transfer the settings to the new layout as appropriate. 🎧

3 Macro layouts

We stay with the first layout, a mixture of eight knobs, faders and buttons. Via the triangular icon in the upper left corner, we show the preview. In the table below, you can see the controls on the left and the assignable parameters of the existing players on the right. We use Drag & Drop to move the parameters to the desired elements. 🎧



4 Create an overview

For the sake of clarity, we also color the knobs and faders, such as red for synthesizers, green for mixing faders and blue for the tasks of the buttons. The simpler the better because, in the hustle of performance, an overview is the key point. Connecting the macros to a MIDI controller is done via the display at the top left, just like in song mode. 🎧

5 Connect controller

Now click on the parameter, move the controller and link it via the triangle icon. If a controller element is not recognized, click on the triangle next to the controller and then on the name of the device. You can add elements here via MIDI Learn. When all parameters are linked, click Perform to hide the settings. 🎧

6 External instruments

To seamlessly integrate a synthesizer into the setup, it must be created as a **New Instrument** in the settings under **External Devices**. Select the appropriate MIDI ports and channels, enter a name and click OK. The synth then appears in the browser under **External Instruments** and can be loaded as a player via Drag & Drop. 🎧

Production Tricks: Performing with Effects

Noisy Beats with Live Distortion

Controlling synth parameters like cutoff, resonance or effect parts via a MIDI controller might be the most common method to bring some excitement into your tracks. And it just feels “live”, but not every sound offers this feeling. Why not perform with the effects instead, in order to surprise the listeners? **by Marco Scherer**

Project Info:



Material: FabFilter Saturn 2

Time Required: 30 Minutes

Content: Perform with effects plug-ins instead of synthesizers to create fresh beats and basslines.

Difficulty: Advanced



1 Basic Beat

In our workshop, we'll get to grips with a beat using a dynamic distortion effect, because static beats in particular benefit enormously from it. In principle, however, the method can be successfully employed for all kinds of sounds, especially basses. As a foundation, we use the Nepheton [1] with a simple groove (see MIDI clip in the issue data). ❖

2 Multiband Distortion

In our case, however, the main character is provided by a multiband distortion effect. We use Saturn 2 because, here, the different frequency bands can not only be changed, but also assigned to MIDI controllers. For starters, we create only a single additional band via the plus icon. We want to modulate the crossover frequency by hand. ❖

3 MIDI Routing

But in order to MIDI signals from a controller to the effects plug-in, we have to take a little detour, because MIDI data usually only goes to the synth plug-in on the track. Create a MIDI track, arm the recording (or monitoring active) and route the channel to the track with Saturn and directly into the plug-in. ❖



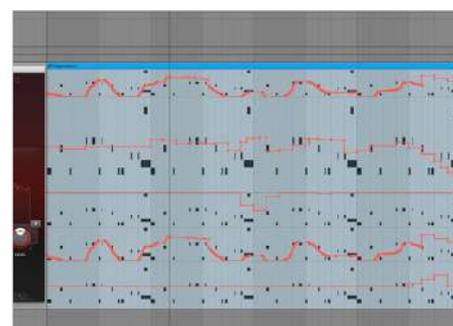
4 MIDI Learn

The handling is different for each DAW, so check the manual for how MIDI gets from the controller to effect plug-ins if necessary. Then arm Saturn's **MIDI Learn function**. The learning process is simple: click on the desired parameter - in this case, **Band 1 Crossover Frequency** - and move a knob on the controller. ❖



5 Feedback

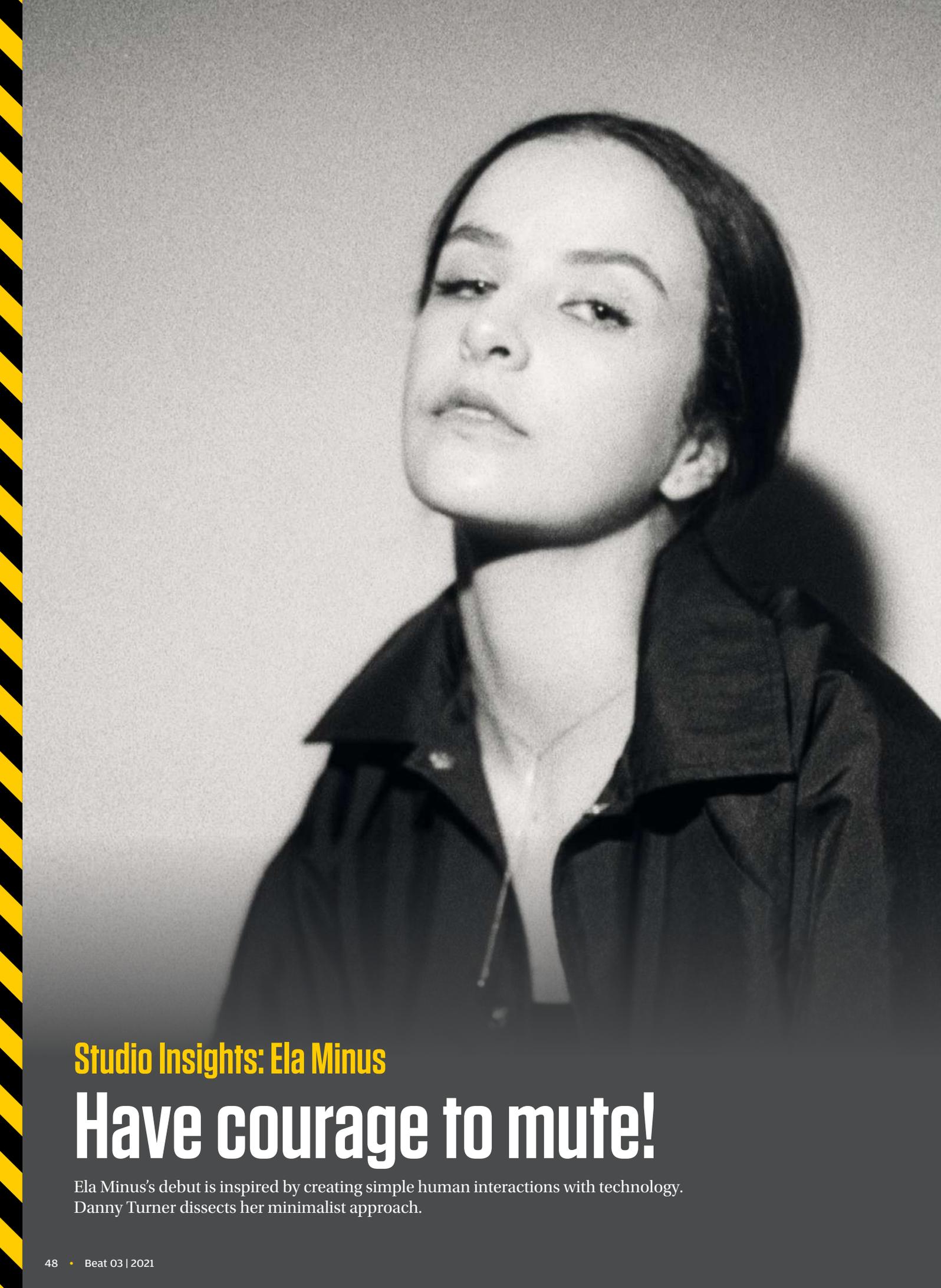
Repeat the process for the **DRIVE** and **Feedback FREQ** controls of each band. Feedback itself is left static so as not to risk deafening sounds. So we have five parameters in direct, manual access, so that the distortion can now be modulated continuously and live. Sounds simple, but it's incredibly effective. ❖



6 Performance!

This is where the real fun begins - because the permanent change in the feedback frequency, together with the crossover frequency, creates fat sounds, especially with drum loops and basses. And the best thing about it is that the automations can be recorded and specifically post-processed, for example, to create breaks, drops or fill-ins. ❖

[1] www.dt16.pl; [2] www.fabfilter.com



Studio Insights: Ela Minus

Have courage to mute!

Ela Minus's debut is inspired by creating simple human interactions with technology. Danny Turner dissects her minimalist approach.

After studying jazz drums and music synthesis at Berklee College of Music, Ela Minus found her dream job when hired by instrument manufacturer Critter & Guitari to test, assemble and design their latest range of synths. Tired of the modern laptop-driven approach to recording and live performing, Ela embarked on a mission to bring back the simplicity and authenticity she felt was missing from electronic music.

Led by her trusty Akai MPC1000, the producer focused on building a toolbox of instruments that could be perfectly replicated on-stage, enabling her to formulate ideas for future recordings while performing live. Her debut album, fittingly titled *Acts of Rebellion*, embodies Ela's headstrong ideology and intuitive approach to music-making that conveys genuine emotional resonance.

Beat / *You were originally a drummer and multi-instrumentalist, so what sparked your interest in making electronic music?*

Ela / I got a scholarship to go to Berklee to learn jazz drums and music synthesis and while I was there began thinking I should do something else with my life other than just play drums. I was very much a fan of Radiohead and Kraftwerk and loved electronic music and going to clubs, so I decided I wanted to learn coding and understand how to programme software synths.

Beat / *Did you get what you wanted from Berklee or was there too much music theory involved?*

Ela / I actually hated it and had a very weird experience. Out of everyone I met on the course I was the only one who graduated because they would get so frustrated and drop out. I was very young and had never studied before, but that was a challenge to me and I have this personality where I like to overcome a challenge, plus I knew if I dropped out I would have to get a job doing something outside of music. The music synthesis course was even more frustrating because it was completely designed for people that wanted to be DJs or produce for other people. I just wanted to learn synthesis.

Beat / *You mentioned Kraftwerk who have a very clinical sound, yet found an emotional connection to their music?*

Ela / It's interesting that you find them clinical. I guess they are, but for me it's about their use of melodies and pop song structures. They have certain songs where the melodies live with you forever, and that's where I get the emotional connection. I resonate with melodies and chords more than anything, so even though I love techno and colder rhythmic-based genres, I would normally never listen to that at home. The moment Kraftwerk entered my life it was as if someone showed me a combination of those two worlds – really technical electronic music and songwriting that had melodies and lyrics.

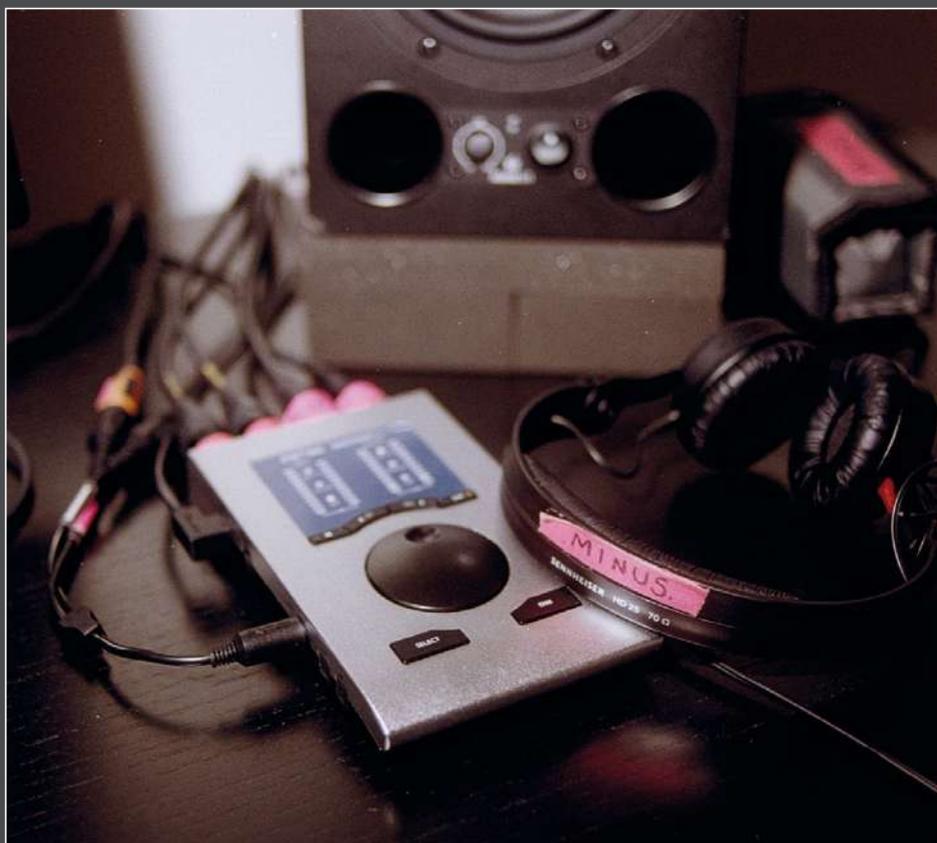


Beat / *Can producers learn from Kraftwerk's approach by focusing more on subtracting than adding?*

Ela / That's what I feel! When I'm working, I have four post-it notes around my monitors that say 'mute'. I always find that muting is the key to everything and you should do it as much as you can. Before I started on this solo project I was craving to hear artists go back to that simplicity. It's way harder to do, but what comes out of that is 'soul' – you can actually hear the artist. You hear a lot of music that has this wall of sound coming through you. It's as if you're staring at a landscape that has an aesthetic appeal but it's not really saying anything and you can barely hear the person behind it because everything's buried under layers of effects.

Beat / *Is modern technology partly to blame for leading producers down this path?*

Ela / The introduction of laptops, computers and overdubbing has a lot to do with it. In the '80s, if you were making electronic music you had to be able to play and record it live. You couldn't just write MIDI in Ableton, send it to a thousand different synths and see which one you liked best. When I started this project, that's what I was thinking about the most – I wanted to make electronic music how they used to do it, as a band with one synth for basslines, one for chords and one for melodies, and I wanted to play it all live. I only recorded multi-tracks because I wanted to get a wider stereo sound, but I didn't add or edit anything and my sessions are ridiculously small.



Beat / Do you think there's a tendency to over-edit simply because the tools are available to do so?

Ela / The more you edit, the more you kill the soul of your music. You can edit anything to be beautiful if you really spend time with it, but I question why I am making music and what I want to say. I'll record something, improvise and listen back to see if I feel something in my stomach. If I don't feel anything I throw it in the garbage, but if I do feel something I put my producer hat on and ask what it is that is waking up these feelings. Sometimes it's really specific like a synth line or vocal melody, so I'll make a decision that everything should serve that because it's the soul of what I just made. In my opinion, that's when the magic happens and you don't have to have rules about editing for the sake of editing. It's like grooming - your face is nice so you can accentuate it with makeup but you don't have to plaster your face. I also feel the same about mixing. People mix as an art form, but there's no song in there, it's just an amazing mix. As producers, it's easy to get confused about what our job is.

Beat / Do you think there's any difference in how male and female producers tackle those aspects of production and mixing?

Ela / One of the things we're missing out on is the differences between men and woman. Women are more emotional and practical; there is less bullshit [laughs]. Maybe it's because we're wired to be mothers and so our instincts are to survive and be more sensitive to what really matters. Maybe we put

more heart into the music and there's less showing off, which is quite common with men who make electronic music.

Beat / Your fascination for making electronic music was sparked when someone gave you a Pocket Piano synth?

Ela / It definitely sparked my fascination for hardware synths. I was frustrated with laptops because I'd spent two years coding and programming and my ear would just recognise laptops. I would go to shows and hear the fucking laptop at every show I went to, and before the Pocket Piano came along I couldn't find a synth that was fun or inspiring. I got one for my birthday and thought this is the type of synth I want to build.

Beat / After graduation you worked at Critter & Guitari. How did you get that job and what was your role at the company?

Ela / It's a tiny company - two guys own it and they had just one employee and hired me. For the first year I was assembling the synths and testing, but we all did everything and they taught me a lot. By the second year, I was helping them to design and think about new synths - the second synth we made was the Organelle. I knew how to programme pure data so I was very involved in birthing that synth, testing, assembling and fixing the ones that were broken and shipped back.

Beat / To what extent does understanding what's under the hood make it easier to get the most of out of the technology you're using?

Ela / I'm not sure because when I'm making the music I'm not thinking about technical things because it's a very playful and intuitive process. I guess having that knowledge spikes in when something goes wrong, for example, when playing live. Otherwise, having that knowledge probably makes me feel closer to the machine emotionally, just like when you know someone really well you feel closer to them.

Beat / Does the circuitry of the older synthesisers have particular appeal to you?

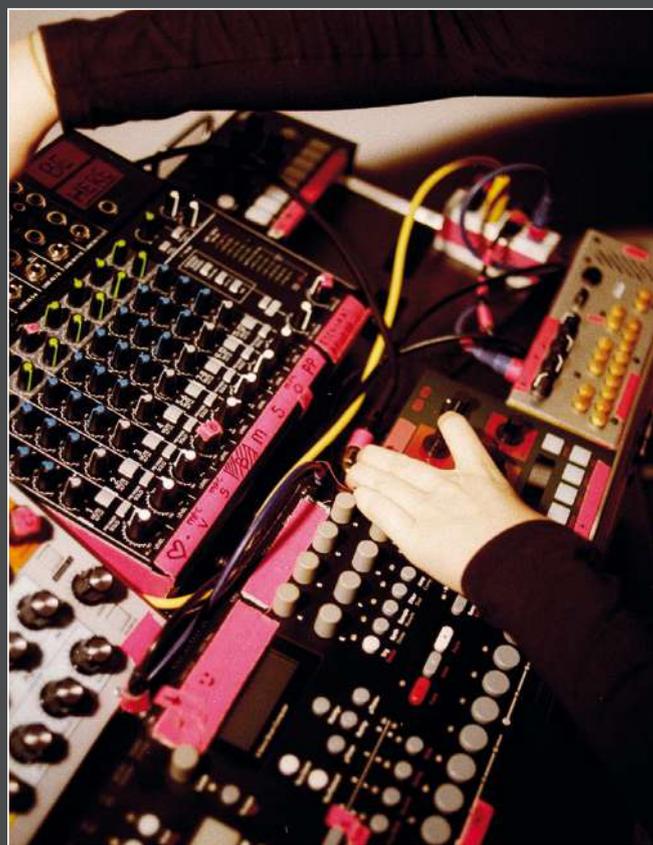
Ela / Yes, they're very different and have an appeal to me. I wish I had more vintage synths but they're usually more expensive and it's hard to get the good ones. I still don't think FM synthesis has got better since the Yamaha DX7 and DX100 - those are my favourites. I have the DX100 and the TX7, which is a cheap module version of the DX7.

Beat / What about FM synthesis appeals to you?

Ela / It's so deep and the synthesis is so complex. So much goes into them, but at the same time I really don't like the new ones. I tried the Elektron Digitone but the machine is so complex that it's hard to be musical with it. I still use the DX100, but only the presets. When those people were using and designing synthesisers in the '80s and '90s, they were thinking of music, songs and bands - it was about instant music-making, not sound design.

Beat / Would you like to build your own synth?

Ela / I've had many ideas in the past but as I've not worked in that industry much lately my brain



»» The more you edit, the more you kill the soul of your music. «

may be a little rusty. I always wanted to make a sequencer with Latin American rhythms - one that's as easy to use as a European sequencer like the Elektron Analog Rytm, which I'm absolutely in love with, but has more flexibility and subdivisions to make different polyrhythms.

Beat / *Acts of Rebellion is your debut album. Did you have a strong idea of the type of album you wanted to make?*

Ela / Because I improvise so much I try to start with a blank slate and write a couple of intentions, but when I was making EPs my idea was just to bring light to the people that listen to it. For the album, I'd been touring for a long time and wanted to make something that could be played live in small clubs. Subconsciously, I had all these other themes and little acts of rebellion.

Beat / *Does the title refer to your rebellious nature?*

Ela / That's the logical conclusion, yes. Acts of Rebellion was the name of one of the songs, but I was very confused about where the title came from. Even more than my music, my character up until now has been very rebellious and a lot of things I've done in my life have been because somebody told me I couldn't do them. For example, not using laptops - it would be way easier for me to produce that way but I won't do it because everybody's doing it.

Beat / *The Akai MPC1000 is the brain of your setup. What was the reason behind that choice?*

Ela / I bought it for \$100 when I was in Boston because I wanted to fix it and see how it works inside, and it's never failed me. I mainly use it as a MIDI sequencer. That's why it's the brain because

I record all the MIDI tracks into it and he's the one sending the MIDI to all the other synths. I also love the sampling aspect of it and obviously use that in a more traditional way, but I just find that it's so musical and intuitive. I love that you don't have to make it quantise, so it's so easy to just play with and it's so loyal to what you're playing on your groove. I can also load up the next sequence while playing the one before, so I can play tracks live sequentially. Most of my music comes from the live shows. I leave space for very small four or eight-bar sequences and improvise on top. Usually after a night of playing live, if I like what I played I'll save those sequences, get home and cue them up, and that's always where my songs come from.

Beat / *So you're effectively formulating ideas for new songs while playing live?*

Ela / Exactly that. A while ago I got a Squarp Pyramid sequencer because I've been craving sequencers that have a bigger range of possibilities. The Pyramid is amazing but you can't keep playing it like you can with the MPC, which just makes me love it more.

Beat / *Do you 'play' your instruments in the traditional sense of the word?*

Ela / I don't use that many samples so everything is synth-based. I play on a keyboard, record the MIDI into the MPC and send that to the actual synths when I'm recording and playing live, so except for a couple of technical things the sound source is always the synths and not the samples. For example,



at the moment I don't have a polyphonic synthesiser in my live set but do have the Roland Juno-60 at home, so I'll record that into the MPC and those sounds are sample-based.

Beat / What's behind your choice of drums and beats?

Ela / The Elektron Analog Rytm is the only drum machine I've ever owned and it's still used for everything. I download sample packs sometimes to make new sounds but love the sequencer on the Rytm. As a drummer, I found it was so freeing – I could program whatever I want into it and every single step on the sequencer can be adjusted and automated which makes it sound extremely musical. All my beats are extremely simple. I'm always thinking about the least I can do with a beat and like to create something really minimal with just the kick, snare and hi-hat. Even though the Rytm is not a sample-based machine, you can add samples and it's a synthesiser. I love the one-note-per-function thing – the machine is designed to have one synth machine for kicks, a different one for snares and another for hi-hats. I find that if I hear a kick I can make it with the synthesis because I have everything at my disposal to make the sound I want.

Beat / You're using some modular gear for effects?

Ela / My Eurorack setup is simply a Make Noise delay, so I'm using guitar pedals for a lot of the effects. It's really just a Strymon BlueSky Reverbator, which is really cool because it has a spring and a shimmer effect. I also found a plugin from Soundtoys called MicroShift that makes everything sound really wide, especially when I record a synth line with a lot of attack through the spring reverb.

Beat / You seem to rely on a moderate amount of gear and look to get the most out of it?

Ela / When I started this project I only had the MPC, Analog Rytm, Pocket Piano and the Moog Minitaur. The Minitaur is important to mention because all of my bass comes out of it. Then Moog gave me the Sirin as I was asking them like crazy to make something like the Minitaur for higher octaves. Because they're analogue and have the same engine I feel they go well together and that was the key for this album because it made things even simpler. I was essentially sending the same line to both of them and able to double up in different octaves.

Beat / Do you think your setup will inevitably change as you move forward and look for different ways to expand your musical vocabulary?

Ela / It's a question I've been asking myself because I really want to make a second album now. Once the record is out I'm going to shut my phone off and start working on it. I don't have any new gear at the moment; I was staring at my synths last week and thinking about that, but it's hard to make any decisions before I start writing. For me, the most important thing is the emotion rather than the actual writing, so everything else is secondary. In my mind, I would love to make a completely different album with the same machines. That would feel like an accomplishment because I'm the one making the music so it's not about the gear.

Beat / Do you think there will be a time when you embrace software, simply out of curiosity?

Ela / There will be a day, but I don't know if I want to do that by myself. I think there will be a point where it will be interesting to collaborate with people I like who can teach me about software. I already learn so much from talking to certain musicians that I meet at shows. I really don't want to be known as



a hardware synth artist, I want to be known as an artist – period. Again, it’s about using whatever serves the music best.

Beat / When do the lyrics enter your compositions?

Ela / As mentioned, I’ll usually start improvising out of the loops I come home with after playing live. Then in the studio I’ll start playing as if I was playing live and make a stereo out to keep a recording of it. Sometimes, I’ll hear a melody in my head and start singing whatever I’m hearing, and I’ll try to keep that even if it’s silly.

Beat / Do you keep it because you want to preserve your intuition?

Ela / I’m trying to be as honest as I possibly can. The more you think about things, the more the ego gets involved, so I try to make the process really fast and commit to initial ideas whether my ego is saying something is good or a stupid sentence. With the lyrics, I usually take that first phrase, word or sentence and start repeating it and improvising from that. It doesn’t always work, but it helps me work on the form of the song and then I’ll sit down and write the rest based on those initial ideas or whatever I think I meant.

Beat / What’s the meaning behind the track title Let them have the internet?

Ela / Like many of us, we’ve gone through stages of love and hate with the internet. It was amazing before it started to become this big thing and I remember reading books by MIT coders explaining how it came to be and how the cyberpunks dreamed of the internet being a utopia, free of capitalism. Now what we have is the complete opposite. Everything we do is mediated by corporations including our bank accounts and communications – the definition of a capitalist society. At first, I thought this fucking sucks, but it’s also kind of nice because everything is on the internet and if we turn our cell

phones off then what we have left is utopia because nobody is selling us anything or mediating. So I wanted to say, let them have the internet and we can have real life.

Beat / Would you say that the track Tony is also about how technology interferes with our human-to-human interactions?

Ela / I clearly love the concept of technology, but I’m against the way we’re using it. I read a book called What Technology Wants and remember how it made me think about how humans have been obsessed with human relationships and socialising since forever. Gossiping is a big part of human evolution. What I don’t really like is how we’re using all of this technology in order to socialise. We’re obsessed with getting ‘friends’ when that should be done in our physical life, so it’s a bit annoying that we’re guinea pigs to that.

Beat / You have some tour dates pencilled in for February. Are you optimistic about playing live again soon?

Ela / I’m optimistic that the industry will get back onto its feet, but I really do hope that it’s not going to go back to normal. My touring schedule has been so intense that I honestly think I’ve gained five years of my life by not touring for a year. If there’s one thing I hope we’ll learn from this it’s that things can change at any moment.

Beat / Have you seen anything change in the music industry that you’d like to stay permanent?

Ela / The concept of touring for three years in a row is insane – it’s why all the musicians get depressed and become drug addicts. If more people spent time in the studio, better recordings would come out that have the potential to make as much money as mainstream music. Maybe having the luxury of spending six months in the studio would give artists like us a chance to compete and the definition of mainstream music would be broader.

Beat / So you intend to adapt your live strategy?

Ela / I’d love to play smaller shows. When you play festivals the sound is so huge and the PA is so far away that you can’t even feel the music. If you’re wearing in-ears you might as well be in your studio with headphones! I’m a very physical performer and the interaction with the audience changes when I’m able to look people in the eye and react to them. I also think everyone has a better time when that happens.

Ela Minus’s debut album Acts of Rebellion is out now on Domino Recordings. For more information, visit [facebook.com/elaminus](https://www.facebook.com/elaminus).



Ela’s Go-To Gear

- **Yamaha DX100** / “I love the sound of this 1985 FM synth. It’s extremely limited, which I like, and I always seem to find a sound that fits perfectly.”
- **Roland Juno-60** / “It’s the only ‘real-size’ synth I own. Even though it has a very recognisable sound it’s very flexible once you get to know it. I essentially live in a cloud with an arp from the Juno.”
- **Moog Sirin** / “The Moog Minitaur has been my bass synth for years but I always dreamed of

having the same synth available in higher octaves so I could use it for melodies too. The Sirin is literally a dream come true.”

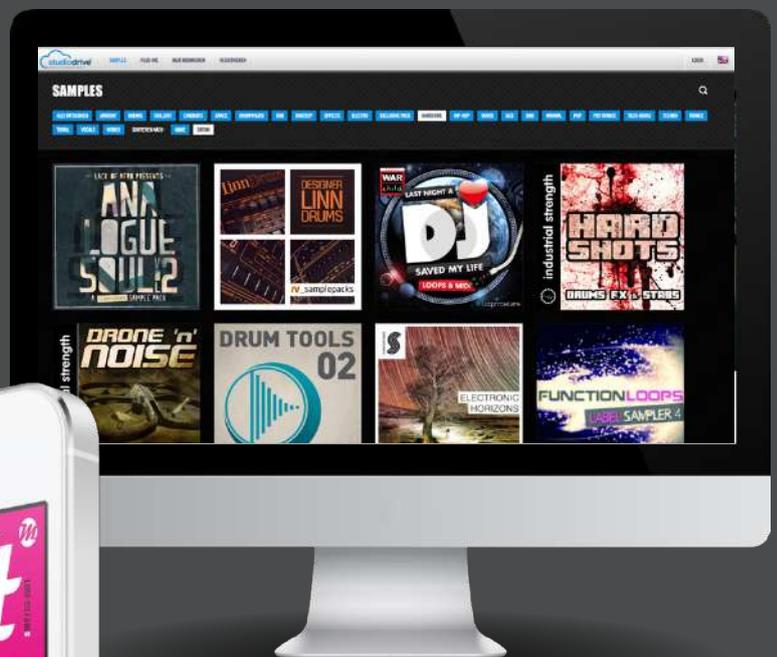
- **OTO Biscuit** / “This is such an interesting machine because it adds so much depth to everything. I love detuning synths, bit-crushing drum machines and using the filter for... everything!”
- **Elektron Analog Rytm** / “I love this drum machine. The combination of analogue synthesis, a sampler and a sequencer that is so musical is great.”

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New Freeware Plug-ins

by Jan Wilking



TDR Molotok

Vladislav Goncharov is the creator of some of the best freeware effects, including the popular Vlad Molot compressor. Tokyo Dawn Records, equally known for high-quality dynamic effects, has taken on this almost ten-year-old plug-in and is revising and releasing it in a paid Gentleman Edition with an incredible range of functions for pretty much all conceivable applications of a compressor. You can also download the free slimmed-down version called TDR Molotok from the website. This is still impressive, even for a freeware plug-in.

The name already describes the plug-in very well: Molotok means small hammer, and indeed Molotok has comparable punch. In the old Fairchild manner, this compressor can neatly color the input signal and is, therefore, recommended primarily for creative effects use and less for subtle dynamic range restrictions. Particularly on drums, whether for processing individual instruments or for glueing on the group track, this plug-in is our first choice.

Its operation is very easy to understand, as the controls are limited to the familiar parameters of a compressor, such as Threshold, Ratio, Attack and Release. With the Alpha Sigma control, you can easily adjust the transient processing.

Verdict

TDR Molotok rocks, because the plug-in compresses with powerful sound coloring and rich sound! Subtle and transparent dynamics processing are not its strengths, but it brings every instrument unmistakably forward and recommends itself - especially on single drum tracks. A great creative tool!

Developer: TDR
Web: tokyodawn.net
Price: Freeware
Format: VST, AU, AAX

Rating: ■ ■ ■ ■ ■



Focusrite/sonible Balancer

Balancer was developed in a joint effort by Focusrite and sonible. This effect plug-in aims to automatically correct and balance the frequency spectrum of an audio track in seconds. At the heart of Balancer is sonible's smart:engine, which is also at work behind smart:comp, smart:EQ 2 and smart:EQ live. You simply insert the Balancer plug-in as an effect on the audio track you want to process. Then, start the track and click the big Learn button. The plug-in analyzes the incoming audio for a few seconds, gathering detailed information about the material as it goes.

Artificial Intelligence-based algorithms then detect and automatically correct any imperfections in the audio signal (for example, spectral balance). You can choose between different profiles such as Universal, Vocals or Drums, which optimize the plug-in for different source signals and allow the system to work even more precisely. After all, if the smart:engine knows what type of instrument or voice is being processed, the analysis can be adapted even better to the input signal. The basic sound can be switched between warm, neutral and bright, and the intensity of the processing is adjusted via a fader.

Verdict

Balancer is a useful little helper for quickly and easily adjusting and balancing the frequency spectrum of an audio track. The results were almost always impressive in practice and usually improved the sound image significantly. Its operation is intuitive and does not require any learning curve.

Developer: Focusrite/sonible
Web: sonible.com
Price: Freeware
Format: VST, AU, AAX

Rating: ■ ■ ■ ■ ■



Matt Tytel Vital

Beat
MUST-HAVE
03/2021

Matt Tytel might already be known to some readers for his popular freeware synthesizer HELM. With Vital, he explores the very popular wavetable synthesis.

This plug-in is very extensively equipped. Even the interface makes a tidy and professional impression. The oscillators are indeed limited to wavetables, but offer interesting additional functions. In addition to cycling through the wavetables, there are spectral effects and shape warping tools including classics like FM, vocoder, distortion and formant and even some wackier variants. Here, you can bend the harmonics at will. The waveforms are displayed graphically in real time, so you can track the changes directly. Of course, the modulations can also be automated, several envelopes and LFO are available for this. The assignment is done classically via a modulation matrix or via Drag & Drop, as we will explain in more detail in the workshop. The LFOs can also work polyphonically and with time offset for exciting stereo effects. Resynthesis and text-to-wavetable are additional features of the oscillators, which are followed by a subtractive signal path with filter emulations and an extensive effects section.

Verdict

Vital is an extremely potent wavetable synthesizer that offers very complex sound possibilities with extensive options for overtone processing - even in the free basic version. Nevertheless, its operation is very easy to learn and numerous well thought-out functions make the creation of unique sounds child's play.

Developer: Matt Tytel
Web: vital.audio
Price: Freeware
Format: VST, AU, LV2

Rating: ■ ■ ■ ■ ■



THE MONTHLY *Beat* GIVE-AWAYS



1 LFO Modulation

The plug-in starts with an **Init** preset; otherwise, you can also select **Initialize Preset** from the menu. Click on **LFO1**. Switch to the **Matrix** tab at the top of the plug-in and select **Lfo1** as the **Source** and **Osc1 WaveFrame** as the **Destination**. Set the **Amount** slider to about 210 and the **Frequency** of **LFO1** to 1/1, so that it runs in sync with the tempo of each keystroke. ❖



2 Wavetable

Go to the **Voice** tab. At **Osc1**, a graphic shows the currently selected wavetable, which is modulated by **Lfo1** as determined in Step 1 - this is indicated by the small round slider and can also be adjusted there directly. But since you can't hear this with the **Init** waveform, select another wavetable. To do this, click on **Init** at the top or switch it on using the arrow button. ❖



3 Classic Blend

Feel free to try out different wavetables to hear which sound spectrum you can cycle through in each case. For our example, choose a rather simple wavetable called **Classic Blend**, where the **LFO** crossfades between the classic triangle, sawtooth and variable pulse waveforms. Increase the decay time of the sound with **ENV1's Release** control on the right. ❖



4 Unison

For a wider stereo sound, we use the **Unison** function to the right: Select **2v** for 2 voices and a detuning of 7%. The checkbox below gives options for further processing of the spectrum. Select **Inharmonic** and set the **Spectral Morph** slider above it to 76% to get an overtone-rich belly and clear ice pad. ❖



5 Filter

Activate by clicking on the round dot in the upper left corner of the **FILTER1** field. The filter sequence is to be modulated by the second envelope **ENV2**. Select the **ENV2** tab at the top right. When you hover over this field with the mouse pointer, a crosshair appears - drag it onto the filter module. The slider will appear that you will use to set the strength of the modulation. ❖



6 Envelope modulation

The **LFOs** and other modulation sources also have such crosshairs, which all you to save the same way from Step 1 via the modulation matrix. Use the knob to turn the modulation to **65%** and extend the attack phase of the envelope by setting the **Attack** knob to about 0.8 sec. Adjust **Decay**, **Sustain** and **Release** as shown in the screenshot. ❖



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New synths & software

by Mario Schumacher



UJAM STRIIINGS

Beat
MUST-HAVE
03/2021

UJAM's latest virtual instrument specializes in modern string ensemble textures and sound design elements and was created in collaboration with Hans Zimmer. STRIIIINGS comes with hundreds of presets, including arpeggios, riffs, motifs, ostinatos, sustain patches, as well as a wide range of pads, textures and exciting hybrid sounds. One patch features the two Low and High Strings engines, which can be individually edited and animated.

There are 60 different styles offered, each with six phrases and four additions. Authentic phrases are automatically created from played notes or chords, and you can also play the bass note yourself if desired. With the modulation wheel, you control a decrescendo and with the pitch wheel you crossfade between the low and high strings. The refinement and alienation of the sounds is a breeze with the multi-effect Finisher, the Filter as well as the Reverb effect.

Verdict

STRIIINGS offers much more than just excellent sounding string phrases. Rather, this virtual instrument shines with expressive recordings of a symphony orchestra that you can conduct with your own playing. Even users who have no previous experience in arranging strings can achieve very impressive and lively arrangements with this plug-in. Thanks to the expressive sound design options, this inspiring composition tool not only makes a good impression in modern film, game and trailer music; it also brings a breath of fresh air to the world of orchestral libraries.

Developer: UJAM
Web: www.ujam.com
Price: 169 Euro
Format: VST2, AU, AAX
Rating: ■■■■■■■  

Interview:

Boris Salchow, Producer and Sound Designer for STRIIIINGS.

Beat / How did the idea for STRIIIINGS come about?

Boris / The basic idea for STRIIIINGS was born about six years ago over a red wine with UJAM founder Peter Gorges, who was also involved in the development from start to finish. We wanted to take the principle behind UJAM's other virtual instruments and apply it to „symphonic“ instruments; to give users who find the standard orchestral libraries too elaborate a little „Wow, I almost feel like Hans Zimmer“ experience. I would never have believed that Hans would get involved in revealing so much of „his treasure“, but he was quite relaxed about it - that might be because Peter and he have been friends for a long time and there is a certain trust there. In any case, our vision was a virtual instrument that would allow a music producer to pull an orchestral accompaniment out of a hat in no time flat, and be able to arrange and play it live on a keyboard.

Beat / What did the recording and production process look like in concrete terms?

Boris / It was a dream come true for us to be able to use Hans Zimmer's legendary library for this product, and to do so in his „remote control“ studio and with the support of people who work with this orchestra day in and day out. Constantly expanded for over ten years and very personally tailored to Hans, this library and its predecessor have ultimately defined the sound of Hollywood for decades.

We polished complex arrangements with Hans' own orchestral library, „prepared them accordingly“ - trade secret (laughs) - and then exported the result. One of my main tasks was to write an arsenal of both common and special string arrangements and implement them with the Hans Zimmer library. This was followed by a rather complex process of further processing and integration into the instrument framework, which was developed from scratch. Since we wanted to achieve a contemporary sound, we took a new and different approach. We looked at today's compositions and realized what is actually „allowed“. A wide variety of sections and instruments are combined today - in



contrast to the classical live orchestra - to create more and more new timbres. Large sections, chamber instrumentations, in addition to some solo instruments, can all be found in the STRIIIINGS engine room.

Beat / What makes this virtual instrument special?

Boris / STRIIIINGS is actually two virtual instruments in one: at its core, it's a phrase-based instrument similar to UJAM's Virtual Guitarists and Bassists. In terms of content, however, we have put a focus on contemporary productions, such as game and film scoring, where in reality there is often quite a bit of trickery and you rarely hear anything that can be played one-to-one by an ensemble anymore. And, of course, STRIIIINGS should also have something new to offer in music genres like EDM, Hip-Hop or even mainstream Pop.

With STRIIIINGS, there's a lot more going on under the hood than meets the eye - in some presets, up to eight full ensembles are playing simultaneously. Of course, the user doesn't notice the complexity and can, therefore, focus on getting a juicy, larger-than-life sound „on the ears“. If the pure sound generation still doesn't go far enough, you can let off some steam with wacky sound design. For this purpose, we've included several extensive multi-effect sections, plus a special edition of UJAM's ingenious Finisher effect in the master bus. With these components, STRIIIINGS becomes a fantastic and creative sound design tool. Beautiful pads, distorted loops, synth-like patterns and much more offer a variety of „unheard of“ new sounds - all based on expensive and organic sounding string recordings.

www.ujam.com

Review: TAL J-8

The Swiss company TAL has introduced one of the best Juno-60 emulations on the market with the U-NO LX. Now, head developer Patrick Kunz dares to tackle the Roland classic par excellence. **by Jan Wilking**

TAL J-8 already lets you know from the striking color scheme of the switches that the Jupiter-8 served as a model here. Unlike Roland and Arturia, who have just presented revised versions of their replicas, this plug-in does without a photorealistic interface, which makes it easier to use.

The sound generation has been taken from the original, but some useful functions have been added. Two oscillators with the standard sawtooth, triangle and square waveforms, as well as noise serve as the basis. Sync, PWM and Cross Modulation expand the sound spectrum, whereby many plug-ins struggle with the latter and make the modulation sound too harsh and digital in the audio range. Roland has always been far ahead with its emulation in this respect, Arturia has currently improved in version 4 and TAL does not let itself down either. The crossmodulation sounds pleasantly analog and organic and can be used in a nuanced way.

Two envelopes and an LFO are available for modulation, which, unlike the original, can also be synchronized to the song tempo. We were somewhat irritated in the first version that the oscillators do not run freely like in the original. This was clearly audible when both oscillators were tuned identically and mixed in the same ratio. With the original, due to the different phases, each newly played note sounds slightly different, which provides the „analog“ liveliness, while with the TAL it is statically phase-locked. However, the developer has already improved it with a phasedrift function so that this unwanted effect no longer occurs.

This is followed by the simple high-pass filter for thinning out low frequencies and the low-pass filter in the best Roland manner: Creamy, smooth, transparent - it contributes to the defining 80s sound. It is switchable between 12dB and 24dB slope, although the intermediate value of 18dB was omitted. On the other hand, it can be modulated by velocity on demand, just like the amplifier.



Via Service Control, the tuning, filter and envelope of each of the 8 voices can be adjusted individually, which makes for a more lively sound, especially when playing polyphonically.

MPE, Layer, Unison

At the bottom of the J-8 is where the extras have been placed. As with the original, the plug-in can generate two different sounds at the same time and then control them via the keyboard, either layered on top of each other or separately with a split point. Using a button, you can select which sound you are currently editing via the controls. Load, Copy and Paste make it easy to assemble matching dual sounds. J-8 also offers MPE support for multi-dimensional controllers, and the strength of the modulation of filter and volume can be adjusted separately.

The unison mode shows itself to be more flexible than the original. You have access to the number of layered voices, the detuning among each other, as well as the distribution in the stereo panorama, since the signal path behind it is completely designed in stereo. A total of four controls are available for „calibration“. Due to the tolerances of analog components, no Jupiter-8 sounds exactly like the other, which is why you can individually adjust the behavior of the oscillators, filter drive, resonance (up to self-oscillation), as well as envelopes. So the oscillators can sound duller and warmer or brighter and more transparent, the resonance more cutting or more restrained.

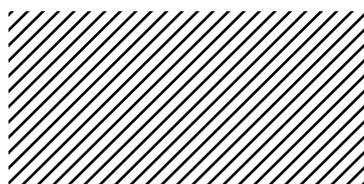
Built-in Effects

Effects have also been integrated. In addition to a delay with various adjustable parameters that can be synchronized to

the tempo, there is, of course, also the obligatory Roland chorus. It seems to be taken from the popular U-no LX or the associated freeware Chorus-LX effect and sounds correspondingly fat. While this is almost always suitable for the rather simple sound generation of the Juno-60, the chorus seemed to us to be too powerful for some of the more complex Jupiter sounds. Here we missed a Dry/Wet control for better dosage. In the current version, the chorus can only be switched in the three known modulation stages or deactivated completely. In the master settings, you have access to portamento and performance aids like the arpeggiator.

Verdict

Patrick Kunz has analyzed his Jupiter-8 in great detail and, with the J-8, presents a very successful emulation with well thought-out extras at a more than fair price! This excellent sounding plug-in plays on the same sonic level as the competition from Arturia and Roland and is, therefore, a favorable alternative for those who do not want to invest in the Roland Cloud or the V-Collection and still do not want to do without the Roland classic. ::



Features

- ____ Jupiter 8 Emulation
- ____ Up to 12 Voices
- ____ Unison
- ____ Split/Layer
- ____ MPE Support
- ____ VST, VST3, AU, AAX
- ____ USB 2, Native Apple M1 Support
- ____ Win, Mac, Linux

Facts

Developer: TAL
Web: tal-software.com
Reference: Website
Price: 62 Euro

- ▲ Authentic Sound
- ▲ Clear GUI
- ▲ Stereo Unison
- ▲ MPE Support
- ▲ Useful Extras
- ▲ Calibratable

Sound: ██████████
Operation: ██████████
Price/Perf: ██████████
Total: ██████████

Alternatives

Roland Jupiter-8
 \$149 USD Lifetime-Key
 From 9.99 Euro Cloud Sub
 roland.com

Arturia Jup-8 V4
 199 Euro
 arturia.com

Review: Arturia V Collection 8

Arturia has expanded its collection of virtual replicas of vintage classics to a whopping 28 instruments and has also made sonic improvements. *by Jan Wilking*

Features

Software Bundle with 28 Instruments

4 New Instruments

Juno-6, Emulator II, OB-Xa, Vocoder,

Sound Browser with over 10.000 Presets

Format: Standalone, VST/VST3/AAX/AU/NKS

From Windows 7 (64-Bit) and Mac OS 10.11

Copy Protection: Online Registration via Software Center

Facts

Developer: Arturia

Web: arturia.com

Distribution: tomeso.de

Price: 499 Euro (Upgrade 199 Euro)

▲ Creative Vocoder

▲ Sound of Roland Emulations

▲ Sampler with Cult Character

▲ Macro Controller

▲ Unified Browser

▲ Very Good Presets

▲ Improved Analog Lab

▼ Internal Carrier Only (Vocoder)

Sound: ██████████

Operation: ██████████

Price/Perf: ██████████

Total: ██████████

Alternatives

Steinberg Absolute 4

426 Euro
steinberg.de

Roland Zenology Analog Icons

\$499 US Dollars (or Cloud Subscription)
rolandcloud.com

NI Komplete 13

From 589 Euro
native-instruments.com



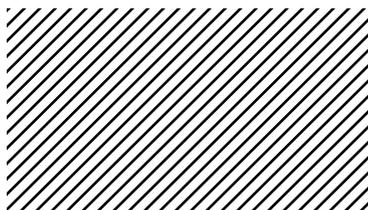
Our personal favorite among the new instruments is the creative Vocoder V with pitch tracking and a built-in sample player.

In addition to the two analog classics OB-Xa (review in BEAT 08-2020) and Juno-6, Arturia's V Collection 8 features another sampler in the form of the E-mu Emulator II, as well as a 16-channel vocoder with exciting extras as a useful addition to the collection. The Jupiter-8 replica has been sonically improved and, across the board, there are now four freely assignable macro controls for quick access to the most important sound parameters as well as integrated tutorials.

Roland Juno-6

The Jun-6 V is based on the Roland Juno-6 from 1982. The original enjoys great popularity because the sound generation can reproduce many classic analog sounds in impressive quality despite the simple design and is, therefore, suitable for both beginners and professionals. Arturia has done it right and left the proven concept almost unchanged. More

voices, another envelope and LFO, as well as delay, sensibly expand the sound spectrum without making the synthesizer confusing. JUN-6V also impresses sonically; in this respect, Arturia's TAE True Analog Emulation has made considerable progress. This can also be heard in the revised Jupiter8 clone Jup-8 V4, which sounds much more convincing than the previous version, especially in such sensitive areas as crossmodulation. We even liked Jun-6V a tad better than the previous top dog TAL U-NO LX, which was already extremely close to the original in a direct comparison.



Emulator II

For fans of 80s Synthpop, the Emulator II needs little introduction. Depeche Mode, in particular, explored the possibilities



Duel: NI Guitar Rig 6 Pro. IK Multimedia Amplitube 5 MAX

The new versions of the virtual guitar and bass studios AmpliTube and Guitar Rig have been released just a few weeks apart. That's reason enough to let the two plug-ins compete against each other in a comparison test! **by Mario Schumacher**

Guitar Rig 6

- Virtual guitar and bass Studio
- 21 amps, 27 cabinets, 16 microphones
- 68 effects and tools
- Convenient browser
- Three new amps
- Many new effects
- Multiband- & M/S-Module
- Large preset selection
- VST, AU, AAX, standalone
- Windows & macOS: 64 Bit

Facts

- Developer:** Native Instruments
Web: www.nativeinstruments.com
Price: 199 Euro
- ▲ Improved sound
 - ▲ Huge creative potential
 - ▲ Excellent new amps
 - ▲ Great creative effects
 - ▲ Modulation options
 - ▲ Enormous flexibility
 - ▲ Multifaceted presets
 - ▲ Very efficient operation
 - ▼ Only three new amps
 - ▼ Loading impulse responses not possible
 - ▼ No Undo/Redo

Sound: ██████████
Operation: ██████████
Price/Perf: ██████████
Total: ██████████

As similar as Native Instruments Guitar Rig 6 and AmpliTube may seem at first glance, the two amp simulations are very different in detail. While AmpliTube aims to recreate the sound of the most popular hardware amps, speakers and effects as authentically as possible, the competition from Native Instruments presents itself as a flexible combination of amp simulation and multi-effects rack.

Guitar Rig 6 Pro

In the long-awaited Version 6, Guitar Rig is cleaner and more intuitive. With a new, scalable interface and many detail improvements, such as a new browser, this software takes a big step forward. Creating complex effect chains is quick and easy, and unlike AmpliTube, Guitar Rig even allows you to connect several amplifiers and speakers in series. The new Macro module allows you to assign different effect parameters to up to 16 knobs. This way, very impressive sound variations can be created with just one hand movement (or via MIDI controller). You don't always feel like creating completely new effect chains. And you don't have to because Guitar Rig 6 Pro comes with more inspirational presets than ever before, including some created by well-known musicians. All of the plug-in's presets offer ready-made mappings.

New amps and cabinets

The new Chicago amp recreates a 1950s Fender amp that excels at clean sounds and warm tube tones. Fans of low tones, on the other hand, will be delighted with Bass Invader, which simulates a Gallien Krueger amp from the 1980s that was particularly popular for Rock. The third new model is called Fire Breather, which is inspired by Marshall and Friedman amps, and also sounds very powerful. The spectrum of this universal amp ranges



The highlight for guitarists and bassists are, of course, the three new amp models in Guitar Rig 6 Pro, which sound even more authentic and nuanced.



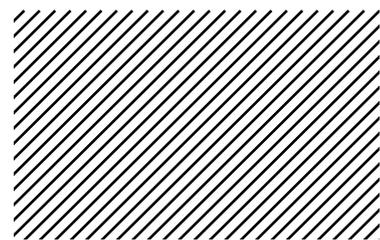
More Info

from undistorted sounds to high-gain attacks. It's a shame that there are only three new amp models, at least so far, because Native Instruments plans to add new hardware emulations to the software in regular updates. There have also been optimizations on the cabinet front: Matched Cabinet Pro offers improved speaker sound for all models thanks to new impulse responses. Furthermore, there is now an expanded version of the time-tested Control Room, in which you can create eight custom setups from an arsenal of 27 cabinets, up to 16 mics and three mic positions.

Sound design tools

With 16 outstanding new effects, Guitar Rig 6 Pro builds on its strengths as a flexible multi-effect. Those who are familiar with Native Instruments' effect plug-ins will immediately find their way around the new additions: The Crush Pack comes up with three tools for creative sound destruction, namely Frequency Shifter, Bitcrusher, and Distortion. Also on board are the three classic modulation effects

Chorus, Phaser and Flanger from the very popular Mod Pack. With the Reverb Classics, two very successful Lexicon replicas also find their way into this software. The three emulations of legendary compressors, the Transient Master and the tools of the Solid Mix Series are a real enhancement to give sounds that final polish. In detail, these are a 6-band equalizer, a dynamics processor with compressor, as well as gate/expander and a bus compressor. Fans of spacey sounds will appreciate the multi-faceted reverb module Raum, the pitch-shifting reverb Replika Shimmer and the flexible delay effect Replika GR. The well-known filter/distortion combination called Driver also invites you to sound experiments.



Guitar Rig 6 Pro: Verdict

With its authentic recreations of legendary hardware amps, speakers and effects, this virtual guitar and bass studio is ready for any style of music imaginable. The three new amp models sound even more authentic and nuanced; and you can already look forward to more new amps. And with the new Matched Cabinet Pro, you can get even more out of your older amps. Thanks to its huge range of creative effects, modulation tools and flexible routing options, Guitar Rig 6 Pro is also an excellent tool for

ani and Dimebag Darrell (Pantera). The signal path in the software is now drag-and-drop customizable and even more flexibly configurable: In addition to mono and stereo configurations, rigs with three amplifiers, as well as serial and parallel routings are possible. Or how about adding the DI signal to your amp sound? A total of 57 gear models including foot pedals, racks, amps and cabinets can now be used simultaneously. With Search and Favorites functions, as well as Tags and Keywords, the browser of AmpliTube presents itself very as very user friendly. Tes-

the innovative IR technology „VIR“ has been implemented. For a realistic sound, up to 2400 impulse responses have been created for each of the 100 cabinets using an automatic, robotic process. If you wish, you can even replace individual speakers in the cabinets. Due to the freely selectable placement of the four virtual microphones in front of the speaker cabinets and in the room, the timbre can be created almost as freely as in a real studio. However, we would have preferred to see an Undo/Redo function - just like in Guitar Rig 6. Also, a new feature is the option to load your own impulse responses. The sound can be adjusted quickly and easily with the adjustable size of the emulated speaker and with a tilt equalizer. Impulse responses from third-party suppliers, therefore, open up completely new sonic possibilities.

Mixer and creative helper

In the integrated mixer, you can combine several speaker and microphone signals, as well as the DI signal, as you like. Very welcome additions are the 19 new mixing effects, some of which are based on the high-quality plug-ins from T-RackS 5. A wide range is covered between equalizers, dynamics processors, as well as saturation, reverb and creative effects.

The standalone version of the software also comes with a Multitrack Looper that lets you quickly and easily record and layer ideas. Audio files can be loaded in many common formats and, of course, there is also an export function. The integrated SpeedTrainer is a practical tool for practicing or learning your favorite riffs.

AmpliTube 5 MAX: Verdict

Whether you want a clean, overdriven, distorted, or high-gain sound, AmpliTube offers remarkably flexible ways to create the guitar or bass rig of your dreams. This plug-in delights with dynamically playable amps, as well as a huge range of virtual pedals and great-sounding studio effects. For many, the ability to load your own impulse responses will surely be one of the highlights of this new version. AmpliTube is still the first choice if you want to recreate the guitar or bass rig of your idols in software form because no amp modeling software offers such a large and expandable selection of amps, cabinets and effects for guitar and bass. And the sound has become even more powerful, defined and nuanced in Version 5. 🍷

AmpliTube 5

- Virtual guitar and bass studio
- Redesigned user interface
- Over 400 amps, cabinets, microphones and effects
- New cabinet emulation with impulse responses
- New effects from T-RackS
- Mixer with 19 effects
- Multitrack looper and SpeedTrainer in standalone version
- Modularly expandable
- VST2, VST3, AU, AAX, Standalone
- Windows & macOS: 64 Bit

Facts

Developer: IK Multimedia
Web: ikmultimedia.com
Price: AmpliTube 5 SE: 122 Euro, AmpliTube 5: 179 Euro, AmpliTube 5 MAX 357 Euro

- ▲ Authentic sound
- ▲ Large gear-palette
- ▲ Expandability
- ▲ Import of own impulse responses
- ▲ Intuitive operation
- ▲ Versatile presets
- ▼ No Undo/Redo
- ▼ No multiband Processing
- ▼ No modulation Tools

Sound: ██████████
Operation: ██████████
Price/Perf: ██████████
Total: ██████████

Alternatives

- Overloud TH-U Full**
299 Euro
www.overloud.com
- Positive Grid BIAS FX 2 & AMP 2 Combo**
214 Euro
www.positivegrid.com
- Line 6 Helix Native**
\$400 US Dollars
www.line6.com



AmpliTube 5's 129 new gear models include 2 virtual foot pedals, 5 amps, 19 rack effects, and over 100 cabinets that have been completely re-recorded.

More Info

sound designers: an extremely flexible effects construction kit that can be used to elicit creative sounds from any conceivable input signal.

AmpliTube 5 MAX

Thanks to detailed emulations of amps from manufacturers such as Fender, Marshall, Mesa/Boogie and Peavey, as well as recreations of sought-after cabinets and effects pedals, AmpliTube is very popular with both guitarists and bassists. Since the release of the last version of the software about five years ago, a lot has happened in the field of amp modeling. With Version 5, AmpliTube aims to catch up with the new generation of amp emulations in terms of authenticity. Visually, the software shines in new splendor with a newly designed, now also scalable user interface.

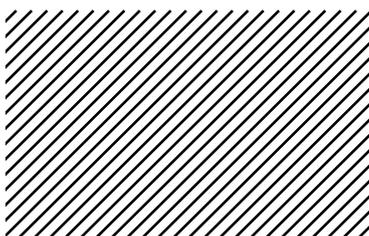
AmpliTube 5 is available in four variants, including the free AmpliTube 5 Custom Shop version. The flagship of the product family is AmpliTube 5 MAX with over 400 gear models, which also includes 11 brand/artist collections such as AmpliTube Jimi Hendrix, Brian May, Joe Satri-

ani and buying new gear models is now even easier thanks to the newly designed AmpliTube Custom Shop.

New gear for guitar and bass

Highlights of the 129 new gear models include a bass overdrive pedal based on the Tech 21 SanSamp and an emulation of the MXR distortion pedal, as well as convincing replicas of amplifiers and speaker cabinets from Aguilar, Bogner, Diezel, Friedman and PRS. By optimizing the gain structure and the improved power amp modeling, the sound of old modules has also been much improved.

One of the most important innovations in AmpliTube 5 is, undoubtedly, the improved Cabinet section, in which



New Effect Plug-ins

by Sascha Blach,
Mario Schumacher and Jan Wilking



Waves CLA Epic



The abbreviation CLA stands for Chris Lord-Alge, who, in collaboration with Waves, has already released various plug-ins such as CLA Guitars and CLA Drums. These plug-ins combined components such as compressors, EQs, reverb, delay and pitch in a single tool, allowing the user to create a suitable sound in a time-saving manner and with just a few button presses. With CLA Epic, there is now a similar concept for Reverb and Delay. This plug-in contains four different delays and reverbs each, so that a total of eight effects can be packed onto one signal. In detail, these are the delay types: Tape, Throw, Slap and Crowd and the reverb types: Plate, Room, Hall and Space. The settings are, however, rather rudimentary. The appeal of this tool lies more in the interaction of the various components, which makes it very versatile - from subtle to huge oceans of effects. Drums, vocals, synths and guitars are all equally well-suited here to be made more „epic“. Another exciting feature is the ability to route the effects into each other, for example, sending delays into reverbs.

According to the concept, there are tons of presets for different approaches that deliver good results. Thanks to the mix control, you don't have to open a bus track, you can just put CLA Epic on the single track.

Verdict

Even more settings would have been the icing on the cake, but even so, CLA Epic is an interesting and above all easy-to-use all-round weapon in your effects arsenal. As usual, the presets offer high musical value and, thanks to CPU-saving programming, multiple instances are no problem.

Developer: Waves
Web: www.waves.com
Price: \$199 US Dollars
Format: VST, AU, AAX

Rating: ★★★★★



Forward Audio faPhaseBundle

Anyone who records instruments like drums, bass or guitars with multiple microphones knows phase cancellation all too well. Forward Audio wants to remedy this with its new faPhaseBundle, which includes the two tools faTimeAlign & faGuitarAlign at a very special price. Phase cancellations are noticeable, for example, when snares sound strangely thin on multi-microphone recordings. This can be fixed during recording by measuring the microphone distance or later by using the phase switch in the mixing channel.

faTime Align is the more elegant tool, as it is more flexible. With it, tracks can be aligned very precisely to each other using this plug-in. To do this, you simply have to load this on all relevant tracks, then you look for the sweet spot by turning the large delay knob in the middle while listening to the signal in the loop. Comb filter effects are also possible in the process. The A/B comparison function is also very practical. In faGuitarAlign, an X/Y pad is the central element. Two signals - guitar and bass - but also any other multi-microphone recording such as piano - can be mixed into each other; and there is a phase switch and solo button for each. The sweet spot is found by moving the cursor in the X/Y pad.

Verdict

Both tools worked reliably in the test and meant more convenient handling than manual track shifting. The two plug-ins can also be used successfully to create wide stereo effects. With more than two tracks, however, you have to find workarounds with faGuitarAlign, which is a pity, because guitar and bass recordings with multiple microphone and DI signals are not uncommon.

Developer: Forward Audio
Web: www.forward-audio.com
Price: \$69 US Dollars
Format: VST, AU, AAX

Rating: ★★★★□



Baby Audio Spaced Out

Spaced Out combines delay and reverb for effects that seem to be outside our universe. On the left side of the control surface, you adjust the delay. As a special feature, it has a sequencer with 16 steps to process only individual passages of the incoming audio signal in sync with the song tempo. This gives you exciting rhythms and groovy delays in no time flat. A combined high and low pass filter, as well as various sound textures, are available for further processing and a reverse function allows experimentation.

On the right are the reverb controls. Instead of a sequencer, a large X/Y pad fills the central area here and it is used for smooth gliding between the four reverb algorithms: Vacuum, Small Space, Medium Space and Outer Space. Stardust adds a kind of shimmer effect in high frequencies. The pre-delay, as well as the sound behavior and the width of the effect, are additionally adjustable. Another X/Y pad combines delay and reverb and simultaneously controls the effect components among each other, as well as in relation to, the input signal. Very handy is the ducker, which suppresses the effect part when an input signal is present. This way the effect is only audible in quiet passages, which prevents the mix from being muddy. A random function always holds new surprises.

Verdict

Spaced Out enables complex space and time effects while remaining easy to use thanks to its well thought-out interface inviting you to tweak and experiment. This visually very appealing plug-in is also very impressive in terms of sound.

Developer: Baby Audio
Web: www.babyaud.io
Price: \$69 US Dollars
Format: VST2, VST3, AU, AAX

Rating: ★★★★★



Overloud GEM VOICE



The latest offering from the Italian software forge is a channel strip that specializes in editing vocals and voice recordings. GEM VOICE is therefore a very fitting name. We were curious to see whether the plug-in is also as accurate in terms of sound. GEM VOICE integrates mic preamps, tape stimulation, vocal enhancers, a multiband module, a dynamics processor, an equalizer, a reverb effect and an analog delay. The virtual microphone preamp offers four different models that can color the sound in different ways. The tape simulator was also modeled after analog. Seven different tape simulations create for some musical saturation, while the Flutter, Vocal Dist and Fuzz types make it heartier and more characterful. For more presence when needed, the Enhancer emphasizes existing harmonics. You can choose between five application frequencies and control the intensity here.

The De-Esser is undoubtedly an essential tool for processing vocals. GEM Voice also offers this kind of frequency-selective dynamic processor in the multiband section, which delivers convincing and transparent results with only a few setting options. The De-Box module, on the other hand, allows bass-heavy vocal recordings to be softened and given more presence and freshness. Of course, a vocal channel strip should not be without an extensive dynamics section: GEM VOICE's Compressor module comes up with five different styles, including optical, FET and tube compressors. The expander/gate can be used to effectively reduce background noise. The equalizer is also very universal, emulating the sound behavior of four legendary EQ models. In the Band Limit mode, you can also achieve megaphone effects and the like. The equalizer parameters can also be set in the display.

With impulse responses of small rooms and classic reverbs, the Space module helps to create a realistic impression of space or even striking reverb effects. Simple delay effects, as well as slapback echoes and stereo doubling are finally possible with the Delay module. Last but not least, in the master section you will find a switchable limiter that protects against clipping. On board are presets for processing male and female vocals, as well as voice recordings, including the preferred signal chains of renowned producers like Joe Barresi. Sure, one could wish for more adjustment options like attack and release controls for the compressor or a customizable order of the modules. But it's the straightforwardness of the plug-in that makes it a studio tool with a high utility value, because you can reach the desired sonic goal very quickly.



Verdict

Without overburdening the user with excessive setting options, GEM VOICE scores as a comprehensive and versatile toolbox for the production of vocals. The sound is excellent as usual and you get professional sounding results in no time. This plug-in is just as well equipped for smooth vocals for sing-song-writer productions as it is for polished pop vocals, overdriven rock vocals or creative applications. Even voice recordings can be given a professional sound easily and effectively. Although the intuitively operated plug-in specializes in the processing of voices, it also scored points in the test for the refinement of instrument recordings, drums or synth sounds. Another plug-in pearl from the house of Overloud!

Developer: Overloud
Web: www.overloud.com
Price: 179 Euro
Format: VST, AU, AAX
Rating: ★★★★★



Get the free trial now - www.synapse-audio.com



Zampler Plug-in, Soundset, Audio demos and MIDI files for Download: www.bit.ly/BeatDL182

Zampler: Aenigma

Downtempo Constructor

Pure emotion and ethnic vocal power ... Gregorian chants have, without question, a mysterious and unique sound; however, since such chants also quickly sound stale, we have sampled them by all the rules of the art, sliced and twisted through the sound grinder. The result is 64 production-ready bass, pad and lead hybrids of choir sounds and synthesizer sounds that add a unique touch to any track. Raise the curtain on our latest soundbank for Zampler//RX! *by Mario Schumacher*



www.zampersounds.com



1 Drums

At the keyword „Gregorian Choirs“ most people will surely think of the music project Enigma, but our Zampler soundbank „Aenigma“ is musically much more versatile. In the following, we use it for a modern downtempo track at 134 BPM. A suitable drum groove often helps to find musical ideas. ❖

2 Beat programming

For our beat, we turn to Native Instruments' Kontakt Instrument Butch Vig Drums [1]. The „Holy House“ drum kit delivers a contemporary and punchy sound. We play in a two-bar halftime beat with the bass drum sounding on eighth notes 1, 4, 7, 10, and 15. The snare plays every half note of a measure. ❖

3 Start the Zampler!

A closed hi-hat on the eighth-note beats provides a consistent groove. In the intro of our track, we're concerned with creating a dense, ethereal atmosphere. To do this, we combine several sounds from the Zampler expansion. To do this, load the Zampler//RX plug-in and then click **Load Bank**. ❖



4 Atmosphere

Change to the folder where you have unpacked the soundbank. Select the file „Zampler Aenigma.fxb“ and navigate to Patch **061: AT Positivity**. We take the sound unchanged, but chop it up rhythmically with the Polyverse Music Gatekeeper plug-in [2]. Eventide Blackhole [3] also adds a dense reverb effect here. ❖

5 Chopped choir

The selected preset plays only one held note in the intro, as does **Patch 019: LD Ohonis**, which alternates with it. For this one, we activate **Mono Mode** and set **Glide** to 0. To make the sound fit into the groove, we also rhythmize it with Gatekeeper, while NI Replika XT [1] adds a dotted eighth-note delay. ❖

6 Arpeggio

Now we bring an arpeggio into play. Load **Preset 058: AT Ghostly Monks**, deactivate the **Mono** playback mode and set **Glide** and **Filter Resonance** to 0. For a more percussive sound, turn the **Sustain** control of the volume envelope to minimum. The patch plays the illustrated eighth-note sequence. ❖



7 Arpeggio: Effects

Blackhole and Replika XT give the sound more depth. What is still missing from our intro? Of course, a powerful bass sound! For this, we use the DS Audio Thorn Solo synthesizer from Beat Studio [4]. First, activate all three oscillators and detune the first two slightly in opposite directions. ❖



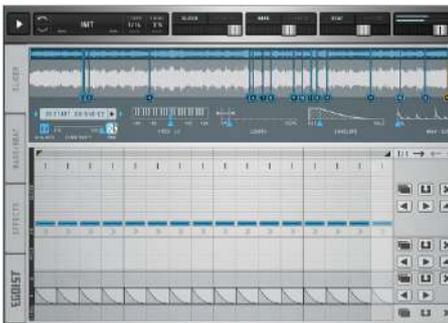
8 Bass sound

Tune Oscillator 3 an octave lower than the first two and select the square waveform here. Then activate the **Dirty LP** filter mode and adjust the remaining filter parameters as shown. For the desired sound and volume curve, adjust the Amp Envelope and Envelope 1 as shown in the following picture. ❖



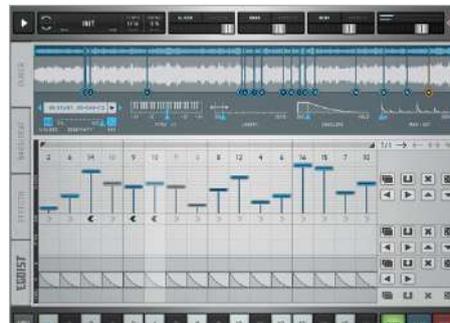
9 Bass: Modulation

To be able to play filter sweeps with the modulation wheel, we make the following assignment in the Mod Matrix: **Source: ModWheel, Depth: 100%, Target: FLT1 Cutoff**. Then, we add a subtle reverb effect to the bass. Since the samples from „Enigma“ are in WAV format, you can also edit them in your DAW or in other plug-ins. ❖



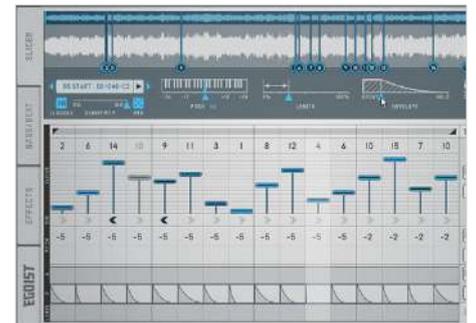
10 Chopped texture

For example, you can create interesting textures by running the samples through the slicing beatbox Sugar Bytes Egoist [5]. Load this as a VST instrument and drag a sample like „BS Start Here-000-048-c2“ from the installation folder of the soundbank onto the **Slicer**. Then click on the cube icon in this section. ❖



11 Sample roller coaster

The positions of the slices are now determined by random generator. Play the VST instrument with MIDI note C1. Also click on the cube in the sequencer under the waveform display. Now the playback order of the slices is changed, resulting in interesting textures. You can also adjust the order manually. ❖



12 Fine tuning

Also experiment with the playback direction (**Dir**), the pitch (**Pitch**) and the progression (**A, D**) and level (**Level**) of the slices. It is also worth changing parameters such as the slice length (**Length**), the pitch and the envelope. By the way, you can also save several patterns with different settings and pitches. ❖



13 Variety

To do this, play Egoist over another MIDI note, such as C#1, and create a new pattern for it. This can be based on another sample, but you can also copy patterns from one memory location to another and change them. A pinch of reverb also adds spaciousness to our texture. ❖



14 Bell sound

With single notes of **Preset 013 IN Ravers Bells**, we accent every four bars on the first beat. In this patch, we deactivate the **Phaser/Chorus**, otherwise it remains unchanged. The intro leads into a more densely orchestrated part, in which we replace the bass from Thorn Solo with a crisper variant with a shorter decay. ❖



15 Bass 2

In this variant, we adjust the envelope and filter parameters as shown. The second bass does without a reverb effect. It plays the chord root notes of C, G, A# and F. Transition notes provide a little more variety. Our bell sound from the last step complements the bass line with an eight-bar, two-part sequence. ❖



16 Pad sound

Now how about a supporting pad? For this purpose, the Patch **021 PD Akkon Will Fall** from „Ænigma“ does an excellent job of doubling the bass with its airy sound in the high registers. In the second part of this part, we replace our halftime beat with a more driving groove from XLN Audio's XO [6]. ❖



17 Driving beat

In this one, the bass drum plays on eighth notes 1 and 6 and the snare on 3 and 7. Ghost notes make the beat more vital, while sixteenth note hi-hats provide the desired drive. To complement this, we added a melody using the tried-and-true Patch **058: AT Ghostly Monks**. Modern vocal chops would be a cool addition, right? ❖



18 Vocal chops

Using the sampler of your choice, you can create your own kit with vocal snippets in no time using the audio material from the sound bank and arrange them as you wish. We use Groove Agent SE5 [7] for this purpose. To do this, drag any samples from the soundbank folder onto the pads / keys of your sampler so that each key triggers a different sound. ❖



19 Edit samples

Adjust the fine tuning of the samples by ear or with a virtual tuner like Melda Production's MTuner [8]. Now experiment with parameters such as the tuning, level, pan position, sample start, and envelopes. By changing the start, you can already create multiple vocal snippets from one sample. ❖

20 Vocal chops: Effects

If your sampler allows it, you can also apply different effects to the individual sounds. For the desired wide, room-filling sound, we load the Replika XT and Blackhole plug-ins in the sampler track as insert effects. The freely available multiband compressor Xfer OTT [9] brings the vocal samples even more to the fore. ❖

21 Heavenly voices

In the break and the final chorus of the track, two solo vocalists make their grand entrance. For these we use the legato patches of the Kontakt libraries Best Service Shevannai [10] and Zero-G Ethera EVI [11]. With both, you can switch between the vowels with key switches. The virtual vocalists harmonically complement the bass and pad. ❖



22 Multilayered beat

Here, too, we use the proven combination of Blackhole and Replika XT for more depth. In the final eight bars of the chorus, we want to go all out musically. We combine the driving beat from XLN Audio XO with the halftime beat played by the Butch Vig Drums. The result sounds cool, but booms too much. ❖

23 Arpeggio 2

We remedy this by using a high-pass filter with a cutoff frequency at 300 Hertz on the halftime beat. Now the groove sounds even denser and more complex, but remains defined. For additional drive, we add an arpeggio, for which we draw on the Thorn Solo synthesizer. Load the **PLUCK Footprint** preset from the „Lead“ folder. ❖

24 Arpeggio 2: Sequence

For this one, adjust the delay and reverb effects as well as the filter settings as shown in the previous step. For a smoother sound, we deactivate the **Noise** oscillator and increase the **Attack** time of the **Amp** envelope to 6%. We also deactivate the plug-in's **Limitter**. The Pluck sound plays the pictured arpeggio that follows the chords. ❖

New Sounds & Samples

by Philipp Sterczewski

Synapse Audio

Premium EDM Vol.3

The DUNE 3 synthesizer plug-in, treasured for its smooth, harmonic sounds, gets a sonically powerful 68-sound expansion to its preset library with Premium EDM Vol.3. Synapse Audio has divided these EDM sounds into Arp, Bass, Drums, Gated, Leads, Pads, Sequences and SFX. The Dubstep-heavy basses sound intricate and intense, accompanied by vintage basses. Soaring leads, which immediately grab attention as distinctive hooks and make the crowd go wild at festivals, are also guaranteed. The drum section features fat kicks. The melodic, soft sounds from the gated and pads category and the hypnotic arps, however, suggest that the pack can also be considered for (Psy)trance productions. In contrast, the Sequence section presents itself as rabid, energetic and hefty. Prominent stutter gates and impacts increase the attention for future EDM tracks.



Verdict

A successful extension for DUNE 3, full of striking EDM and Psytrance sounds.

Developer: Synapse Audio **Web:** synapse-audio.com

Price: \$20 US Dollars **Format:** DUNE 3, NKS

Rating: ■■■■■■■■■■

HY2ROGEN

Psytrance Movement

A Gigabyte of propulsive loops at 140 BPM comes with the product of HY2ROGEN. If you emulate the sound of Psytrance heroes like Infected Mushroom, Astrix, Astral Projection or Juno Reactor, you have come to the right source. Loops include basses (60), synths (55), drums (82) and percussion (15). There are 131 of the single samples plus 20 each of fills and effects. Eighteen multi-samples were prepared as sampler instruments. The pumping drum loops (some of them up to 32 bars long) are rich, finely accented and were exported with and without kick drum respectively. The pluck-like basses roll wonderfully and like to shine with groovy shuffles, even supported by the kick drum, if desired. Descending glitch synth effects plus the typical risers and impacts as transition effects round off this package worth listening to.



Verdict

Psytrance Movement combines all the necessary sounds for a competitive, club-ready Psytrance production.

Developer: HY2ROGEN

Web: hy2rogen.com

Price: 19 Euro

Format: WAV, EXS, Kontakt, NNXT, Halion, Serum

Rating: ■■■■■■■■■■

Bitwig

Bass-08

The legend is back! The sounds of the Roland 808 drum machine have been preserved in this approximately 500 MB sample package Bass-08, which Bitwig makes available to all its registered users of the in-house DAWs (Bitwig Studio, 16-Track or 8-Track) free of charge as a sound set. In total, twenty presets and 32 multisamples were crafted from the 2747 samples. The attention to detail becomes apparent when a Macro is changed, for example, to change the tuning or decay. Then, a completely different sample set is loaded. Particularly noteworthy are the 28 pattern clips, which contain ready-made grooves, so there is no need for complex beat programming. These groovy clips range in style from analog tribal and 80s breakdance to warehouse electro and classic house.



Verdict

If you don't have the samples of this drum classic yet and have chosen Bitwig as your favorite DAW, you should definitely get it here.

Developer: Bitwig

Web: bitwig.com

Price: Free

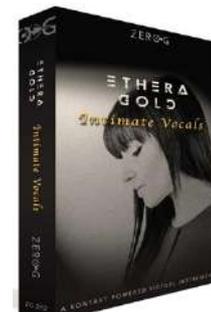
Format: Bitwig (Vers. Bitwig Studio 3.3.1)

Rating: ■■■■■■■■■■

Zero-G

ETHERA Gold Intimate Vocals

Zero-G has released a Kontakt instrument called Intimate Vocals as part of the Ethera Gold series, which is not only designed as an add-on to the Ethera series, but rather serves as a standalone instrument. The approximately 2 Gigabyte vocal collection was recorded by Italian soundtracker-proven vocalist Clara Sorace. Although there are few control parameters such as the envelope and vibrato, there are two new articulations to choose from with soft and dark. Thanks to the Epic True Legato function, powerful vocals can be performed unpitched over three octaves with various sounds such as Ah, Oh Uh or Eh. From soft, angelic tones to slow and dramatic vocals, the instrument can provide a lot of emotion to a track. Some of the sustains are comprised of two layers.



Verdict

Intimate Vocals is an expressive and moving sample-based instrument that provides epic film and game scenes with appropriate vocals.

Developer: Zero-G

Web: zero-g.co.uk

Price: 45 Euro

Format: Kontakt (ab Vollversion 6.4.2)

Rating: ■■■■■■■■■■

New Sounds & Samples

by Matthias Sauer

PatchPool Fractalism

Granular effects for abstract textures and beats are popular with many creative producers. With „Fractalism“ by PatchPool, you can feel a new fascination when using the Output Portal granular FX plug-in.

With the help of some videos and sound examples, the renowned sound designer Simon Stockhausen demonstrates the sonic possibilities of this rather special production. For the first steps, a simple acoustic sound (a piano) is recommended in order to better reconstruct the sometimes wild sound manipulations of the approximately 101 presets. These include tempo-synced stutter as well as freezed effects and ever evolving grain clouds. After the FX plug-in, it is best to activate a reverb plug-in specialising in long reverb tails and enter the experimental playing field. Portal's internal reverb is left out - a very good decision.

Verdict

If you haven't had much success with Output Portal's included presets, this package should definitely inspire your sound design. Futuristic!

Developer: PatchPool **Web:** patchpool.net
Price: 22 Euro **Format:** Settings for Output Portal

Rating: ■■■■■■



ModeAudio Apex – Serum Arp Sets

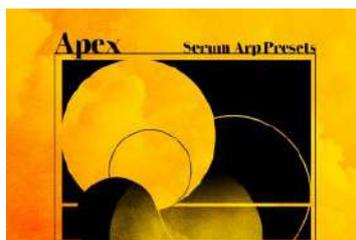
Looking for fresh sounds for the synthesizer xfer Records Serum? The soundset Apex by Mode Audio isn't brandnew anymore, but manages to inspire with lively and timeless sounds for the popular wavetable synthesizer. The 50 presets for Serum come with just as many MIDI files, 45 wavetables and 15 individual LFO shapes. Press just one key, hold it and watch the lively spectacle. These are moving presets that don't sound clinically sterile coming from your loudspeaker, but stir up a bit of dirt and more often have a charming LoFi character. Besides the arp presets, there are also basses, leads, FX and pads that play well on the keyboard in spite of the many modulations.

Verdict

A well invested 15 Euro will gladly go to London for this small but fine set. The arpeggiator presets have that certain something, inspire musically and definitely belong in the good Serum library. Well done!

Developer: ModeAudio **Web:** modeaudio.com
Price: 15.42 Euro **Format:** Xfer Records Serum

Rating: ■■■■■■



Plughugger Nanopolarity

Arturia's Pigments 2 software synthesizer can sound even more cinematic: Plughugger's Nanopolarity offers many ambient pad sounds that are very special. The soundset takes an Access Virus Ti and processes it with the sound and effect parameters and, in particular, the granular engine in Pigments 2. The resulting 163 pads are consistently gloomy, sometimes complex and, in any case, they are more spacey than the „bread and butter“ pad sounds of many other synthesizers. It sometimes takes a bit longer, however, before you have adjusted to the respective preset. Fast stepping through presets is, therefore, not recommended here. One point is deducted for the macros, which, unfortunately, remain idle and should be used for intuitive sound shaping.

Verdict

Nanopolarity is not mainstream, but a bold sound production that has its charm and can certainly do more than the next ambient production. Personal testing is recommended!

Developer: Plughugger **Web:** plughugger.com
Price: 19.90 Euro **Format:** Arturia Pigments 2

Rating: ■■■■■□



Easy Sounds FM Xplorer

Yamaha's flagship Montage is even more productive in applying FM sounds since OS version 3.5. The „FM-Xplorer“ set from Easy Sounds makes extensive use of the Smart Morph for the first time. A total of 192 Performances, 192 Live Sets and 107 Smart Morphs is quite an announcement. With this content, your discovery tour can start. You hold a chord, adjust the performance aids and spontaneously create different mixes of pads, arps, bass and drums. Rhythmically, in the manner of a wave sequence, but also fluently via swiping over the touchscreen, the multi-layered sounds can mostly inspire. Stylistically, they range between classic and today's synthesizer music, without being consciously trendy or club-oriented.

Verdict

FM-Xplorer is a fantastic FM library for Montage and its brother MODX (OS 2.5 and higher). If you want to open up the new Smart Morph and design your own creations based on the performances, this library is absolutely the right choice. Smart!

Developer: EasySounds **Web:** easysounds.de
Price: 59 Euro **Format:** Yamaha Montage, MODX

Rating: ■■■■■□



Steinberg Polarities Expansion

For Steinberg Padshop 2, Simon Stockhausen has created an extensive collection that moves between acoustic and electronic sound territory - and inspires! Padshop 2, a specialist for granular sounds, receives over 250 presets with „Polarities“, which are based on 3.4 GigaBytes of sample content.

The library starts with one of the most beautiful accordion pads, which is followed by epic brass ensembles and other acoustic instruments. The abstract spherical collages for timeless ambient music and soundtracks are impressive. They can be shaped nicely and simply via the modulation wheel. Rhythmic phrases hardly appear, it's clearly about pad sounds with different layers.

Verdict

Steinberg's Padshop in its current version gains even more appeal with this great expansion - by now Steinberg's fifth library for Padshop 2: Close your eyes, fly and dream!

Developer: Steinberg **Web:** steinberg.net
Price: 39.99 Euro **Format:** Expansion for Steinberg Padshop 2

Bewertung: ■■■■■■■■■■



Luftrum Genisys

You want to realize cinematic soundscapes with just one synthesizer in your DAW? Genisys for u-he's virtual analog powerhouse Diva once again provides proof of how well this can work in practice.

Genisys has been created by a proven team: Designed by Stephan Baer and supervised by Luftrum. The first presets are immediately astonishing. Played with a single note, the arpeggiator sounds almost always result in beautiful accompaniments, which are continued with the bass loops in the lower registers. The power in silence is conveyed by the pads; subtle sounds are also available for themes. Some nifty presets are, therefore, teased out of Diva (from version 1.4.3).

Verdict

Without question, Genisys is one of the tastiest libraries for u-he Diva when it comes to the cinematic sounds of analog synthesizers. If you're still in doubt, you should definitely check out the 20+ great demo tracks on the Luftrum website.

Developer: Luftrum **Web:** luftrum.com
Price: \$35 US Dollars **Format:** Presets for Diva/NKS

Rating: ■■■■■■■■■■



UVI LoFi Dreams

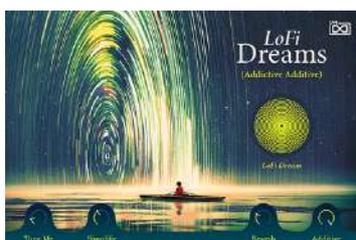
Chillhop and related downtempo genres are currently very popular. So even UVI's Falcon 2 gets a corresponding add-on called „LoFi Dreams“ with a lot of lo-fi character. After the installation and the (wrongly feared) iLok authorization, 200 presets are available to play, which devour 4.31 GB of samples. With the macros, the individual patches are still easy to modify. The journey goes through several sections: Piano, Keys, Bass, Guitar, Leads, Pads, Plucked and Synths, as well as Animation and Drums. The sounds for melodic phrases are worth mentioning, sounding organic and grounded. The pads and keyboards are also varied and well done. The versatile patches can and want to be played. Cool!

Verdict

LoFi pleases with very practical sounds that have a rather moderate LoFi touch. If you're looking for bread-and-butter material instead of wacky effected sounds, you can grab this without hesitation.

Developer: UVI **Web:** uvi.net
Price: 39 Euro **Format:** Presets for UVI Falcon

Rating: ■■■■■■■■■■



Sounds Divine Atmosphere

With a title like "Atmosphere", you actually already know where the journey is going. If this set has been created for the first-class software synthesizer Xfer Records Serum, the joy is even greater.

However, SoundsDivine is a little unsettling at first. The basses are aimed at EDM producers and are mostly not very atmospheric. Yet with the numerous FX presets, you are already immersed in a shimmering sonic cosmos. Effective yes, but also surprisingly well usable musically. The rhythmic animation, which grooves finely and effectively, deserves extra praise. The chillout and ambient producer will find plenty of ideas for some new tracks here.

Verdict

Atmosphere for Serum contains 130 sounds that are well worth the price of around 30 Euro. If you love exquisite spheres of sound and want to be inspired, you can be enchanted by this first-class soundware. Simply heavenly!

Developer: Sounds Divine **Web:** soundsdivine.com
Price: 30 Euro **Format:** Serum Presets

Rating: ■■■■■■■■■■



Review: PreSonus ATOM SQ

Optimized for the in-house DAW Studio One, this compact controller offers knobs, pads and step sequencers to make reaching for the mouse unnecessary. **by Jan Wilking**

Features

- USB Controller
- Optimized for Studio One
- 32 RGB Pads
- Polyphonic Aftertouch
- 8 Encoders
- Multifunctional Touch Strip
- Arpeggiator/Sequencer
- Dimensions: 362 x 172 x 25 mm
- Weight: 0,91 kg

Facts

Manufacturer: PreSonus
Web: presonus.com
Purchase: Specialty Shops
Price: 239 Euro

- ▲ Compact Form
- ▲ 32 Pads
- ▲ Usable as a Keyboard
- ▲ Polyphonic Aftertouch
- ▲ Configurable Touchstrip
- ▲ Arpeggiator
- ▲ DAW Integration (S1/Live)
- ▲ Step Sequencer (S1)
- ▼ No Display of Controller Assignment

Features: ■■■■■ □
Operation: ■■■■■ □
Price/Perf: ■■■■■ □
Total: ■■■■■ □

Alternatives

Novation Launchpad
from 87 Euro
novationmusic.com

Akai MPD232
199 Euro
akai-pro.de

Arturia BeatStep Pro
220 Euro
arturia.com



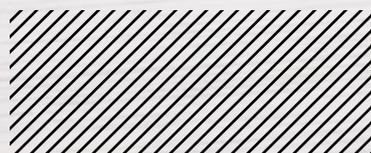
ATOM SQ is connected to the computer via a USB cable, which also supplies the controller with power.

This controller makes a solid impression. The eight large endless knobs have a pleasant resistance, and the buttons have a noticeable pressure point. The 32 multicolored, illuminated pads are smaller than those on Maschine or comparable pad controllers at about 2.5 x 1.5 cm, but they offer a good playing feel. They are velocity sensitive and also handle aftertouch (even polyphonic aftertouch). A freely configurable touch strip with LED chain is located between the knobs and pads.

An easy-to-read display is used to show important information and, in conjunction with the arrow keys and associated knob, for menu navigation; a multi-color transport section is also integrated. ATOM SQ has a compact design and will find its place even on a cramped desktop. Power is supplied via the USB-C port, which you also use to connect ATOM SQ to the computer. There are no other connections available.

DAW Controller

In Song Mode, you have access to the classic mixer functions. You can arm tracks for recording, mute them or listen to them individually. Zooming and navigating in the arrangement can also be done via the



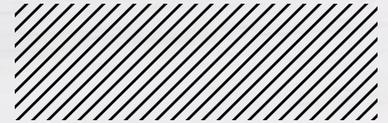
controller, as are the transport controls for Play, Record and more. For this purpose, ATOM SQ uses the standardized Mackie protocols and is, therefore, compatible with all common DAWs.

In Studio One, the integration goes a good bit deeper; you can also set markers in the song or scroll through effects there. You also have advanced features in Ableton Live. Tracks are displayed with names, can be stepped through and adjusted in volume via the sliders, and clips and scenes can be started from the controller.

Pad and Keyboard Controller

In Instrument Mode, you use the pads as a keyboard to play drums and instruments. Various scales are available for this purpose. With the eight knobs, you control the parameters of the selected software synthesizer. In this mode, you can also use the integrated arpeggiator with different playback directions and swing option. Playing via the keys basically works well and is quite a useful alternative when there is no real keyboard within reach. However, we sometimes had to struggle with double triggers in the test.

In Studio One, you have direct access to the instruments and can load them via the controller; in Impact, the pads show the assignment with samples in color. In Ableton Live, you also have access to browsers and can load individual devices and edit them via the controllers. Unfortunately, however, this has one major



drawback: the assignment is not shown in the display! So, you are flying blind and have to find out by trial and error which parameter is on which knob. This is something we hope will be improved in the course of an update. The same applies to the User Mode, in which you can freely assign DAW commands or MIDI-CC to the knobs to control external hardware in standalone mode. This is very practical, but without displaying the assignment in the form of parameter names, it is a constant mental task.

Step Sequencer in Studio One

For more in-depth editing of recorded sequences and patterns, the Edit Mode opens the appropriate editor in Studio One and provides access to common functions such as Quantization, Velocity, and Note Shifting and Transposing directly from the controller via menu and knobs.

Studio One users also have access to the step sequencer based on the DAW's own pattern editor, which you can use to program grooves in classic TR-XOX fashion. The controller lets you select drum kits, change the length of the pattern, select variations, quantize and access all other important functions, so you can create complete beats without reaching for the mouse. We would like to see similar functionality in other DAWs or even in standalone mode.

Verdict

ATOM SQ combines DAW and pad/keyboard controller in a solid package. It is especially interesting for users of the Studio One DAW, who benefit from uncomplicated installation, deep integration and integrated step sequencer. It is also a compact and affordable alternative to Push for users of Ableton Live, where the small pads impress with a pleasant feel and polyphonic aftertouch. ❖❖

Zoom V3



While the Zoom V6 vocal effect in robust floor pedal format and featuring a built-in looper is aimed primarily at street artists and stage musicians, its smaller brother V3, which is only half as expensive, is more suitable for the desktop studio. For this purpose, it offers plenty of voice effects for music production, as well as for podcasts, dubbing and streaming. The 16 voice processing effects optimized for their intended use, such as Unison and Vocoder, can be selected directly via the large buttons, without detours, and tuned appropriately with the V3's parameter controller. The pitch correction can subtly compensate for vocal weaknesses or be used excessively for the currently ever so popular autotune effect.

As with the V6, the V3 also lets you create your own backing vocals by adding up to two voices in major or minor keys to create three-part harmonies with your voice. Real-time formant correction allows you to alter your voice without changing pitch, which also allows for unusual special effects to alter your voice for streaming video games, podcasts, and YouTube videos. Reverb, Delay and Compressor are already built in and, connected via USB, the V3 also serves as an audio interface.

Verdict

Zoom V3 is a practical, compact device for modifying your voice for a wide variety of applications in the desktop studio. Whether pitch correction, harmony accompaniment or monster voice are required, thanks to its intuitive operation, we could actually always find a suitable effect of reasonable quality quickly and easily in the test. The direct parameter access also invites experimentation.

Manufacturer: Zoom
Web: zoomcorp.com
Distribution: Sound Service
Price: 199 Euro

Rating: ■■■■■■■■■■



Vochlea Dubler Studio Kit

This topic is an evergreen: The hookline is in your head, but before you can find all the right notes on the keyboard, it's long gone. If only you could just sing or hum a melody. You can guess what's coming next: Sure, you can! And not only notes, but also beats.

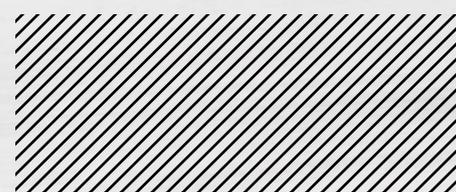
While much longed-for technologies such as „Brain to MIDI“ are still being worked on, manufacturer Vochlea has already invented „Voice to MIDI“. The Dubler Studio Kit consists of a special USB microphone and a software package of the same name, which recognizes voice signals from the microphone and converts them into MIDI notes.

Installation is super simple: Either scan the QR code included in the package or go directly to the manufacturer's website, download Dubler software and open the app. On the one hand, this activates the virtual MIDI port, which can be used as an input in any DAW, and on the other hand, it acts as a converter from voice to MIDI notes. Two modes are available, „Triggers“ and „Controls“, which can also be used simultaneously.

The former converts up to eight percussive sounds into notes for drums. In order for the app to understand your sounds properly, they must first be trained. So, add a drum, press the „Train“ button and repeat until the desired sound is repeated several times. Then, select a MIDI note for the drum and, if necessary, activate „Velocity Control“ so that you can control the velocity of the MIDI note with the volume of your voice.

The „Controls“ mode, on the other hand, recognizes sung pitches in real time and outputs corresponding MIDI data; however, not only are the notes recognized, but so are the vowels A, E and O, as well as an envelope - all of which can be assigned as MIDI controllers to any parameters in the DAW, for example, to control filter movements, vibrato or effect components. The only limit here is your own imagination.

Singing the notes works surprisingly well and Dubler also quantizes the input to the nearest note if the pitch is not quite hit. Since a basic pitch can be defined and four scales can be added, inexperienced singers are also on the safe side. There is even a chord function available, but with only a single chord. The selection of scales should also be much more extensive; however, scales can be cre-



ated themselves by simply activating allowed notes with a click. Alternatively, the desired notes for the scale can even be sung in. Practical! In order to also cover ranges between the notes, Dubler offers a pitch bend function, which detects fluctuations in the voice and sends them as pitch wheel data.

While both singing notes and controlling parameters via vowels is a lot of fun, beatboxing was only conditionally inspiring. Drums could certainly be controlled via various sounds, but not nearly as precisely as notes. A clear „Bamm“ or „Bomp“ for the kick is distinguished quite reliably from a „Tsssss“ or „Psssss“ for hi-hats, but the recognition got confused with less different sounds. In principle, the technique works quite well, but requires much more practice until the results fit.

Verdict

The Dubler Studio Kit is a unique product with impressive technology and a great fun factor. Although the drums were not quite as easy to control via microphone, singing melodies works flawlessly and controlling filters or other parameters via vocals is more than just a great bonus, both in the studio and on stage. And last but not least, thanks to chords, scales and quantization, Dubler is a true source of inspiration for any type and form of music. Top!

Developer: Vochlea
Web: vochlea.com
Distribution: Website
Format: Standalone
Price: \$360 US Dollars

Rating: ■■■■■■■■■■



The current assignment of the endless controllers can be read on the display, but this requires some thinking due to the staggered arrangement.



The highlight of the opsix: Direct access to all operators, the illumination adapts to the function (carrier or modulator).



The graphics-capable OLED display not only shows controller movements, but can also display the waveform in real time.

Connections reduced to the essentials

All connections are on the back and are quickly dealt with. The opsix is only monostimbral, so it can only produce one sound at a time and not several (even if at least a kind of split sound can be programmed with the FM synthesis). Therefore, single outputs could be omitted, audio signals reach the outside world via two balanced jack sockets and a headphone jack. MIDI data is received and sent

via USB or two DIN jacks (IN/OUT), USB audio was not integrated. An audio input is also missing, which is a pity considering the good filters and effects.

There is only one connection for a damper pedal. If aftertouch is omitted, Korg could have at least integrated a connector for an expression pedal; however, keyboardists can use a decent external keyboard with aftertouch and additional controller connections, anyway. The power is supplied via an external power supply.

Knobs and faders for each OP

On the other hand, the very lush features of the controls for an FM synthesizer are pleasing. In the upper left corner there are six faders and endless knobs. These are used to control the volume and frequency spacing of the individual oscillators. The faders and knobs are illuminated and their colors indicate whether the respective oscillator is used as a carrier or modulator. Reminder: Depending on the linkage, an oscillator (called operator in FM) can either be heard (=carrier), or it serves in the background for frequency modulation of a carrier (=modulator). For example, Operator 1 and 3 can be sent directly to the audio output, while Operator 2 modulates Operator 1 and Operator 4 acts on Operator 3 and is, itself, influenced by Operators 5 and 6. In addition, there is a feedback loop that allows an operator to modulate itself. Sounds complicated? It is, and it takes some experience to use FM to create the sound you want.

Advanced FM Synthesis

The sound synthesis in the opsix goes way beyond the DX7 and offers more waveforms per oscillator than just sine and also allows more combinations. 40 algorithms plus individual operator circuitry are available. The volumes of the modulators, which have a different effect than in analog synthesizers, are essential for their sonic results. If you modulate the volume of Operator 2 via an envelope in the example above, the modulation of Operator 1 follows this course. This is more reminiscent of a filter envelope than a volume envelope, since Operator 2 is not audible as a modulator. The same applies to the frequency ratio between carrier and operator. It decides between bell and bass, harmonic piano sound or disharmonic metal thunderstorm. And this complex interaction can be „grasped“ directly with the opsix in the double sense of the word, because you have direct access to these parameters for all six operators.

No macro controls

The fader/encoder combination is complemented by six additional knobs on the right side, which fulfill various functions. Among other things, you can use them to edit the volume and pitch curves, switch between the menu sections and the individual operators with the buttons below them; and the central OLED display shows the current parameter assignment of the knobs. Here, unfortunately, the operation becomes a bit more menu-heavy and fiddly, but this is more the fault of the complex possibilities of FM synthesis than Korg. Nevertheless, from our point of view, it would have made sense to give the opsix a few macro knobs to set parameters like attack and decay of the envelopes for all modulators or all carriers together, like on the Volca FM. At least a selection of several operators for joint editing (like with the RefaceDX controller from Dtronics) would be a relief. Perhaps this can still be upgraded via firmware update.

» Soundwise, the opsix offers digital diversity, from crisp bases to dreamy arpeggios and ice-cold or beautifully soft pads. «



Via the illuminated buttons, you have access to the 16 steps of the integrated sequencer.

Additional digital synthesis

As already indicated, Korg does not rely on FM synthesis alone for the opsix, but has built in numerous other features. Not only can one of the 21 available waveforms (sine, sawtooth, square, and more) be selected for each individual operator, but alternative synthesis can even be set. Instead of frequency, volume can be modulated, resulting in a high-speed tremolo and thus a similar but different sound coloration compared to typical FM. FilterFM allows the modulation of the cutoff frequency in the audio range. This effect provides rough, metallic and overtone-rich sounds depending on the resonance value. Wavefolder „folds“ the waveform resulting in aggressive and distorted sounds. And if you prefer virtual-analog, you can do without digital modulation and choose the pure filter engine to send the unaltered waveforms through the great-sounding filter emulations. A widely configurable random function helps to create your own sounds even without a deeper understanding of sound generation.

Virtual analog filter

The signal of the sound generators runs through a virtual analog filter. Eleven different filter types are available, including the legendary MS-20 filter for dirty sounds with character and the Polysix filter for beautifully smooth pads and leads. Those familiar with the corresponding plug-ins know that Korg's digital recreations of analog filters can sound quite convincing. And Yamaha has already shown with the DX200 groovebox that a downstream filter is useful for taming the harmonic orgies of digital audio modulation.

Modulation variety and effects

The modulation sources have not been spared either; in addition to three envelopes and four flexible LFOs, there are two modulation processors that take over different functions and can even influence each other.

This is on the level of large modular systems. Finally, there are three simultaneously available effects with everything your heart desires: compressor, EQ, chorus, flanger, phaser, stereo delay or even rotary speaker and grain shifter. High-quality reverb effects for the final finishing of the sounds are also on board. The most important parameters of each effect can be edited and, as with the Wavestate, the effects impress with their very good sound. Unfortunately, it is not possible to load additional effect algorithms as with the Minilogue XD.

Polyphonic step sequencer

The 16 buttons in the lower area of the control panel are used to control the internal step sequencer, among other things. This sequencer is polyphonic - that is each step can play up to six different notes. The velocity, note duration and playback timing can be set individually for each note. Long phrases are just as much a part of the possibilities as subtle timing offsets for emulating guitar strumming and drum rolls - a feature that is rather rarely found in integrated step sequencers. The motion sequencer in the opsix permits recording of value changes of up to six parameters, allowing dynamic sound changes and rhythmic effects without much effort.

Flexible sound generation

Sonically, the opsix offers digital diversity, from crisp basses to dreamy arpeggios to ice-cold or beautifully soft pads - everything is on offer here. It's always amazing how flexible FM synthesis is. It can sound digitally cutting like a polar wind, but with the right programming also warmer and more „analog“ than many a VA synthesizer. In terms of basic sound, the opsix sits a bit between the raw FM sound of the early DX models and the extremely transparent and punchy sound of Yamaha's newer FM synthesizers like Reface DX or Montage, and seems a bit tame and lacking real bite in direct comparison.

On the other hand, it shows itself to be very flexible; in addition to the classic FM sounds, with the help of the additional functions, filters and effects, very modern-sounding and unique sounds are also possible. This is evidenced by the numerous presets, which, in addition to ready-to-play sounds, also offer plenty of templates for a simplified start to programming your own sounds. 500 presets can be stored in the device, of which a good half are preset with factory sounds. A positive feature is that the old sound fades out when the program is changed, if the maximum of 32 voices allow it.

Digital competitors

Besides the aforementioned FM synthesizers like Reface and Digitone, the flexible ASM Hydrasynth digital synthesizer is definitely an alternative. Argon8 and Cobalt8 from Modal score with a more robust case and a much better keyboard. Their sound generation offers fewer options, but you have direct access to almost all parameters. Waldorf Iridium pushes the digital variety to an even higher level, but is also a good deal more expensive.

Verdict

It is delightful that Korg is another major manufacturer that has rediscovered FM synthesis. The opsix deserves a lot of praise for the features with six faders and knobs each, which allow direct access to volume and ratio of all six operators at the same time and provide a better overview through color-matched lighting. This makes the opsix probably the most accessible FM synthesizer ever, even if we would have wished for macro knobs for easier operation of the other functions. opsix even goes beyond the extensive possibilities of a classic FM synthesizer with the additional digital sound synthesis and additionally offers subtractive post-processing with virtual-analog filters, high-quality effects and a polyphonic step sequencer with parameter recording. As with the Wavestate, the hardware is to be criticized; in particular, the rickety keyboard with no aftertouch is not appropriate for the asking price. ❄️



More Info

Review: UDO Audio Super 6

Super6 is inspired by Roland's classic Jupiter-6, but goes its own sonic way with a combination of digital oscillators and an analog filter. *by Jan Wilking*



Two colors are available: Super6 is available in blue or black/dark gray.

This 12-voice hybrid synthesizer already caused quite a stir at the 2019 Superbooth trade show with its extravagant design and convincing sound. But it would be a good year and a half before the synthesizer, which is based on the legendary Roland Jupiter-6 and features FPGA-based digital oscillators and an analog low-pass filter, was ready for series production. We have secured one of the first copies for a detailed test.

From lovers for lovers

Super6 is the debut synthesizer from the young company UDO Audio from the UK. The driving force behind this synthesizer is the likeable George Hearn, who was already involved in the development of the Modal 008 and is at least as fond of synthesizers as the potential buyers are! Even if the name and the overall design suggests it a bit, the Super6 is more than just a clone of analog vintage classics like the Jupiter-6. Although the basic sound of the Super6 definitely leans in the direction of Roland, you can also hear American influences ranging from Moog to Sequential.

Eye-catching design

The sound synthesis is built into a robust metal case of the „Made in Germany“ level of quality, which is optionally

available in a blue or dark gray finish. We somehow liked the blue even better on the pre-series model presented at the trade show, but that may be deceptive and design is highly a matter of taste anyway; especially when Axel Hartmann is behind it. In any case, the design in conjunction with the white, straight-line lettering looks very techno. The upper area allows direct access to the parameters of the synthesizer. Based on the Roland classics, UDO relies primarily on faders. This is especially practical for the envelopes because, in this way you can also visually follow the course. With the help of 24 faders, 6 knobs and a variety of switches, you can create just the right sound without any detours.

Only 64 memory locations

In the lower section, you load and save sounds, operate the arpeggiator/step sequencer and adjust the performance

controls. A total of 64 factory presets and 64 custom sounds can be stored in eight banks of eight sounds each. Sure, this is also a reminiscence of the old Roland synthesizers, but with a digital synthesizer from the year 2020, there surely would have been a few more memory slots. Due to the lack of a display, you are also flying blind when selecting the sounds or have to rely solely on your ears, but we didn't really find that too annoying. Fortunately, sounds can be exported and imported via USB; when a computer is connected, the Super6 appears as its own drive and files can be easily exchanged between the computer and synthesizer.

Good Fatar keyboard

The lever-bender as a replacement for the pitch bend and modulation wheel is also a Roland relic. With this, you control a hidden second LFO for vibrato and

Features

- Hybrid synthesizer
- 12 voices
- Binaural stereo
- Digital oscillators (FPGA)
- Analog low-pass filter
- Arpeggiator/Step Sequencer
- Chorus/Delay
- 49 keys, aftertouch

Facts

Manufacturer: UDO Audio
Web: udo-audio.com
Distribution: Specialty
Price: 2,499 Euro

- ▲ Lively sound
- ▲ Flexible oscillators
- ▲ Analog filter
- ▲ Fast LFO
- ▲ Binaural stereo sound
- ▲ Good keyboard
- ▲ Audio input
- ▲ Robust build quality
- ▼ Price

Sound: ██████████
Build Quality: ██████████
Price/Perf: ██████████
Total: ██████████

Alternatives

Novation Summit
2,045 Euro
novationmusic.com

Roland Jupiter X
2,280 Euro
roland.com

Arturia PolyBrute
2,544 Euro
arturia.com

» **More than just a clone of analog classics.** «

filter modulation. A very playable keyboard from Fat-ar was built into the Super6, which handles aftertouch, as well as velocity. It covers a range of four octaves; therefore, the Super6 remains reasonably transportable despite a healthy weight of a good 10 kilograms. Nevertheless, we would have liked to see a version with 61 keys. Overall, Super6 leaves a solid impression; nothing wobbles or creaks, and this synthesizer should survive rough everyday touring without any problems.

No CV/Gate

The rear panel is unspectacular. USB and the classic MIDI trio serve the connections to computers and other equipment. There are no CV/Gate connectors for linking to analog sound generators, but the alternative use of a MIDI socket as a DIN socket for synchronization with analog drum computers is being considered. Two pedal connections will please the traditional keyboardist and underline the Super6's claim to be an instrument rather than a mere sound slinger. Matching this is the built-in power supply, which connects to the wall socket via an IEC cable. Two jack sockets bring the stereo audio signal to the outside world, plus there's another output for the headphones.

FPGA chip inside

The generation of the sounds is done by an FPGA chip in the Super6. This chip is so popular with virtual-analog synthesizers because it can be programmed in a highly specialized way, coming closer to the actual behavior of real analog hardware circuits than other DSP solutions. Similar to Roland's Boutique series, the Super6 uses all of its processing power to deliver the most faithful sound possible and, accordingly, can only deliver a limited number of voices. In return, no aliasing or other digital noise is audible even when played in the highest registers.

Two digital oscillators

Super 6 offers two oscillators per voice, named DDS1 and DDS2. Both oscillators have the standard waveforms: sawtooth, square, triangle, sine

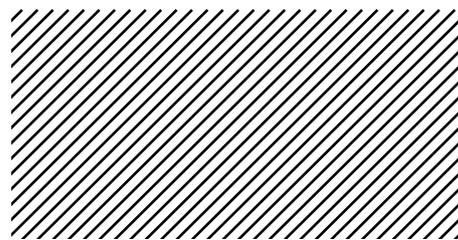
and noise. DDS1 grants access to an additional 16 digital waveforms, which can also be exchanged via computer. In addition, it can be expanded sevenfold without loss of tuning for the infamous SuperSaw. This also works with other waveforms including the digital variants, so sounds beyond classic trance horns are possible. And a sub-oscillator can also be activated, but then DDS2 is no longer available.

Flexibility thanks to digital waveforms

DDS2 has a square wave with variable pulse width, which can also be modulated (PWM). DDS2 can be synchronized to DDS1 and its pitch modulated for classic sync sounds - that sounds really good! Anyway, the basic waveforms of the oscillators sound very strongly analog and also feature those subtle changes with each keystroke that our ears perceive as lively and organic. With the additional options, however, a digital variant can be added, if necessary. The digital waveforms, in conjunction with the analog filter, are quite reminiscent of hybrid classics such as the PPG or Prophet VS.

Audio range LFO

LFO1 deserves special attention, because it can do so much more than just filter wobble and PWM. In HF mode, it reaches frequencies up to 20 kHz - well into the audible range. Moreover, key tracking can be activated and the frequency can be adjusted to the two oscillators, allowing harmonic FM sounds. And besides the standard waveforms, the digital waves of the DDS1 can also be used for the LFO! For weird, overtone-rich sounds, there's also cross-modulation.



Binaural stereo sound

Despite the simple structure at first glance, Super6 also offers a lot of sound options on the oscillator level that go far beyond classic analog synthesizers. And to make the whole thing sound nice and wide, there is also the so-called binaural mode. Here, the sound is doubled and distributed in the stereo field to provide more spatiality and liveliness. This costs half of the 12 voices - the sounds are then only playable in 6 voices. But the effect goes far beyond simple doubling and hard-panning and also allows subtle sound migrations in the stereo field, since phase shifting and detuning can be adjusted.

Analog low-pass filter

Another important component of the Super6's convincing sound is the analog filter. It is a 24dB low-pass filter, based on the filter model used in the Korg Polysix and currently in the Prophet X. The filter sounds excellent, nice and creamy and smooth and, even at high resonance values, not exhausting, but wonderfully harmonic - very Roland style! With a drive that can, unfortunately, only be adjusted in three steps, it can be driven hotter for more aggressive, distorted sounds. A switchable high-pass filter thins out the low frequencies, if necessary; and, in TRK mode, bandpass-like filtering is also possible.

» Although the basic sound of the Super6 leans in the direction of Roland, you can also hear American influences from Moog to Sequential. «



With a robust metal housing, very good keyboard and built-in power supply, the Super6 is also equipped for rough everyday touring life.

 **NEW**

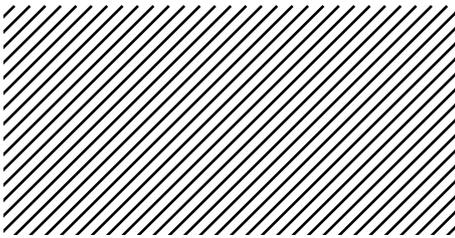
INSTANT MASTERING

PRO QUALITY MASTERS WITHIN MINUTES

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FULL TRACK PREVIEW



Envelopes with extras

Two ADSR envelopes for filter, amp or other destinations like pulse width or pitch (also inverse) complete the sound generation. What's interesting here is the adjustable delay time of Envelope 1. Keytracking and loop functions extend the possibilities of the envelopes and turn them into additional super-flexible LFOs, whose intensity can also be controlled by velocity. The assignment of the modulation sources (including DDS2!) to the modulation destinations is done via a small modulation matrix.

Chorus and delay

As befits a synthesizer inspired by Roland classics, the end of the signal chain is followed by a chorus that can be switched in three stages via two buttons; but it can't quite keep up with the great models in terms of sound. The same applies to the delay. You only have access to intensity, delay time and feedback. There are no options like ping-pong or even multitap, and the effect also sounds rather digital in a negative sense and lacks warmth and liveliness. The effects in the current version should, therefore, be seen more as a practical addition for live performance. In the studio, the Super6 with good external effects, again, significantly improves.

Apegiator / Step sequencer

Of course, there is also an arpeggiator, which is also limited to direct access to rudimentary features. At least it saves the order of the notes entered, so that sequences of notes beyond simple ascending or descending sequences can be created. Swing provides further loosening up, a hold function frees the hands for further tasks like tweaking the sound. A classic step sequencer is also on board. It records up to 64 steps and allows you to set slides, accents and pauses. You can save 64 sequences and link them to sound presets to call them up together during live performance.

Alternatives?

Anyone who has had the pleasure of playing the Modal 002, which is, unfortunately, no longer available as a new purchase, will be reminded of

this hybrid synthesizer by many things about the Super6. No wonder, given the career of the main developer described in the introduction. Contemporary, transparent sound with vintage charm probably describes it quite well. The Modal Cobalt8 can, therefore, definitely be kept in mind as a much cheaper alternative - even if the analog filter there was replaced by a digital emulation for cost reasons.

Both in terms of price and sound, the Roland Jupiter-X plays on a similar level. Its sound generation is even more flexible and the excellent analog emulations of Roland's classics impress with a punchy hi-fi sound; but, due to the lack of an analog filter, it lacks the last bit of vintage character and thus also a bit of a goosebump effect. Novation Summit offers a similar hybrid concept with flexible digital oscillators and an analog filter, but also sounds a bit more well-behaved and inconspicuous than the Super6. On the other hand, it offers more sonic variety, not least of all due to the split and layer options and the very good effects. Korg's Prologue also combined a digital engine with an analog filter and is now available in an 8-voice version for under 1,000 Euro.

Verdict

Sonically, the Super6 shows what optimized digital technology is now capable of. The oscillators sound analog in a positive respect, with a powerful and lively sound. The frequency modulations in the audio range also know how to please and do not sound harsh and exhausting as is the case with many other digital synthesizers. The digital substructure has the advantage that the options of the oscillators go far beyond what analog technology has to offer. Paired with the excellent sounding analog filter, Super6 excels at all standard analog sounds, be it warm and wide pads and strings, creamy leads or rich synth basses. The basic sound definitely leans in the direction of Roland, but with a certain American touch. However, the hybrid concept also allows for sounds full of character that go beyond the classic analog sounds. Super6 responds very well to high-quality external effects. And if you then play the synthesizer via the excellent keyboard like a real instrument, goosebumps are guaranteed! Although this pleasure is not quite cheap, in this respect such a small



More Info

company can not keep up with the global players like Roland, Yamaha & the like, however, in return you get an extraordinary synthesizer of the highest class, individually developed with attention to detail. ::



CV/gate connections have been completely omitted, but there is an audio input for looping in other sound generators.

Review: MicroFreak Vocoder

The MicroFreak has been on the market for almost two years. Now this small hybrid synthesizer comes to the market in a new design and as a surprising Vocoder Edition. And this is also for older MicroFreaks! by Jan Wilking

Features

- Hybrid synthesizer
- Touch keyboard with 25 keys
- Digital oscillator
- 16-Band vocoder engine
- Analog filter
- Step Sequencer/Arpeggiator
- 256 memory locations
- USB, MIDI, CV/Gate
- Includes gooseneck-microphone

Facts

Manufacturer: Arturia
Web: arturia.com
Distribution: tomeso.de
Price: 278 Euro (Vocoder-Edition); 30 Euro (Microphone for Standard-Edition)

- ▲ Hybrid synthesis
- ▲ Vocoder algorithm
- ▲ Clip-on microphone
- ▲ Analog filter
- ▲ Step sequencer
- ▲ Polyphonic aftertouch
- ▲ CV/Gate outputs
- ▲ Attractive price
- ▼ Short microphone neck

Sound: ██████████
Features: ██████████
Price/Perf: ██████████
Total: ██████████

Alternatives

Novation MiniNova
 329 Euro
 novationmusic.com

Korg Microkorg
 from 339 Euro
 korg.de



The included microphone simply plugs into the back of the headphone jack and can also be purchased separately to retrofit a „normal“ MicroFreak.

The name says it all because the outstanding new feature is the vocoder algorithm, with which the Microfreak can alienate voices and turn drum loops or other audio material into rhythmic pads. Similar to the Novation AFX Station, the core technology remains unchanged, so owners of the „old“ Microfreak can also enjoy this new feature.

Disguised microphone input

But how do you get the microphone or another audio signal into the Microfreak? After all, this compact synthesizer has no audio input! It does, but only the developers knew this until now: the headphone output is assigned similarly to a smartphone, where a headset can be

connected for listening and speaking. The included gooseneck microphone ends on a four-pin (=3 rings) mini-jack plug, docks solidly with the plastic base and conveniently loops through the headphone output as well. Unfortunately, the neck of the microphone is a bit too short, so that the synthesizer either has to be placed high or you have to bend down a bit when singing in. With a suitable adapter cable, however, you can also loop audio signals from a mixing console or DAW into the Microfreak.

New Design, identical core

Externally, the Vocoder Edition stands out with its white case adorned with swan graphics. Nothing has changed in the core of the sound synthesis. A digital sound

processor offers various oscillator models, which can also be upgraded via firmware update. So the Microfreak first got a flexible noise generator and, in the brand-new version 3.0, three more oscillators from Noise Engineering with Wavefolding, Additive Harmonic Color and Phase Modulation, which invite you to experiment. Also new is the 4-voice unison function for all oscillator types, including modulatable detuning. Only the 12dB multimode filter is analog. The predominantly digital design has the advantage that the MicroFreak can be played polyphonically with up to four voices - despite the low price. The analog filter is the only thing that all four voices have to share, so it is an extended paraphony.

Polyphonic aftertouch, CV/Gate

The „keyboard“ consists of two circuit boards with conductive tracks and works capacitively, so it reacts to touch and needs skin contact to close the circuit. Nevertheless, the keys are velocity-responsive, and by touching with more finger area, polyphonic aftertouch is also possible! On the back is the USB port for computer integration, which can also take care of the power supply. Outputs for CV/Gate, as well as pressure, make the MicroFreak (in combination with the flexible arpeggiator and polyphonic step sequencer) a great alternative to the popular Keystep.

Vocoder algorithm

To use the microphone, the Mic Gain must first be turned up in the Utility menu, a VU meter in the display helps with the level or you can select the automatic volume adjustment. A noise gate has also been integrated to let only the desired vocal signals through and no background noise, thus preventing a feedback loop. With a suitable headphone splitter cable, you can also loop in another sound generator as a modulator for the vocoder instead of your voice.

There are three parameters for adjusting the new vocoder algorithm, just like in all other oscillator types. Wave fades the carrier waveform smoothly from sawtooth to pulse wave with variable pulse width to noise. Timbre sets the frequency range in which the vocoder should operate. And with Shape, you adjust the bandwidth of the individual filters of the vocoder to emphasize certain sound ranges. The 16 presets give you a good starting point for the



Thanks to the integration of a vocoder algorithm, it is now even more fun to perform live with the MicroFreak.

optimal settings, but since every human voice is different, you'll need to experiment a bit with the settings for optimal results.

You should not expect miracles in terms of speech intelligibility or transparency, the MicroFreak vocoder has more of a lo-fi charm and lives mainly from the extensive post-processing options with analog filter, loopable envelopes, modulation matrix, arpeggiator and step sequencer.

Verdict

With the vocoder algorithm and the unmasked audio input, the already exceptionally flexible MicroFreak covers additional application areas and invites experimentation. The integration of the included microphone is thoughtfully solved; the modulation matrix and sequencer with parameter recording provide a lot of movement, and the filter gives it that analog touch. The capacitive keyboard with polyphonic aftertouch forms a creative input element and, spruced up with external effects, the MicroFreak sounds much bigger and more expensive than it actually is! 🍷



The rear panel even offers CV, gate and clock in addition to MIDI, so MicroFreak and Modular Racks get along just fine.



More Info

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Review: Chronovore

The 303 sequencer as a rack module? Here you go. With the unusually titled Chronovore, Michigan Synth Works deliver just that. And as authentic as possible, because the internal Pixie u650 processor emulates the original „operating system“ of the TB. Is that still up to date? **by Marco Scherer**

Features

- 303 sequencer module
- CV-, gate- and accent-out
- MIDI input
- 7 songs
- 32 patterns



The Chronovore 303 sequencer promises authentic patterns and puristic operation.

Accent, in turn, sends a simple CV pulse that can be linked to any parameter, such as the filter resonance, if the result is to sound like a 303. Outputs are Gate, Pitch, Accent and inputs are Run, Clock and MIDI, which can be used to synchronize the module to external sources. For the MIDI input, the manufacturer provides an adapter cable so that any MIDI source can specify the clock.

fun. Unfortunately, there is no official manual at the moment, so the inclined user will have to resort to tutorials from the original.

The advantages

Once you have overcome the programming hurdles, however, the sun rises because this is when the module shows its true strength: the typical hook-, bass- and acid-lines of the TB-303. In our test, we connected the sequencer to various sound modules and were impressed on the one hand by how much an ordinary A-111 oscillator from Doepfer can sound like a 303 when played by the appropriate sequence and, for example, the filter resonance is controlled by Accent. On the other hand, we were thrilled by the results the Chronovore delivers together with Plaits from Mutable Instrument when accent changes the sound creation or affects the FM knob.

Facts

Manufacturer: Michigan Synth Works
Web: michigansynthworks.com
Distribution: Website
Price: \$330 US Dollars

- ▲ Authentic patterns
- ▲ Memory locations
- ▼ Awkward operation
- ▼ Build quality

Build: ████████
Operation: ██████
Price/Perf: ██████
Total: ██████

Fans of Roland's TR-303 will probably cheer now, while others will scratch their heads and ask why you should build a sequencer from 1981 into the rack. Clearly, the 303 is famous for more than its sound alone, but also for its idiosyncratic patterns, especially thanks to its characteristic slides and accents. And with a sequencer like this, they can be used with any sound. So is this the ultimate hookline machine?

Feature overview

The patterns in this module are up to 16 steps long and contain one note value per step, which in itself already covers all similarities with other sequencers. In addition, each step can be transposed an octave via the up or down buttons, and slide and accent can be added. In contrast to the usual portamento on other sequencers, the 303-Slide does not start at the end of the note, but at its beginning and also extends the current step into the next one. This is of course a simplified explanation, because the real magic behind the slides is even more complex and that's exactly why they are so unique and famous. Since Michigan Synth Works Chronovore has no sound generation of its own, the effect of the slides depends heavily on the programming of the modules used.

The (beastly) sequencer

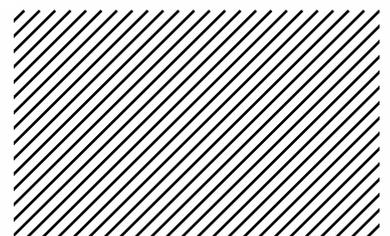
So far, so good and probably still comprehensible. The matter becomes much more complicated as soon as it comes to programming the 32 available patterns. Where others display a number of the current step and wait for input, the Chronovore shows all the idiosyncrasies of the 303 original.

The sequencer distinguishes between tracks and patterns, whereby the seven tracks offer a kind of song mode in which patterns can be connected in series. The patterns are divided into normal and pitch mode. The former is responsible for playback, the latter for entering notes, slides and accents. But this mode can only be called up when the pattern is in write mode. Since the current step is not displayed in any form, the overview is lost more quickly and the reworking of existing patterns is feasible, but it is extremely awkward. So, if you have never used a 303 before, you will likely be sitting there in despair in front of the module, because the programming is anything but self-explanatory.

There are additional peculiarities, which we won't go into for reasons of space, but the conclusion is the same: a few hours of familiarization and practice are mandatory; otherwise, the module will not bring you the desired level of

Verdict

Chronovore is a very special kind of tool. The sequencer is extremely authentic and, thus, a curse and a blessing at the same time. After all, in 2021, this complicated kind of pattern programming not only feels oldschool, but is cumbersome and, therefore, restricts the circle of users exclusively to purist 303 fans. On the plus-side are the faithful and unique results - you'd probably never create patterns exactly like this with modern sequencers. And once you've gotten to grips with the way it works, there's no shortage of fun either. If you like 303 sequences, you will have great fun with this uncompromising module. 🍷



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Hands-on: Psytrance

From idea to finished track

Crispy beats, staccato basslines and powerful, psychedelic hooklines – Psytrance has lost nothing of its fascination since the early nineties and continues to attract a huge fan base. Of course, we're making a contemporary track that shows Psytrance at its best. **by Marco Scherer**

Project Info



Material: DAW; Curve BE, OxeFM, Beatzille, BE-EQUA87, Tyrell, Dune LE, Multiply, TB_Reverb from this issue's magazine data.

Time Required: About 2 Hours

Difficulty: Advanced

KICK



1 Kick & Bass

Psytrance has undergone a number of transformations over the years, has been expanded to include contemporary elements, and always draws inspiration from other genres. But two characteristics have always been in focus: a powerful kick with a distinctive click and a heavy bass, either as a rolling variant with 16th notes, as an off-bass or in a triplet pattern. Often two variants are used in one track. ❖



2 Equalizing

You can find a base of typical kicks on this month's DVD. Alternatively, the **BazzISM Synth** [1] is very popular with producers. We used the „**BD Transfuser Prog**“ sample that we sampled from the plug-in of the same name. Since the bass drum has a lot of sub, we loaded an **EQ** behind it and cut away the frequencies below **40 Hz**. For more emphasis on the body, we add two bands. ❖



3 Emphasis

The pitch of the track is supposed to be **F#**. From a frequency table (see issue data) we learn that the frequencies of **F#** are multiples of 23.12. So 46.25, 92.5, 185, 370 and so on. Set the **LF-Band** to **92.5** and add **7 dB**, the **MF-Band** to **185 Hz** and add **3 dB**. The intensity varies depending on the kick. Turn **Q** full up on both bands and turn off the EQ's limiter. ❖

BASS



1 Basis

For the kick, record a 4/4 pattern that's eight bars long at 140 bpm, leaving the last bar empty. We will fill this with a bass variation later. First, the actual bass line: Load the **Curve BE** on a new track, pitch both **oscillators** to -12 and turn **Volume of Wave 1** to 0, **Wave 3** to 0.81. **OSC 1** will take care of the prominent part of the sound, **OSC 2** will deliver the sub. ❖



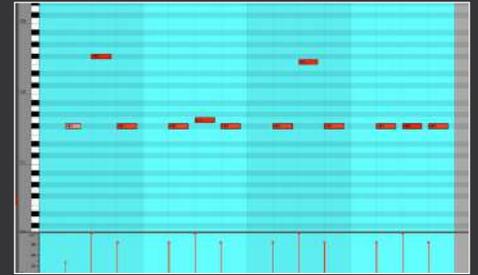
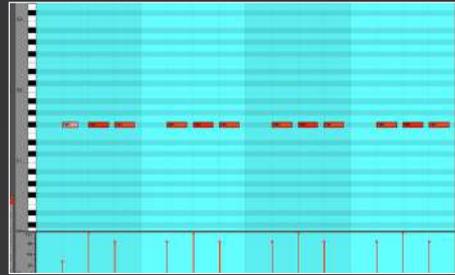
2 Sub

Select the **Triangle** waveform, route the oscillator to **Filter 2** only and set the **24 dB S-K LP** low-pass variant there. With **Cutoff** at 117 Hz, we make sure that really only the bass happens. With this, Curve already delivers a nice foundation, but it's still not very typical for Psytrance. This is because sawtooth waveforms play the main role here. So select the sawtooth waveform for **Wave 1**. ❖



3 Sawtooth

We mix the oscillator with **Volume** 0.55 and pass it through both filters, one after the other, with **Filter 1>2**. For the former, we select the type **24 dB S-K HP** (high pass) and turn **Cut-off** to 104 Hz. This filters out the sub, which we already assign to Oscillator 2, but adds the desired, typical character. The sawtooth alone would not be powerful enough without the **Triangle** waveform. ❖



4 Filter

In the Mod Matrix, connect the **EG** with maximum intensity to **Cut2**, so that the second envelope acts on the filter. For the EG envelope, we set **Decay** to **34 ms** and **Release** to about **400 ms**. **Attack** and **Loop** remain at **0**, so Filter 2 snaps open very briefly and then only lets the low-frequency bass through. So far so good. Now we need the right sequence for the bass. ❖

5 Velocity

First, create a 16th note sequence on **F#1** and shorten the notes a bit so they don't play full-length 16th notes. Delete the first note of each quarter to give air to the kick. For a less rigid pattern, we vary the velocities of the notes. This can have a very significant effect on the groove, so be sure to experiment with different velocities. ❖

6 Pattern

We emphasize the off-beats, so we set all odd 16th notes to full velocity, while a value of 100 is sufficient for the rest. We lower the velocity of the first 16th note to 40. This way it grooves more, but it sounds exciting in a different way. So we shift some notes away from **F#1**. For the beginning, we recommend jumps of a whole octave or a semitone and no more than three jumps per bar. ❖❖

HOOKLINE



1 Drive

The beat alone doesn't make a track, so we add a little melody to it. As with the bassline, 16th note staccatos and arpeggios are the order of the day, with wild filter rides providing action. Analogous to Trance and Hardstyle, the use of **Supersaws** is almost mandatory for Psytrance as well. As a basis for our hook, we fall back on the **Synapse Audio Dune LE** and load the **Init** preset C128. ❖

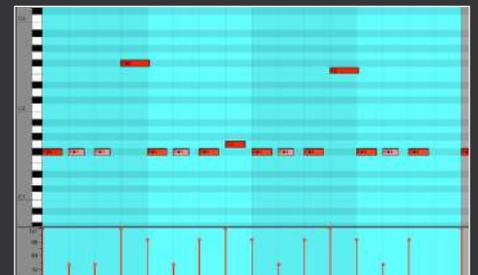
2 Supersaw

We leave **OSC 1** on the **Sawtooth** waveform, but turn up **FAT** a little. Add some **NOISE** (LEVEL at 9 o'clock) to give the sound more punch in the later mix. We set **CUTOFF** to **11 o'clock**, **ENV** to 3 o'clock and turn the **DECAY** knob only of the **FILTER ENVELOPE** to 11 o'clock; all other knobs to 0. We create the **Supersaw** by turning up the **VOICES** knob to 1 o'clock. ❖

3 Melody

To do this, set **DETUNE** to 9 o'clock and **SPREAD** to full blast. As before with the bassline, we take a 16th note pattern on **F#1** as a basis and transpose about half of the notes upwards. Again, steps of one or 12 semitones are recommended, with discreetly interspersed deviations. Embellish the sound with plenty of **Delay** and **Reverb**. Later in the track, automating **Cutoff** adds some excitement. ❖❖

ACID



1 Beatzille

Similar to the Supersaw, the 303 also has a duty to make an appearance in a typical Psytrance track. The lengthy opening and closing of the filter, in combination with the resonant swirling, is virtually synonymous with „traveling“ in music. But Roland's classic is not always employed for this purpose, modern synths also provide suitable sounds - like our own **Beatzille**, which we load into the DAW. ❖

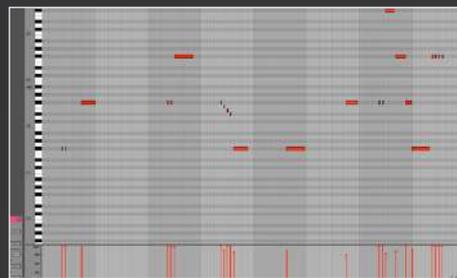
2 Accent

Set the **Fractalize** knob to 9 o'clock and select **Saw Mode** next to it. With this control alone, you can create „swirly“ sounds. For the snapping sound which is so typical for Acid, we use **ENVELOPE 2** with **DECAY** at about 30%, connected with **PD** at full intensity, as well as with **Fractalize** at 1 o'clock (as shown in the picture). We connect **OSC 1 Volume** to the **FILTER** and its **LP6** to **OUT 1**. ❖

3 Movement

The **LP6** Lowpass Mode is rougher in sound. With the **Gain** and **Resonance** controls set to 3 o'clock, the filter pleasantly goes into overdrive. As a basis for the sequence, we take the bassline pattern, but shift the notes a 16th to the right and fill the gaps. Now just automate the two **Fractalize** controls and the sonic journey can begin. ❖❖

FILTER FX



1 Filter Run

As already mentioned, Sawtooth waveforms play a big role in Psytrance. So, they also set the tone for many effects. One of the most important effect sounds is created with the **Tyrell**. We only need **OSC 1**, so we set its volume to 10; all others are set to 0. For the waveform, we set it to **Saw**, of course. For the Filter, we select **LP/HP** and push **MIXSPR** all the way up. ❖

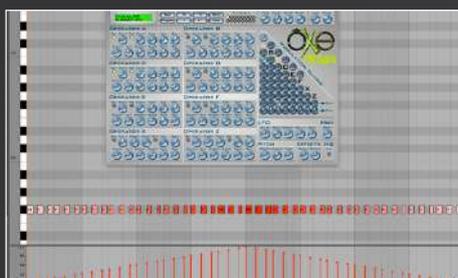
2 Modulation

This makes the filter act as a Highpass Filter. Set **CUT** to 0 and **RES** to 5. We create the characteristic effect by modulating both Pitch and **Cutoff** simultaneously via the Pitch Wheel. In the **OSC MOD** section, therefore, we select 24 semitones at a time for **PITCHBEND** and specify **PitchW** as the source for **FILTER MOD 2** at full intensity. For more dirt, we turn **FEEDBACK** to center position. ❖

3 Staccato

We record the pattern for this on-the-fly: Play in individual F# notes of different octaves according to your own taste. Then, quantize the notes and place two very short 16th notes in front of them to emphasize the staccato effect. After Tyrell, we set a **3/16 delay** with **40% feedback** and at **40% wet**. Behind this, again, we load a **compressor** that only applies a moderate amount of compression. ❖

RISER



1 FM Synthesis

Other features are, on the one hand, the use of harsh FM sounds and, on the other hand, the permanent automation of their properties to keep sound and flow in motion. With the **Oxe FM** synth, we assemble such a representative and immediately use the first preset as a template. Turn all controls of the Mod Matrix (via double-click) to **0**, except the connection from A to C. ❖

2 Operators

We want to hear the result of the modulation of the two Operators, so we turn up the volume of C fully in the penultimate control line. For **Operator C**, we select the Saw wave and transpose it 2 octaves up via **COAR(se)**, while **Operator A** is transposed 2 octaves down. To prevent A from permanently affecting C, we set **Attack** to 8 o'clock, **Decay** to 11 o'clock, **Sustain** to 0 and **Release** to 10 o'clock. ❖

3 Velocity

Since operators in FM synthesis modulate more or less violently depending on their volume, velocity plays a major role. The harder you trigger a note, the louder Operator A is, and the more prominent its influence on C becomes; therefore, we record a simple pattern, but let the velocity rise and fall steadily to make the sound lively. ❖

ETHNO SOUNDS



1 Origin

Due to the origin of Psytrance in Goa, many artists and tracks are inspired by the instruments and moods there. The corresponding sounds are to be found in abundance in the form of drums, vocals and emotions. So we want to garnish our track with vocals as well. Material can be found at sample providers like Loopmasters [2] or Prime Loops [3]. ❖

2 Samples

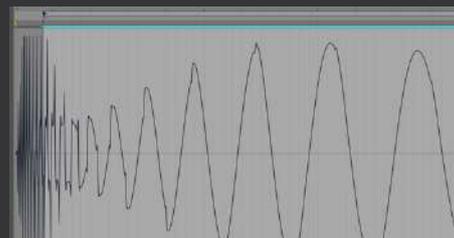
Even the sound banks of some large romplers and samplers such as Kontakt or HALion usually contain a section for ethnic sounds. We help ourselves to the „**MidEast Vocals**“ button pack from Rast Sound [4] and load the **DUYGU_LONG_2_Cs.wav** sample into the DAW. The good lady sings in C#, so we transpose her 5 semitones up to F#. On the track, we load a **Chorus**, a **Reverb** and an **EQ**. ❖

3 Effects

For the Chorus, we use the freeware **Multi-ply** from Acon Digital and its „**Honky tonk**“ preset. This makes the vocals wider and creates a nice wafting effect. With **TB Reverb**, we set the **REVERB TAIL** to 4 seconds, **MIXER** to 50%. The **EQ** ends up cutting away only the frequencies below 300 Hz to keep the bass range tidy. Have fun with further tinkering! ❖

Hands-on: Create your own drums with synths

CREATING DRUMS



1 Psytrance Kick

With their crisp attack and bone-dry body, Psytrance Kicks are unmistakable. For more freedom in the track, it's a good idea to build the kicks yourself, which we do with the Thorn Solo synth. For **OSC 1**, we select the **Triangle** waveform, activate the Filter and turn **DRIVE** to **11 o'clock**. In the **MOD MATRIX**, we connect **Env 1** and **Env 2** with **All OSC Pitch**.

2 Clicking

For the envelopes, we set **Decay** to **5%** and **13%**, **Sustain** to **0%**. The faster **ENV 1** is responsible for the initial click, while **ENV 2** generates the belly. We set the intensity of **ENV 2** to **33%**, for **ENV 1** to **43%**, although you can vary the click here. After the Thorn, we load the plugin La Petite Excite and turn **High** to **3 o'clock**.

3 Bounce

As a second effect, we load a Limiter, which is allowed to intervene violently to compress the sound. Bounce the kick to an audio track and cut away a bit at the beginning so that the crackle can just be heard. Tip: Load the sample into your sampler and modulate Pitch again by **8 - 12** semitones via envelope with **Decay 150 ms**.

MIX



1 Cleaning with EQ

Where other music styles can be rough and dirty, Psytrance is almost clinically clean. That's why we EQ out the frequencies below **200 Hz** on all drums except the kick. Behind this, we load a very short reverb and mix only so far that it is just audible. This creates stereo width and punch in the overall mix.



2 Exciter and Limiter

To get the beat as brilliant and consistently punchy as possible, we route all the drums (and the bassline) to a bus track and load La Petite Excite there, but this time with moderate settings: **Low** to **0.4** and **High** to **1.2**; otherwise, the result will be too harsh. Finally, we use the Ozone Limiter to ensure constant loudness.

BUILD

Kick and Hat

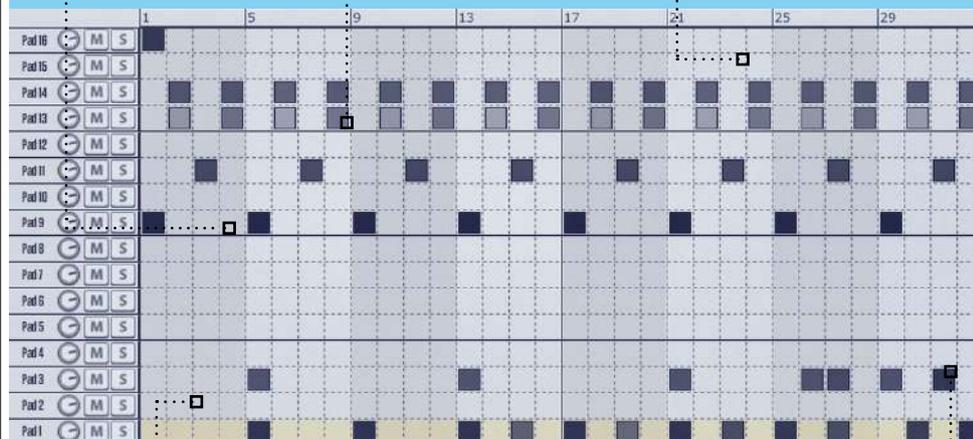
Psytrance Beats are usually characterized by their straightforwardness - Kick on one, Snare on two and an open Hi-Hat in between. The placement of a closed Hi-Hat on the kick is almost mandatory.

All 16ths

As with the bassline, 16th note-based rhythms are usually found on the beat as well - more specifically, on closed hi-hats and shakers. We use a shaker to fill the 16th notes between closed and open hi-hats.

Percussion

In the space between the kicks, you can add percussion or short effect sounds that can break up the otherwise rigid groove and, incidentally, provide more fullness in the panoramic field.



Ghost Kicks & Drops

Dropouts of the kick at the beginning of the bar and ghost notes are often used to set small accents in the groove. With dropouts, a crash or short noise sound is placed instead of the kick.

Fill-ins

Kick and snare fills play every eight or 16 bars. Tip: create a snare fill and push some notes onto the kick. Then, the two don't get in each other's way and the fill is more interesting.



OffBeat:

Beat workshop with Florian Pilz

The universal translator

There are many reasons why we choose a particular electronic musical instrument. One of the main arguments is of course the sound, but other aspects always play an important role. It is frustrating when an otherwise great instrument cannot be integrated into one's setup as desired due to a lack of functionality. Fortunately, there is a solution for a growing number of sound generators.

We're talking about the RetroKits RK-002 Active MIDI Cable. At first glance, this inconspicuous-looking device can hardly be distinguished from a conventional MIDI cable. Only an orange plug indicates that there is more going on behind the scenes than mere signal transmission. The built-in microprocessor is capable of performing a variety of tasks, whether it's translating MIDI messages or acting as a sequencer, arpeggiator or even VJ tool. Originally designed as an add-on for the Korg Volca Sample, it is now possible to extend the feature set of a variety of synths and grooveboxes. In the author's collection of instruments there are three devices (Korg Kaossilator, Korg Volca Sample, Elektron Digitakt) that are compatible with the RK-002 (Fig. 1). The focus of this article is the interaction with the Elektron Digitakt.



2. Firmwares from the manufacturer as well as self-programmed applications from the community can be loaded onto the device via a browser interface.



3. MIDI loop for transferring the firmware.

The numerous firmwares of the simple device, which are in many cases tailored to specific sound generators, can be easily changed and updated at any time using a browser app (Fig. 2, 3). The use of Chrome is recommended here, as this browser supports MIDI by itself. A power supply unit is not necessary, the electronics are supplied with power via MIDI.

As a high-end drum sampler and sequencer, the Digitakt is popular with many musicians, but there are some limitations due to the underlying concept (Fig. 4). The manufacturer does not intend to play the internal samples polyphonically. Although there is a sequencer in the Digitakt for such an application, it can only control external instruments. The RK-002 allows the Digitakt to be addressed as a polyphonic sound generator, the microprocessor takes over the dynamic assignment of the MIDI notes to individual voices. If the above-mentioned sequencer is to be used as a source, it is necessary to connect the MIDI input and output of the Digitakt using the RK-002.

A disadvantage of this approach: In order to continue playing the Digitakt with an external keyboard, the corresponding MIDI signal must be fed via USB, i.e. a DAW or a USB-to-MIDI host.



1. After firmwares were already available for three instruments from the author's collection, the purchase of the RK-002 was obvious.



4. This way the Digitakt becomes a polyphonic synth and creative sequencer. The internal MIDI sequencer and its controllers are used to control the RK-002.

Everyone is talking about Euclidean sequencers (Fig. 5). Regardless of whether within a DAW or as part of a modular system, this type of sequencer, which is based on an algorithmic equal distribution of musical events, plays a major role in many genres. The theoretical basics are beyond the scope of this article, but even a complete lack of



5. Euclid is the namesake of Euclidean sequencers. The theory may be complex, but using it in practice is intuitive and uncomplicated.

knowledge of these principles, which are also relevant in particle physics and computer science, is no obstacle to the intuitive use of these composition tools.

The RK-002 has sequencers, optimized for the Digitakt. Control via one of the internal MIDI tracks is also possible here. The higher the value of the control change commands sent, the denser the equally distributed rhythm patterns become.

Of course, other instruments can also benefit from the use of the RK-002, not only through custom firmwares that allow, for example, the Korg Kaossilator to be played with a MIDI keyboard. But also through a universal arpeggiator or



6. Originally only playable via the internal pad and control changes, with the RK-002 also with the master keyboard: Korg Kaossilator Pro.

patches for experimental playback of lo-res video material (Fig. 6). There is also the possibility to be creative yourself and to program your own applications for the RK-002 with the Arduino IDE. This is an open source idea that fortunately is gaining importance with more and more manufacturers.

Links

RetroKits:
www.retrokits.com

Tutorial RK-002 and Digitakt:
www.youtu.be/8fQXK7J1txc

The Euclidean algorithm generates traditional musical rhythms, G. T. Toussaint, Proceedings of BRIDGES: Mathematical Connections in Art, Music, and Science, Banff, Alberta, Canada, July 31 to August 3, 2005, pp. 47-56.
<http://cgm.cs.mcgill.ca/~godfried/publications/banff.pdf>

Warning

The modifications described here are not supported by the manufacturers, can shorten the warranty period and in the worst case make the device unusable. So they are only suitable for sound engineers who are willing to take risks.



Florian "AudioPilz" Pilz worked for many years as a sound engineer, sound designer and music producer and runs a YouTube channel. With his Bad Gear Show he not only inspires his audience, but also brings a breath of fresh air into the studio by giving supposed „bad gear“ a new glory in contemporary tracks and jams.

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DJ-Interview: Anja Schneider

Society is failing!

DJs and booking agencies have been hit particularly hard by the pandemic. Not only are they faced with an occupational ban. They also lack political representation. To get their concerns heard, 170 agencies and 2,000 artists have set up "Booking United." Anja Schneider is one of the new organisation's most familiar and passionate spokespersons. In her interview with Tobias Fischer, she comes to a sad conclusion: So far, the political response has been an almost complete failure.

Beat / Just like many of your colleagues, you've been personally affected by the pandemic. How did you use the forced time off from DJing?

Anja Schneider / It didn't feel like a time-off, that's for sure. For one thing, I was in the studio a lot. I released three new EPs on my label Sous ("Seduction", "Boundless Beings" and "Turning My Head"). I contributed a track to the "Marble Bar Detroit" charity-compilation and reworked my old piece "Dubmission". I also present a program on Radio Eins, called Club Room. As part of that program, I run a series of interviews on how the pandemic affects artists and the creative scene. Some of the talks with people like 2raumwohnung, the Watergate crew or Henning Wehland were fantastic. On top of that, there's my own talk podcast "Club Room BACKSTAGE". Ich am trying to move things on a political level with Booking United and have started writing a book. I'm certainly not bored, let's put it that way.

Beat / Your work with Booking United should give many of those affected by the pandemic hope. When did you realise that you had to take collective action?

Anja Schneider / I would say it became clear right in the middle of March that we had to found our own organisation to make a change. Today, we represent around 170 agencies and management companies as well as 2,000 individual artists. This allows us to specifically target our needs and problems. Even though that's a pretty big group and although we're an important part of the cultural ecosystem, we are still under the impression that our concerns are not being heard and taken seriously. To make a change requires a lot of work and motivation.

Beat / Why do you think has there been so little concrete help so far? Do you feel as though the fact that the scene is so concentrated in Berlin has made it harder to present your case on a national level?

Anja Schneider / It's true that we have a higher visibility in Berlin compared to other cities here. Still, this problem affects all of us, in fact, it affects the entirety of Germany as a cultural nation. Right now, neither the individual states nor the

federation are accepting responsibility. We can't accept that, neither can we accept that we're not getting the same support as other parts of the economy. It's important that we build a strong lobby and that our voice is heard.

Beat / Could it be that many people simply aren't aware of your problems?

Anja Schneider / I think they have no idea what the event-scene in Germany is capable of and how critical it is for our society. We need to promote the arts, and we need to focus on subculture in particular.

Beat / Dixon gave a few interviews, in which he talked about the pandemic and Booking United. Unfortunately, it seemed as though the only thing many people took away from this is that he's complaining from a privileged position.

Anja Schneider / I can't tell you how angry this made me. We have the exact same issue whenever major stars like Herbert Grönemeyer or Udo Lindenberg take a stance. We need powerful artists making powerful statements. Dixon was the first and only one of the big artists to argue our case and to be honest, I was somewhat disappointed there haven't been more.

Beat / Can you describe what the situation is like for the majority of your members?

Anja Schneider / All of our members have a full-time job in the event scene. Since March, none of us has an income anymore. Imagine that. If you're a recording artists, you can still go into the studio and at least release something. But that's not an option for our agents and managers. Many of them are self-employed and now need to live on the lowest level of German state support. To me, this is a clear sign that we, as a society, are failing.

Beat / One point you're singled out is the fact that DJs can only get support for the fees they've earned here in Germany - which is a tiny fraction of their overall income. That seems like a somewhat dated view of the way things work these days.

Anja Schneider / To me, it feels like a slap in the face. When DJs - and classical artists, too, by the way - make money with performances abroad,

we are obviously expected to pay our taxes here in Germany. But when it comes to support payments, these are suddenly calculated on the basis only of our domestic gigs ... wow ... The car industry certainly couldn't only declare their domestic sales, just like Lufthansa couldn't only get support based on their domestic flights. It's like Germany is entirely ignoring culture as an export product. And to think this is happening in a country with such a rich tradition of poets and thinkers.

Beat / You've set up a paper summing up your demands. One of them contains a step-by-step return to clubbing. What could this look like in practise?

Anja Schneider / We're looking at the bigger picture here and a scientific, medically founded concept. We don't want to rush this. Over the Summer, many organisers have proven that it's possible to set up gigs and club events, provided there's a strict hygiene concept and smaller groups of people. We can do this. But we can't allow having a good time to turn into a luxury item.

Beat / It does make you think about the future of the scene as a whole. What are your thoughts on the long term effects of the pandemic on clubbing and DJing?

Anja Schneider / Personally, I'm not a big fan of streaming. I just need the personal interaction with the crowd. One thing's for sure, local scenes are going to become more important and I doubt we'll keep flying around the world like we used to. But musically, things are sure to remain exciting.

Beat / If the situation persists, a big chunk of the scene may disappear.

Anja Schneider / Thankfully, we are being heard and we've talked to a lot of politicians. Very slowly, but surely, they're beginning to understand our situation. But if it really came to a collapse, it would be a disaster! We need the clubs as places of refuge, as spaces for self-discovery. We need them for inspiration and for letting go. 🍷

www.booking-united.org
www.anjaschneider.com



**It would
be a disaster! «**

Review: Denon DJ Prime Go

The Prime Go standalone DJ workstation from Denon wants to enter a new dimension of portability. This test shows which features the battery-powered mobile console has to offer and how it performs in practice.

by Philipp Sterczewski

Features

- Compact
- 2-channel DJ-controller
- 7 Inch HD-touch-display
- Battery operation for up to 4 hours
- Dual-bank performance pads
- WLAN operation for streaming
- Assignable effect module
- Aux input
- 1 USB Port,
- 1 SD-Card Slot



The DJ Workstation with a 7 inch color-touch-display.

Facts

Manufacturer: Denon DJ
Web: www.denondj.com
Price: 1075 Euro

- ▲ Standalone workstation
- ▲ Battery operation
- ▲ Portability
- ▲ 7 Inch colour touch display
- ▲ Effects
- ▲ Aux input
- ▲ Streaming over WLAN
- ▼ Jogwheels are somewhat small

Build Quality: ██████████
Technology: ██████████
Price/Perf: ██████████
Total: ██████████

Alternatives

None

After the successful launch of the Prime 2 and Prime 4 DJ controllers, Denon surprises us with Prime Go - a fully comprehensive 2-channel, battery-powered standalone solution. The most striking feature is the very compact design, which allows mobile DJs in particular to complete a professional DJ gig in a backpack.

Connections and display

The back of the DJ workstation is equipped with two microphone inputs, so that the DJ and another person can be heard for the purposes of presentation. The connection for external players, such as CD players or smartphones via the aux input is praiseworthy. In addition to the XLR master output, there is also a jack booth output. Two headphone outputs have been provided on the front.

The high-contrast, high-resolution 7-inch color touch display, behind which the operating software Engine OS runs, is comparatively large. The user can easily scroll and navigate through

song folders via gestures, and creating playlists and crates is also no problem. Previewing music before loading is realized via the track preview.

Decks and mixer

The decks and mixer section, on the other hand, are very compact. In order to fix the quantizable start positions of the songs, each deck has four rubberized non-slip performance pads as hot cues, which can also be used for loops and rolls. They feel very good, while the jog wheel underneath is very small due to the configuration. After some initial practice, however, it can be used to make adjustments just as precisely as the jog wheels of its big brothers. The pitch faders are also proportionally quite short, but work with pleasing precision. The fader resistance is comfortable without seeming too loose.

This also applies to the channel faders in the mixer unit, whose LED meter displays are definitely too short for reliable level indications. Two of 13 assignable effects can be activated above each of the volume faders, which provide creative mix intervention in addition to the Sweep FX filter control.

The arrangement of the 3-band equalizer, which includes the level control per channel, is a bit unusual, as they are placed next to the touch display above the respective decks instead of on

the mixing console. But the equalizer sounds good and knows how to intervene properly in the frequency spectrum.

Sound feed

The music can be streamed via the SD card slot, the USB ports or via LAN / WLAN. In addition, you get a free three-month trial membership to the streaming service provider Tidal. It grants access to more than 60 million songs. The Beatport link opens the gates to nine million electronic music songs. Use of the SoundCloud Go+ streaming service is included. Audio files in the formats AAC, AIF, FLAC, MP3, MP4, Ogg Vorbis, and WAV can be played.

Practice

In terms of workmanship and reliability, the Prime Go makes an excellent impression; however, one of the most impressive advantages of the DJ workstation is its portability. Thanks to the battery operation of almost four hours, DJ sessions can be spontaneously produced on the beach or during other outdoor activities. The jog wheels are stable and precise, and with a bit of practice, clean transitions are always possible despite their small size.

The thirteen effects (such as Filter, Reverb and Delay) can each be modified rudimentarily by various parameters, but are qualitatively successful throughout and stimulate the creative potential when DJing. After longer live operation, you realize that all important functions are on board that are necessary for a professional DJ mix, although at first glance it may seem to be rather reduced.

Verdict

With its 2-channel DJ workstation Prime Go, Denon opens up a new market segment of battery-powered standalone controllers that is, so far, unique in its compactness and portability. The price/performance ratio of this device is really okay and in terms of quality, Prime Go is in no way inferior to larger controllers in terms of professionalism. ❄️



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Review: Rane Seventy & Twelve Mk2

Together with the Twelve MKII turntable controller, the 2-channel Seventy mixer promises Serato DJ Pro disciples vital scratch battles. Get to know the innovations and practicality of these DJ tools from the house of Rane here.

by Philipp Sterczewski

Seventy

- 2-channel Battle Mixer
- 6 Dual Flex FX
- 16 MIDI-capable MPC Pads
- 3 Mag-Four Faders
- 1 Sampler Channel
- Dual Microphone Inputs

Twelve MKII

- Turntable Controller
- 8 Hot-Cues
- 4 Selectable Serato Decks
- 33/45 RPM
- Adjustable Torque
- 1 USB Port
- Cinch Stereo Out for DVS
- 12" Control Vinyl

Facts

Manufacturer: Rane
Web: rane.com
Price: 1919 Euro (Seventy); 1019 Euro (Twelve MKII)

- ▲ 9 Inch Color-Touch-Display (Seventy)
- ▲ Effects & Lock-FX Switch (Seventy)
- ▲ Mag-Four Fader (Seventy)
- ▲ Switch Between Four Decks (Twelve MKII)
- ▲ Vinyl Feeling (Twelve MKII)

Build: ██████████
Features: ██████████
Price/Perf: ██████████
Total: ██████████

Alternative

Pioneer DJ DJM-S11
www.pioneerdj.com
1,999 Euro



The 2-channel Battle Mixer Seventy with the Turntable Controller Twelve MKII.

An exciting DJ setup that embodies digital DJing fun with an authentic vinyl feeling is formed by the new scratch mixer Seventy in combination with the Twelve MKII turntable as a controller. The Serato DJ Pro license is included with the DJ software.

Properly Connected

The rear connections of the Battle mixer allow each deck to feed one aux signal or phono/CD signal with RCA connection. The Session connection offers an additional input and output.

There are also two XLR microphone inputs and two monitor channels. You can switch between the sources on the mixer using the source control per channel. The two USB ports have the advantage that two DJs can play together. Two additional USB ports are provided for Twelve turntables. This connection works smoothly and also runs stable without any time delay. Only the two headphone outputs are located on the front.

Effects and Pads

The central elements below the effective 3-band equalizer and the display are the Lock FX toggle switches and six effect buttons. Depending on the purpose of use, either the onboard Flex effects

(Echo, Reverb, Brake, Flanger, Phaser and Delay) or the software effects in Serato can provide the spice. Even though the intensity is controllable for each channel, unfortunately, only one FlexFX can be used at a time for both channels unless you use the software with up to three effects for each channel.

In addition to the effects, loops can be set. Among them are eight pads per channel, which can be used to define song positions as hot cues. Spontaneous remix interludes with rolls and incoming samples are also possible thanks to dedicated buttons. If no players are connected, the music can be started or stopped via the transport function and the pitch can be changed.

Practice

The effects are not only first-class for creative transitions, but they sound really good. The mixer's high-end quality is also evident from the dynamic range of 114 dB. The glow-in-the-dark rubberized RGB pads also powerfully raise the entertainment factor when battling, including sample fill-ins. There's also the fun of using the small FX joystick to switch between decks and beats directionally. Mixing with the new, contactless sliding Mag-Four faders is also a comfort gain compared to the predecessor. Our enthusiasm for the Twelve controller is also very high. Long-serving DJs should certainly approve of scratching with up to four decks without dust-catching needles and needle jumps.

Twelve MKII

The Twelve MKII vinyl controller, which weighs just under ten kilos, is extremely sturdily built and comes with an attachable 12-inch platter. Compared to its predecessor, it can output a timecode carrier signal for suitable DVS software via the RCA jacks or rock the club as a MIDI controller for Serato DJ Pro via USB. Control with Traktor and Virtual DJ has been thought of as well. Included in the package is a nicely grippy 12" acrylic control vinyl plate.

The Start and Stop button, which can be pressed down deeply, awakens many nostalgic feelings, just like on earlier turntables. Playing the eight hot cues is also conveniently solved, as is switching between four different virtual decks. The scroll/loader also proves to be a useful aid for navigating quickly through playlists. The torque can be adjusted via a switch (Hi/Low) underneath the turntable.

Verdict

The interaction of the Seventy mixer with the Twelve MKII turntable controller worked smoothly and without noticeable latencies, with impressively good audio quality on the part of the effects. The promise of the wear-free reworked Mag-Four faders is another selling point. The convenient workflow with instant access to all important controls makes the team attractive for much more users than just oldschool DJs. ❄️



More Info

Power Producer: Ableton Push

More oomph for your sound

Interesting and lively sounds are what catch the ear the most. Live's instrument devices offer many ways to tweak the sound. Where LFOs for parameter modulation are lacking, Hacktive's free Max for Live device multiLFOs can help out. Here's how you can use this tool to help out a boring bass. by Maya C. Sternel

Project info

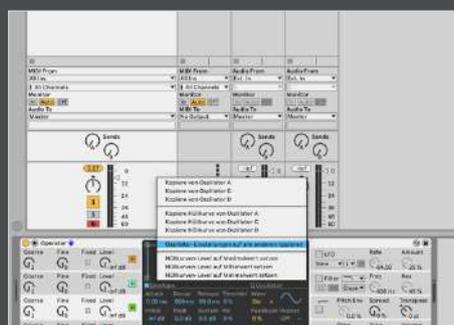


Material: Ableton Live Suite, Ableton Push

Time required: 30 minutes

Content: Multiple parameter automations using multiple LFOs via a single Max for Live device; configuration and mapping of Operator and multiLFO; real-time control of the parameters of the individual LFOs via Push.

Difficulty: Advanced



1 Operator sound

Load an **Operator** into a track. Set the **Decay** time of Oscillator A to **1.41 ms** and the **Release** time to **20 ms**. The short decay affects how fast the volume modulation starts. Choose Algorithm 8 for routing the oscillators, with Oscillator B routed to A and Oscillator D routed to C. ❖

2 Install multiLFO

Copy Oscillator A to all other oscillators. To do this, right-click on the Operator display to open the context menu and select the **Copy Oscillator Settings to Others** option. To be able to modulate any parameters now, download the **multiLFO** plug-in from Hacktive [1] and drag it into the track. ❖

3 Activate LFO 1

The multiLFO plug-in contains four independently adjustable LFOs, each of which can modulate up to 4 parameters. Click on the box with the **1** in the center of the multiLFO to select the first LFO. Then select the box labeled **On** to activate the LFO. To view, click on the red circle in the upper right corner. ❖



4 Parameter mapping

Select **map**. In the parameter mapping window that now opens, select a **Map** button and then route the **Level** of Oscillator B from the Operator to it by clicking on it. In multiLFO, select **Down** as the waveform. Activate **Sync** mode for the **Rate** and finally, set a rate of **1/24**. ❖



5 Modulation

Now select Oscillator 2 in multiLFO and activate it. Open the mapping window via **map** and route the **level** of Oscillator D from Operator to a Mapping Point. Select Triangle as the waveform and set **Rate** to **0.37 Hz**. Also activate the filter in Operator. ❖



6 Game control

Map the Filter Frequency to another mapping point of LFO 2. Set **minimum** to **35%** and **maximum** to **64%**. Map the Operator's filter resonance to a mapping point of LFO 1 and select for minimum 9% and maximum 42%. Group the multiLFO and map **Rate**, **Depth**, **Shape** and **Smooth** of each LFO to a macro knob. ❖❖

Music reviews

by Sascha Blach



cEvin Key: Xwayxway

The exact name of this project is cEvin Key And The Subconscious Electronic Orchestra. And all too often what Mr. Key is playing really sounds like an electronic orchestra. While his main band Skinny Puppy seems to be out of breath, the Canadian is in top form on solo paths and delivers a demanding, cinematic album with countless facets somewhere between post industrial, soundtrack and IDM. In some numbers there are great vocals from guests like Edward Kaspel (The Legendary Pink Dots) or Chris Corner (IAMX). The majority of the songs, however, remain instrumental. Whether it's experimental soundscapes, intricate or more song-serving structures, Key manages to make all pieces sound somehow exciting. It is therefore worth exploring the depths armed with headphones, because there is a lot to discover.

Genre: IDM | Label: Artobject



Danielle de Picciotto: The Element Of Love

Some of you might know the American artist, who lives in Berlin, from her collaboration with her husband Alexander Hacke (Einstürzende Neubauten) under the name hackedepicciotto, as a singer for Crime & The City Solution or as a solo artist, because „The Element Of Love“ is already the third solo album by Danielle de Picciotto. It appears - logically according to the title - on Valentine's Day 2021 and offers a mix of spoken poetry, experimental electronica, ambient soundscapes and melancholic-melodic violin playing. The lyrics are meant to reflect the broken heart of society and remind us of our inner beauty amid the destruction. An album full of mystery, depth and poetry, but for which you should have a preference for the spoken word, as this element is central.

Genre: Electronica, Ambient | Label: Broken Clover Records



Fix8:Sëd8: The Inevitable Relapse

Also on his fifth album Martin Sane remains true to his chosen path and offers sophisticated industrial that has an almost cinematic quality. For good reason, Fix8:Sëd8 are more often considered the German equivalent of Skinny Puppy. Although influenced by the Canadians all too clearly - musically and vocally - the musician still manages to add enough of his own to this sound. Thus, similar to the two predecessors „Foren6“ (2017) and „Warning Signs“ (2019), „The Inevitable Relapse“ sounds like a mix of industrial, EBM and soundtrack - garnished with lots of atmosphere, effects, darkness and an interesting sound design. A bombastic, tricky album that is best dissected with a lot of time to fathom the many small details.

Genre: Electro | Label: Dependent



Imperative Reaction: Mirror

For almost a decade, the Los Angeles based project, which had released six albums from 1999 to 2011, had been silent. The new longplayer „Mirror“, which is the seventh, directly follows the earlier works and offers an explosive mix of industrial and electro sounds. Mastermind Ted Phelps knows how to write songs with a lot of energy and still scores with cool melodies and hymn-like choruses that are full of hooks. Again and again Phelps turns on the distortion units and gives the diverse synths a lot of drive. In addition, the programmed drums push the mostly brisk pieces forward. Not to mention the fat production, which is fun to listen to. So you could say curiously that the long wait was worth it, because „Mirror“ is one of the best albums of the project so far.

Genre: Industrial | Label: Metropolis



Joplyn: Pappelallee

Joplyn lives in Berlin and has German, Vietnamese and Canadian roots. Her music is just as diverse as her ancestors. She moves freely between dance, electronica, deep house and pop, and with the experience of over two dozen (!) released singles, has now delivered a very mature debut album that sounds pleasing throughout and suitable for a wide audience, yet contains enough interesting production details to reach discerning listeners. The sound is based on synths and drum computer elements, which form a danceable and atmospheric basis for Joplyn's detailed pop singing, which often makes use of polyphonic arrangements and is also enhanced by numerous contemporary effects. The warm-soft production does the rest that "Pappelallee" is a beautiful spring album that is a pleasure to listen to.

Genre: Electronica, Deep House | Label: Stone Free Berlin



Lijnenspel: Compression

Interesting experiment. Three hours of drones compressed to just 30MB. In contrast to the daily flood of information, British graphic designer Mark Webster encoded synthesizer recordings into low-resolution MP3s for so long that in the end only artifacts remained and the original signal had disappeared. What remained were calming soundscapes with extremely low bit rates that must not be changed, which is why this release is not available from streaming providers who bring everything to a uniform resolution. The audio material sounds slightly different on each playback device, as new artifacts can appear during decoding. This gentle background noise, which can easily put you into a state of meditation, is only the first part of a larger overall cycle with the title "Info".

Genre: Drone | Label: Eigenvertrieb, Bandcamp



Mr. Mibbler: The Long Journey

With the band name, these Norwegians prove their humor. The musicians Thom Hell, Vidar Ersfjord and Jorn Raknes move in the broadest sense in the ambient genre on their second long player, because there is something Brian Eno-like in many of the pieces. Their music is largely calm and spherical in nature, nourished by electronica set pieces and effect-treated guitars as well as all kinds of flat sounds that create a wide space. The album covers a wide spectrum, from extremely delicate, very filigree parts to slightly threatening drones. The songs were created over the distance via data exchange, whereby the long back and forth found its echo in the album title „The Long Journey“. An album worth listening to by a rather unknown band that has what it takes for a long journey in the player.

Genre: Electronica, Ambient | Label: NXN Recordings



Martin Gore: The Third Chimpanzee (EP)

If you know Martin Gore from Depeche Mode, you certainly wouldn't expect such music. Martin's first solo album "MG"; however, is more of a clue as to what to expect. The 5-track EP lets us jump into the worlds of minimal electro and techno. It's a rough electro recording that was made in the Electric Ladyboy studio in Santa Barbara, California. Martin apparently placed little value on beautiful melodies and grooves, because the pieces on "The Third Chimpanzee" are abstract, dark and often dissonant. In addition, the purely electronic compositions are also completely instrumental. Gore himself doesn't find the sound human, but rather primate-like, which inspired him to the title „The Third Chimpanzee“. Certainly a challenge for some Depeche Mode fans, but lovers of experimental electro sound should definitely listen.

Genre: Electro | Label: Mute



Orlando Voorn: Internal Destination

You don't have to introduce Orlando Voorn to techno fans. The Dutchman has been one of the engines of the Amsterdam scene since the 80s and cooperated with the Detroit circles early on. The list of his pseudonyms and project names is very long and includes DJ Fix, Frequency and Format and many other. And even though he has tried a lot over the years, from hip-hop to electro to drum'n'bass, he's returned to the music that made him famous. This EP, his debut on Kompakt, delivers crisp old-school techno with lively beats, minimalist arrangements and house-like elements. Three tracks made for the dance floor, without unnecessary frills and just as classic scene-goers like it. Hopefully another full-length album will follow soon.

Genre: Techno, House | Label: Kompakt



Tortusa: Bre

Tortusa, whose real name is John Derek Bishop, is a Norwegian-American sound artist who uses pieces from ambient, downbeat, jazz, avant-garde, noise, electronica and dub to brew an idiosyncratic cocktail that blurs the boundaries between music and sound collage. "Bre", however, has a greater tendency towards the latter compared to its predecessors. The instrumentals are often spherical in nature, have something oppressive and puzzling about them. Three renowned jazz musicians who love to improvise were invited as guests: guitarist Eivind Aarset, drummer Erland Dahlen and trumpeter Arve Henriksen. There are also field recordings that were made in California, Italy and the Norwegian mountains and then processed with samplers, modular synthesizers or loop stations. Something for listeners of Oneohtrix Point Never or Nils Petter Molvær.

Genre: Jazzland/Edel | Label: Ambient, Jazz

Music retailer and service guide

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Special: Trap & Hip-Hop

While Hip-Hop and Electronic were initially two parallel universes, they have long since become inseparable and, with Trap, have entered into just one of many symbiotic relationships. Stars like Sido, Drake, Deichkind and Apache 207 show very clearly how well the fusion of the two worlds works. In our big special, we not only interviewed hip acts, but also look over their shoulders while they're producing. In addition, we give you all the tools and tricks you need to create your own authentic Trap and Hip-Hop sound.



Review: Behringer System 100

In the early 80s, the Roland System-100m offered an affordable entry into the modular world. Since it was prominently used in Synth-Pop by Vince Clarke, Depeche Mode, Tears For Fears and Human League, among others, it became a coveted classic. Behringer now brings back this dual built modular synthesizer in the Eurorack format to inspire a new generation.

Interview: Louisahhh

The Paris-based New Yorker has been touted by the media as the „Queen of Techno“ and, in addition to delivering rebellious music that fuses technoid beats with punk and industrial vibes, she also delivers power on the activism front. She champions female power, sex positivity, spirituality, self-acceptance and a punk DIY spirit. We look forward to an exciting conversation on the occasion of the release of her debut album „The Practice of Freedom“.



Review: Modal Cobalt8

Cobalt8 looks confusingly similar to Argon8, but has a different focus. A highlight of the Cobalt8 is the emulation of an analog multimode filter in addition to the two oscillator groups with 32 algorithms with up to four oscillators each show themselves to be very flexible. In addition, there is a polyphonic step sequencer, modifiable effects, app control and morphing.

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