

MIXOSAURUS[®]

EXPERT VIRTUAL DRUMS

MIXOSAURUS DAW DRUMS
POWERED BY KONTAKT PLAYER 2

KIT A MANUAL



support@mixosaurus.com



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MIXOSAURUS DAW Drums GmbH
Dürerstr. 46
D-12203 Berlin
GERMANY

CEO: Uwe Lietzow

For more company information please visit MIXOSAURUS.com or send an email to inquiry@mixosaurus.com. Thank you.

www.MIXOSAURUS.com

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CHAPTER 1

THE MIXOSAURUS CONCEPT

1.1 WHY MIXOSAURUS?

MIXOSAURUS DAW Drums were created to overcome the poor realism and the limitations regarding playability and mix options that all other available virtual drum instruments have in common – and that's why they were designed with a completely different focus. Instead of sampling dozens of drums and cymbals the non-musical way, with limited articulations, limited dynamics and limited authenticity, I decided to create ONE drumset that allows you to play and mix it in any way your music would demand, and that will sound great and realistic – in any musical context.

(Do a little “resolution math exercise”: divide the size of the MIXOSAURUS ‘Kit A’ library by the number of drums and cymbals used in this drumset, then do the same for other products and go figure.)

With their incredible degree of detail, MIXOSAURUS DAW Drums go way beyond what other drum libraries or plugins are able to do. However, using all the features at the same time would go way beyond the powers of today's computers and their operating systems as well. That's why MIXOSAURUS offers you a great number of different patch variations to build your drumset from, focusing on exactly those features you need in each production situation to create a great-sounding, convincing drumset. And no matter which of the 1800 MIXOSAURUS patches you choose to build your drumkit with, any of the resulting combinations will be an authentic reproduction of the recorded kit.

A MIXOSAURUS Drumset is a Kontakt or Kontakt Player 2 Multi that consists of several individual instrument patches. The following chapters will make you familiar with the various parameters that define any MIXOSAURUS instrument patch.

1.2 MIXOSAURUS “A” DRUMS AND CYMBALS

The MIXOSAURUS “A” drumset consists of 14 instruments, all set up together and recorded with their authentic sympathetic vibrations and ringing:

22" Kick Drum <i>(4 different beaters available)</i>	10" Tom	17" Crash
14"x6.5" Brass Snare Drum <i>(3 different mufflings available)</i>	8" Tom	18" Crash
14" Tom	14" Hi Hat	17" China
12" Tom	20" Light Ride	8" Splash
	21" Heavy Ride	Clicking Sticks
	15" Crash	

Except for the Clicking Sticks, each of these instruments can be played using an unprecedented variety of articulations. Although they are numerous, they still are easy to understand and follow a certain logic that you'll have no difficulties to grasp and use. If you're not a drummer, I recommend that you watch the [MIXOSAURUS “Articulations” tutorial video](#) located in the ‘Documentation’-folder on your MIXOSAURUS

hard drive. This video, the examination of the included MIXOSAURUS MIDI-grooves and your musical creativity are all you need to produce great sounding, convincing drum tracks yourself.

You can find the complete list of MIXOSAURUS articulations at the end of this manual (including key mapping and MIDI note numbers).

The [MIXOSAURUS_Key_Layout PDF](#) in the 'Documentation'-folder on your MIXOSAURUS drive shows you what sound is located where on the MIDI keyboard.

1.3 MIC TRACKS AND DAW CHANNELS

MIXOSAURUS DAW Drums have been recorded using a multitude of mics and tracks. The mix engineer has access to 20 tracks, consisting of three very different pairs of Overheads to choose from, stereo PZM mics, stereo Teldex Reverb Chamber mics and two different Hi Hat mics, along with the standard Kick Drum (in+out), Snare Drum (top+bottom) and the four Tom mics.

When using MIXOSAURUS in a stereo Kontakt or Kontakt Player 2 instance, all of these signals are played through Outputs 1+2. When using MIXOSAURUS in a multichannel Kontakt or Kontakt Player 2 instance, the output matrix is as follows:

Overheads left (A/B/C) -----	Output 01	Tom 14" -----	Output 09
Overheads right (A/B/C) -----	Output 02	Tom 12" -----	Output 10
Kick Drum inside -----	Output 03	Tom 10" -----	Output 11
Kick Drum outside -----	Output 04	Tom 8" -----	Output 12
Snare Drum top -----	Output 05	PZM left -----	Output 13
Snare Drum bottom -----	Output 06	PZM right -----	Output 14
Hi Hat close -----	Output 07	Teldex Reverb Chamber left -----	Output 15
Hi Hat distant -----	Output 08	Teldex Reverb Chamber right -----	Output 16

I decided to use no more than 16 channels as some DAW environments do not allow for more.

MIXOSAURUS OUTPUT DESCRIPTION

OUTPUTS 1+2

The stereo Overhead Channel, determining the overall sound of the drum set. Depending on the patch you load, this will either be a pair of vintage ribbon mics (A), a pair of small diaphragm condensers (B) or a pair of vintage tube mics in an M/S setup, mixed down to stereo (C).

I decided to use Outputs 1+2 for the Overheads for a reason: These Outputs are the ones you instantly hear after activating the plugin in your DAW's VI channel, and the MIXOSAURUS Overhead tracks carry signals of ALL loaded drums and cymbals and give you a good impression of the overall sound of the drumset.

(The option to choose from three totally different Overheads is a feature exclusively available in MIXOSAURUS DAW Drums.)

OUTPUTS 3 + 4

Kick Drum inside (3) and outside (4). You might put them on individual channels in your DAW to process them independently, but I suggest you also try out using 3+4 as a stereo channel. Refer to “Dual Mono or Stereo Channel?” in *Chapter 6 “Mixing”* on page 27.

OUTPUTS 5 + 6

Snare Drum top (5) and bottom (6). You might put them on individual channels in your DAW to process them independently, but I suggest you also try out using 5+6 as a stereo channel. Refer to “Dual Mono or Stereo Channel?” in *Chapter 6 “Mixing”* on page 27.

OUTPUTS 7 + 8

Hi Hat close (7) and distant (8) mics. You might put them on individual channels in your DAW to process them independently, but I suggest you also try out using 7+8 as a stereo channel. Refer to “Dual Mono or Stereo Channel?” in *Chapter 6 “Mixing”* on page 27.

(The option to choose from two different Hi Hat mics is a feature exclusively available in MIXOSAURUS DAW Drums.)

OUTPUTS 9 TO 12

Toms 14” (Output 9) through 8” (Output 12).

OUTPUTS 13 + 14

Stereo PZMs, massively processed by tube gear.

OUTPUTS 15 + 16

Stereo Teldex Reverb Chamber Track. This is a separate reverb chamber with amp and speaker, fed by a specific mix of drum microphones – actually more than those that were recorded. The special balance of the mics makes for a very dynamic reverb that you’ll find extremely useful, as a quick “first aid” or even as your main drum reverb.

Since the speaker has been fed by more mics than the ones recorded for each instrument, no reverb unit or plugin could ever give you the same dynamic sound later during the mix. It is ready to use right out of the box – no need to set up individual aux sends in all the drum channels to get a decent reverb mix. I’ve done that for you already (you can change that mix, though – more on that in *Chapter 5 “GUI/Controls”*).

(The Teldex Reverb Chamber Track is a feature exclusively available in MIXOSAURUS DAW Drums.)

1.4 ALTERNATING SAMPLES

With MIXOSAURUS DAW Drums you can use up to seven alternative recordings of each hit, depending on the patch you load. This means you have SEVEN alternating samples, available for EVERY drum or cymbal, for EVERY articulation of that instrument, for EVERY velocity layer, and EVERY single one of these alternative recordings involve individual recordings for each of the multiple plugin output channels.

If you load a “7 Alternating Samples” patch and play a sequence of 8 notes, all the same articulation and all at the same MIDI velocity, then only the 8th note will be playing a sound you’ve heard before. This allows MIXOSAURUS to sound utterly realistic even if you program a very stiff and machine-like groove.

Should you actually want MIXOSAURUS to sound like a machine, then you'd simply use patches without alternating samples.

(The option to use up to seven alternative recordings for each and every sound is a feature exclusively available in MIXOSAURUS DAW Drums. To make best use of this feature, please watch the "Alternating Samples" tutorial video located in the 'Documentation'-folder on your MIXOSAURUS hard drive.)

1.5 SCRIPTING VARIATIONS

MIXOSAURUS makes extensive use of Kontakt 2's ingenious script processor (KSP). In MIXOSAURUS patches, KSP processes and manipulates incoming MIDI data, changes MIXOSAURUS' engine parameters and effects, and it defines and toggles user interface controls.

With the incredible number of samples and controls available, activating all of them at the same time can put a heavy load on your CPU. To give you figures: in a normal drum groove, MIXOSAURUS will continuously play 100-200 stereo voices and its engine can be set to apply several DSP effects to each of them. Consequently and analog to the Alternating Samples issue, MIXOSAURUS offers three different variations of "control depth" to reduce CPU load, GUI elements and loading times in those cases where you don't need the full set of controls:

- ▶ **FULL SCRIPTING** All controls and FX available
- ▶ **NOFX SCRIPTING** no FX algorithms, but Levels/Dynamics/Envelope available
- ▶ **NONE SCRIPTING** no controls or FX at all, all sounds play exactly as they were recorded: pure tracks

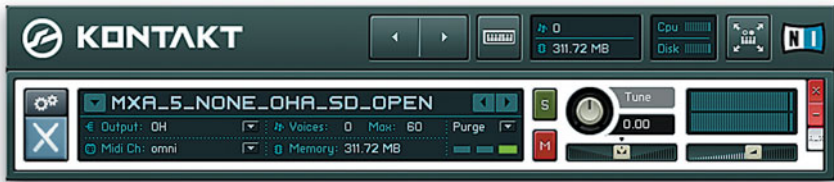
To fully understand the differences of these scripting variations you will need to read through the GUI chapter, so don't bother now. For now, just remember that any MIXOSAURUS patch can be loaded in these three different levels of "control depth", depending on the scripting variation.



'full' scripting



'no FX' scripting



'none' scripting

1.6 SUMMARY: MIXOSAURUS PATCH NAMING

Let's summarize: each MIXOSAURUS patch is defined by:

- ▶ the number of alternating samples used in that patch (1 to 7)
- ▶ the scripting variation ("full", "noFX" or "none")
- ▶ the overhead mic setup ("OHA", "OHB" or "OHC")
- ▶ the instrument description (e.g. "Kick Drum Soft" or "Ride Cymbal Heavy")

Here are a few example patch names and their descriptions:

PATCH NAME	MEANING
MxA_5_full_OHB_Ride_hvy.nki	<ul style="list-style-type: none"> - MIXOSAURUS Kit "A" - Heavy Ride Cymbal - 5 alternating samples - full scripting - Overhead setup B (<i>small diaphragm condenser mics</i>)
MxA_3_full_OHA_SD_open.nki	<ul style="list-style-type: none"> - MIXOSAURUS Kit "A" - Snare Drum open (=no muffling) - 3 alternating samples - full scripting - Overhead setup A (<i>vintage ribbon mics</i>)
MxA_1_noFX_OHB_Tom_12.nki	<ul style="list-style-type: none"> - MIXOSAURUS Kit "A" - 12" Tom - 1 static (no alternating) sample - "noFX" scripting - Overhead setup B (<i>small diaphragm condenser mics</i>)
MxA_3_none_OHC_KD_med.nki	<ul style="list-style-type: none"> - MIXOSAURUS Kit "A" - Kick Drum (medium beater) - 3 alternating samples - no Scripting - Overhead setup C (<i>vintage tube mics in M/S configuration</i>)

A full MIXOSAURUS Multi looks like this:



Don't worry – the MIXOSAURUS patches are organized in an easy-to-browse folder structure, and you can even re-arrange the structure to suit your personal browsing logic. More on that in *Chapter 3 "Loading Instruments and Multis"*.

CHAPTER 2

GETTING STARTED

SYSTEM REQUIREMENTS

- ▶ Mac OS 10.4 or later, G4 / G5 / Intel Core Duo CPU, 1.4 GHz or faster, 2GB RAM
- ▶ Windows XP SP2, Pentium IV / Athlon CPU, 1.4 GHz or faster, 2GB RAM
- ▶ a free and working Firewire800 or eSATA port
- ▶ internet access (at least temporary to authorize the software)

INSTALLATION BASICS

If this is your first Kontakt Player 2 product, both the MIXOSAURUS DAW Drums “A” library/instruments path and the Kontakt Player 2 software will be installed. If you already have installed other libraries powered by Kontakt Player 2, the installer will skip the player software and configure the MIXOSAURUS DAW Drums “A” library/instruments path only.

IMPORTANT NOTE: After the installation, MIXOSAURUS DAW Drums will need to be authorized to run, which normally takes no more than a minute provided that internet access is available.

WITHOUT A VALID AUTHORIZATION THIS SOFTWARE WILL NOT RUN.

(The authorization procedure is described in *Chapter 2.4*)

2.1 INSTALLATION UNDER MAC OS X

- ▶ double-click the Installer-icon on your MIXOSAURUS hard drive to start the installation
- ▶ the start screen appears. Click Continue
- ▶ confirm the license agreement
- ▶ if this is your first Kontakt Player 2 installation, you will be asked where the standalone Kontakt Player 2 software shall be installed (defaults to your 'Applications'-folder), and which of the various plugin formats you wish to install. Select a location for the standalone software and the plugin format(s) you wish to install, then Continue
- ▶ confirm to start the Service Center installation (this is needed to authorize the software)
- ▶ confirm the Service Center license agreement
- ▶ select a location for the Service Center installation
- ▶ done

2.2 INSTALLATION UNDER WINDOWS XP

- ▶ double-click the Installer-icon on your MIXOSAURUS hard drive to start the installation
- ▶ the setup program will suggest C:\Program Files\Native Instruments\KONTAKT PLAYER 2 as the path for the destination folder. You may also choose another folder.

INSTALLED FOLDERS, FILES, AND LINKS

The setup program creates a new folder called KONTAKT PLAYER 2 in the installation directory (Program Files\Native Instruments). This folder contains the files required to operate the software. If you do not choose a different program path during installation, links to KONTAKT PLAYER 2 and a ReadMe-file are added to the Start menu under Programs\Native Instruments.

IMPORTANT: Do not move the installation folder to another location!

VST, DXi, and RTAS Plug-in Installation:

When the choice is given by the installer, tick the desired plug-in(s) from the list of components to install.

For VST, you can choose to automatically search for the VST plug-in folder, or manually select the VST plug-in folder of your choice. Please select the option that best suits your installation requirements.

If you decide to install the VST plug-ins at a later date, simply copy the "KONTAKTPlayer2 VST.dll" from the VST folder of the installation folder into the VST plug-ins folder of the host program.

NOTE: If the VST plug-ins are not visible in the Windows Explorer, select the Show All Files option. This option is located in the Explorer menu View -> Folder Options ... on the View tab below Hidden files. Optionally, you can set up your host programs so that they all use the same VST plug-ins folder.

- ▶ confirm to start the Service Center installation (this is needed to authorize the software)
- ▶ confirm the Service Center license agreement
- ▶ select a location for the Service Center installation
- ▶ done

2.3 UPDATES

Be sure to regularly check Native Instruments' web site for any possible Kontakt Player 2 updates. Software is frequently updated and a more recent version may be available.

Library updates may be available at MIXOSAURUS.com. Please check the Library Info Box in the Kontakt Player 2 browser for relevant links.

2.4 AUTHORIZATION

After installing MIXOSAURUS DAW Drums and/or Kontakt Player 2, they need to be authorized to be used. To authorize, you use the Native Instruments Service Center application which was installed after the main library installer. You can start the Service Center through the Info box registration tab of the Kontakt Player 2 software.

For more information on how to use Service Center, please see the accompanying documentation in the Service Center application folder.

2.5 SETTING UP KONTAKT PLAYER 2 FOR MIXOSAURUS DAW DRUMS

To assure optimum performance of MIXOSAURUS DAW Drums, please check the following parameters before initial use (press the Options button in the Main Control Panel of the Kontakt Player 2 interface):



- ▶ set “Audio Engine / CPU Overload Protection” to “medium”
- ▶ activate “Audio Engine / Multiprocessor Support” if applicable
- ▶ set “Audio Engine / Offline Interpolation Quality” to “perfect”
- ▶ set “Handling / MIDI Channel assignment ...” to “omni”
- ▶ set “DFD / Amount of memory ...” so that the maximum voices field below will show the highest number

“DFD / Override Instrument’s preload size” should NOT be activated for now. More on this later.

“Load/Import / Load Instruments/Banks/Multis in Purged Mode” should NOT be activated for now. You’ll find more on this in the following chapter.

CHAPTER 3

LOADING INSTRUMENTS AND MULTIS

3.1 CRUCIAL: THE MIXOSAURUS FRAME

Each MIXOSAURUS instrument patch needs to be embedded in a MIXOSAURUS Frame Multi. This Frame works as an inner routing/bus structure and allows for a number of useful mixing options (more on that in *Chapter 6 “Mixing”*). There's one frame for multichannel use (e.g. in a DAW) and one for stereo use (e.g. when used standalone), both located in the “Multis” folder on your MIXOSAURUS hard drive.

Be sure to always have a Frame Multi loaded before loading additional MIXOSAURUS instruments, otherwise they won't be able to route their multitrack audio to the desired plugin outputs.

All instrument patches can be used in either the stereo or the multichannel Frame with the exception of the Toms – these have individual patches for stereo or multichannel use (marked “_S_” and “_M_” in the instrument name). Obviously, once you load any MIXOSAURUS DAW Drums Multi, the Frame will be there and you can load additional drums and cymbals into it.

3.2 MEMORY? MEMORY!

The total amount of sample RAM used by a Multi is shown in the Main Control Panel. In many configurations, it is not possible to use more than a total of roughly 1.1 GB of RAM for Kontakt Player 2 samples. This limit will be valid regardless of how much RAM you have installed, and regardless of how many instances of Kontakt Player 2 you use or if you use it standalone and as a plugin at the same time. The total sample RAM of all simultaneously running instances cannot exceed that limit.

However, don't blame Kontakt Player 2 alone (its powerful engine only made MIXOSAURUS DAW Drums possible) – today's operating systems have allocation limits as well. It seems that MIXOSAURUS DAW Drums simply are designed too uncompromising for today's standards ... Luckily, we have a few tricks to use and a few parameters to tweak to tailor the perfect drumset for each production situation:

3.3 PURGE MODE

Kontakt Player 2 has a useful feature to reduce the amount of active sample RAM: Purge Mode. Purging samples means removing all samples from RAM except for those that are used in the current arrangement. But how would Kontakt Player 2 know which samples they are? Well – it remembers them.

Purge Mode identifies the used samples by “listening” to your track as you hit Play on your sequencer. It remembers the ones it plays, and after you've stopped the sequencer it offers you to Update the Sample Pool which means removing all unplayed and keeping/loading all played samples.

RESTART THE ENGINE!

Unfortunately, this identification algorithm does not take into account MIXOSAURUS' Alternating Samples feature. If you use patches with several Alternative Samples, it will be likely that you hear different sample variations in different passes, and letting the Purge algorithm analyze just one pass of your arrangement

will then result in missing samples. To solve this, open the Engine Tab in the Browser, and click Restart Engine. This will restart Kontakt Player 2's sample engine and reset the alternating samples counter. Obviously, having to press a button everytime you want to start the sequencer is as impractical as it could get. That's why I recommend to compose/arrange/mix using patches with less or no alternating samples, and to replace them by the larger patches when the mix is ready to print.

- ▶ Compose/Arrange/Mix using patches with few or no Alternating Samples
- ▶ when the mix is ready to print, click the Main Control Panel's Options button
- ▶ click the Load/Import tab
- ▶ activate "Load Instruments/Banks/Multis in Purged Mode"
- ▶ close the options window
- ▶ replace your current MIXOSAURUS instruments with their respective, more Alternating Samples counterparts (you'll need to copy any specific knob settings by hand)

You should now have a MIXOSAURUS multi with all (or most) samples purged. Continue:

- ▶ open the Engine Tab in the Browser, and click Restart Engine
- ▶ hit PLAY in the sequencer and let it play start-to-end through the entire song
- ▶ In the Main Control Panel, press the Purge Button and select Update Sample Pool
- ▶ Kontakt Player 2 will now load all the samples needed
- ▶ saving the project might be a good idea at this point
- ▶ open the Engine Tab in the Browser, and click Restart Engine
- ▶ now print the mix

TIP 1: If your arrangement uses a fixed tempo you can raise the tempo to shorten the time needed for the purge learning pass.

TIP 2: I recommend that you make use of the Rack's Minimized/Maximized View features (described in *Chapter 5 "GUI/Controls"*) while replacing instruments and copying parameters.

Please watch the "Purge Procedure" tutorial video located in the "Documentation"-folder on your MIXOSAURUS hard drive.

3.3 OFFLINE BOUNCING

If purging doesn't free up enough sample RAM to allow loading of all the MIXOSAURUS instruments you wish, then there's Offline Bouncing.

Offline Bouncing doesn't need realtime disk streaming and thus allows to lower the Sample Preload Buffer. That parameter determines the streaming performance – changing it, you are effectively toggling between "can stream well but only load a limited number of samples" and "can load lots and lots of samples, but can't stream realtime".

Setting up for Offline Bouncing works as follows:

- ▶ click the Options button on the Main Control Panel and select the DFD tab
- ▶ set the slider below the Override Instrument's preload size checkbox to a low value (e.g. 24 kB)

- ▶ check the Override Instrument's preload size checkbox (KP2 will now re-arrange the RAM assignment which will take a few seconds)
- ▶ close the options window
- ▶ load additional MIXOSAURUS instruments, or replace your current MIXOSAURUS instruments with their respective more Alternating Samples counterparts (they will take some time to load, and you'll need to copy any specific knob settings by hand)
- ▶ now perform the offline bounce in your DAW

I recommend that you make use of the Rack's Minimized/Maximized View features (described in *Chapter 5 "GUI/Controls"*) while replacing instruments and copying parameters.

IMPORTANT: Remember that after these changes Kontakt Player 2 might have a DFD buffer setting that won't allow for any good realtime streaming at all.

To re-enable realtime streaming, FIRST reset the multi (= remove all instruments), then uncheck the Override Instrument's preload size checkbox again. You don't need to move the slider, unchecking is sufficient.

EQUALLY IMPORTANT: The Preload Buffer size has a great effect on the speed of the Offline Bounce. The lower the Preload Buffer, the longer will the bounce take.

NOT ANY LESS IMPORTANT: If the bounced audio contains artifacts, please refer to Offline Bouncing in the full Kontakt Player 2 manual (which is available as a PDF-document in the 'Documentation'-folder on your MIXOSAURUS hard drive). Also, be aware that sample purging and changing buffers may interfere with each other – one operation could make the previous operation worthless if applied in the wrong order.

3.5 BROWSER OR LOAD/SAVE BUTTON?

The Kontakt Player 2 Browser on the left shows you all installed Kontakt Player 2 libraries and their individual patches in a hierarchical menu reflecting the folder structure on the drive. If you have difficulties using it, please refer to the Browser Section of the full Kontakt Player 2 manual (in the 'Documentation'-folder on your MIXOSAURUS hard drive).

You will prefer to use the Browser to load instruments out of many different folders on the drive.

The Load/Save button of the Main Control Panel allows you to load instruments or Multis via a standard file selector, and it remembers the folder you used last. Thus, you might prefer it over the browser when loading several files out of the same directory one after another (e.g. to compare similar patches).

3.6 CREATING YOUR OWN FOLDER STRUCTURE

If you feel that the default MIXOSAURUS folder structure doesn't suit your own "sorting logic", you can easily change it by moving the patches, renaming folders and/or creating new ones. However, it is important that the RELATIVE PATH between instruments/Multis and the sample monoliths stays unchanged: each instrument or Multi must find the 'Samples'-folder four directories above itself, and the structure within the 'Samples'-folder must not be changed!

CHAPTER 4

THE MIXOSAURUS GROOVES

MIXOSAURUS DAW Drums “A” comes with a number of included drum grooves, Hi Hat and Ride Cymbal patterns. Be sure to regularly check MIXOSAURUS.com for additional grooves which will be available as free downloads.

Feel free to request any groove I haven’t included when you think that I should (the best way to do this would be to tell me the artist name and song title). However, I cannot guarantee that it will eventually be included, nor can I promise any handling times.

4.1 GROOVES STRUCTURE

Each of the included MIDI files holds a 4-bar drum groove or pattern, a few variations of those 4 bars, and a few fills. These MIDI files are located in the ‘Grooves’-folder on your MIXOSAURUS hard drive.

Note that these grooves make use of specific features and sounds only available in MIXOSAURUS DAW Drums.

The Grooves are organized within subfolders for quick browsing, and each Groove is available mapped and/or optimized for several of the included Preset Multis.

4.2 USING GROOVES WITH DIFFERENT DRUMS & CYMBALS

There is a customized variation of each Groove available for several of the included Preset Multis – to use a Groove with different MIXOSAURUS drums and cymbals, the MIDI data (or parts thereof) has to be transposed. This is because every MIXOSAURUS instrument has its own fixed range of keys on the MIDI keyboard to allow to use any combination of instruments in one Multi (e.g. both Ride Cymbals, or all three Snare Drums together) without the danger of overlapping keys or other worries. Since most MIXOSAURUS instruments use quite a number of keys, I found conflicts too likely to arise.

All of today’s sequencers allow for comfortable transposition of MIDI data – please refer to your sequencer’s manual if you’re unfamiliar with transposing MIDI.

4.3 CREATING MORE GROOVE VARIATIONS

MIXOSAURUS DAW Drums feature a MIDI Dynamics Processor that allows you to change the drummer’s interpretation of incoming MIDI. Using this feature, you can create endless variations of the grooves and patterns. Please refer to *Chapter 5.5 (the Dynamics-page)* for details and don’t miss the “Dynamics” tutorial video located in the ‘Documentation’-folder on your MIXOSAURUS hard drive.

CHAPTER 5

GUI / CONTROLS

5.1 MAIN CONTROL PANEL



The Main Control Panel holds the global controls that affect all MIXOSAURUS instruments together. Click on them, try them – most of the functions are self-explanatory, so to make this chapter not too long, I'll only cover those specifically useful for MIXOSAURUS. If further questions arise, please check the Kontakt Player 2 manual (in the 'Documentation'-folder on your MIXOSAURUS hard drive).

OUTPUTS

Toggles the Outputs view on/off. Allows you to check whether you have the correct MIXOSAURUS Frame loaded, and to apply Kontakt Player 2's own effects to its Output Busses.

MASTER KONTROL

Lets you set the Master Tune, thus tuning all MIXOSAURUS instruments together. This might be useful if you need to detune an instrument and want to be sure to keep all instruments' relations and the global ambience intact. Allows +/- 2 semitones.

LOAD/SAVE

If you want to clear the Multi, you can use "Reset Multi", but you can also load one of the two empty MIXOSAURUS Frame Multis. "Reset" will always load Kontakt Player 2's current default Multi. To save any loaded Multi as the default Multi, press the red "Make Default" button in the Outputs window (if you don't see the Outputs, press the Main Control Panel's Outputs button).

OPTIONS

Does the obvious. The respective options for specific features are described in those features' chapters.

PURGE

Purge Mode is described in *Chapter 3.3, Purge Mode*.

VIEW

Obvious. Set the three sizes on the Options / Interface page.

5.2 ADDITIONAL GLOBAL CONTROLS



Kontakt Player 2 can load up to 64 MIXOSAURUS instruments, and it organizes them in four sections of up to 16 instruments each. Only the active section's instruments can be viewed, so if you don't find your instruments, check these buttons. The two buttons on the right are very important to keep the whole view clear – they switch the whole Rack to minimized and maximized view. Try them.

MIXOSAURUS' clever color coding of the individual instruments' GUIs will allow you to identify each instrument immediately, no matter if mini- or maximized.

Finally, the best button of all (to me, anyway):



The Instrument Focus button zooms in on the currently selected MIXOSAURUS instrument and hides all other graphical elements of Kontakt Player 2. If the instrument's view is set to minimized, the remaining window will be nothing more than a slim bar that you can put to the upper or lower border of your screen. You can then switch through instruments, expand any that you want to make changes or adjustments to, and minimize again.

5.3 PERFORMANCE VIEW: BASICS AND NAVIGATION



Each MIXOSAURUS instrument has its color-coded logo on the left, the navigation buttons on the right and a status-/quick-help-label down at the bottom. The color-coded “x” button in the upper right corner deletes the instrument from the Rack, the “-” button minimizes this individual instrument's view.

Due to each instrument's direct multichannel output assignment, the output selector and the volume and pan sliders in the upper controls area have no effect (don't worry, you can control volume and pan, yet not there). Tune works. The Max. Polyphony value can be adjusted, however it's sometimes dangerous to use high values (see *Chapter 5.6, “Delay”*). The Solo and Mute buttons are very useful – you can listen to a single instrument (with all its tracks), or mute one (with all its tracks).

The eight navigation buttons switch pages except for two of them:

The **On/Off Button** (top right) always works as the on/off button for the currently selected page (in the screenshot above, it would toggle the Levels controls on/off).

The **Help/Options Button** opens a pull-down menu with a few useful options and the great onscreen help function. When enabling it, the navigation buttons will be replaced by a text window. If you now touch a control, the window will display an in-depth description of this specific control. A Back button will close the window.

IMPORTANT: With the vast number of available controls, the screen redraw might get unpleasantly slow when you have too many instruments' GUIs open and the controls active. I recommend to leave the Rack in minimized view or even better, use the Instrument Focus feature described in the previous section.

Note that the full selection of controls pages is only available in the “full” patches. In “noFX” patches, Delay, Filter and Distortion will not be available. In “none” patches, no controls will be used at all.

5.4 PERFORMANCE VIEW: LEVELS PAGE



The Levels Page has the Volume, Close Mics Balance and Pan controls for this individual MIXOSAURUS instrument. You can use the Levels On/Off button to compare your mix to the original.

The “Levels” tutorial video located in the ‘Documentation’-folder on your MIXOSAURUS hard drive shows a short example of what these controls do.

5.5 PERFORMANCE VIEW: DYNAMICS PAGE

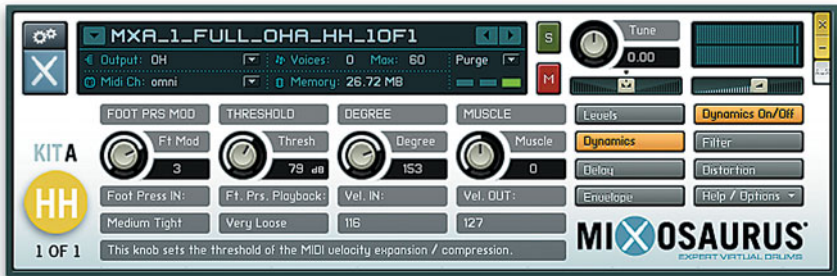


The Dynamics Page has the Threshold, Degree and Muscle controls for this individual MIXOSAURUS instrument. These resemble Threshold, Ratio and Makeup Gain controls of audio compressors and work quite similar – but on the incoming MIDI. The MIXOSAURUS MIDI Dynamics Processor applies changes to MIDI velocities before the notes hit the sample playback engine.

Thus, you can make the virtual drummer play more or less expressively, just plain harder or softer, or any combination thereof. This allows you to quickly turn a MIDI drum groove into something quite different – without changing the MIDI data. The feature that makes this MIDI compressor/expander especially useful is the Threshold control. This determines at which MIDI velocity the “knee” of your compression or expansion sits.

The Vel. IN and Vel. OUT labels give you feedback on how your settings affect the MIDI.

Use the Dynamics On/Off button to compare your settings to the original.



All MIXOSAURUS Hi Hat instruments feature an additional control on their Dynamics Page: the **Foot Pressure Modulator**. This adds an offset to the foot pressure MIDI data contained in the groove. It allows to loosen or tighten the Hi Hat relative to what the MIDI originally dictated.

As a simple example, by automating this control (more on automation later) you might use the same MIDI groove for verse and chorus of a song, and automate this parameter when going into the chorus to have the Hi Hat more open in the chorus – slightly more or greatly more. MIXOSAURUS' Closed Hi Hat sounds use 7 different foot pressure levels from Too Tight to Very Loose (which you might call “open” already), and the Foot Pressure Modulator can turn each into any other by offering +/- 6 steps.

To hear how differently the same MIDI can sound using the MIXOSAURUS Dynamics Processor, watch the “Dynamics” tutorial video located in the ‘Documentation’-folder on your MIXOSAURUS hard drive.

5.6 PERFORMANCE VIEW: DELAY PAGE



Analog to the Dynamics Page, the Delay Page has controls quite similar to ordinary Delay effects units or plugins and they work the same way – but on the incoming MIDI. Visually speaking, the delay doesn't work on the audio, but it tells the drummer to hit multiple times. Thus, the delay-generated notes will play different samples if you've used an Alternating Samples patch.

READ THIS TO AVOID CRASHES! Two of these controls are dangerous – if used improperly. They can overload Kontakt Player's audio engine and make it crash. I don't consider this a fault of Kontakt Player 2 so much – the engine only tries to do what we tell it to, but it's being given contradicting orders.

Here's how it occurs: the Time Fine control allows to set the delay time to very short, even to negative values as it works as an addition to the Time Coarse value (and you might want to use very short times to create buzzing effects now and then). The Time Factor control determines whether the delay time stays constant with each repetition ("0") or gets shorter or longer each cycle.

Now, it's obvious that these controls can be set in a combination that at some point the engine is told to play thousands of notes in a split second.

"But why would that crash it, I've set the polyphony limit to 60!" Yes, you have – but what Fading Time have you specified in the instrument's note killing options? Even with short fading times there might be an overload. Try it – set the polyphony limit to 40 and play around with extremely short delays. You'll see a voice count of 60 or more.

"So shall I set the fading time to zero?" Not the best idea as this will produce audible note killing in other situations. The best way is to use the Max. # control as a safety net. Leave it set to lower numbers. If you really want to go for buzzing or accelerating delays, carefully raise it and watch the voice count. If it gets to significant numbers, lower the polyphony limit for more voice headroom (at this point, the early killing will not be audible).

"Man – what would I use the Delay for anyway? Isn't it totally unnecessary crap?" Good question. Probably yes ... then again – why not watch the "Delay" tutorial video located in the 'Documentation'-folder on your MIXOSAURUS hard drive?

5.7 PERFORMANCE VIEW: ENVELOPE PAGE



This probably is the most interesting page of the MIXOSAURUS interface. It offers controls to manipulate the Attack, the Duration and the Release of each MIXOSAURUS drum and cymbal individually. Duration sets the virtual “Key Held” time, Release is the fade time that sets in after the Duration is over.

REL. OPR DEGREE?!

A unique feature of MIXOSAURUS DAW Drums is the control on the right, labelled REL. OPR DEGREE. “OPR” is short for Overheads, PZMs and Room. In short, it works like a multiplier (based on percentage) of the Release knob and works on the Release of the mentioned Overhead, PZM and Teldex Room tracks only.

This is an extremely versatile feature as it allows you to cut the length of an instrument’s Close mic’s sound (e.g. shortening Kick Drum and Toms) but keep the ambient tracks somewhat longer which will sound a lot more realistic and, well, just “better”. Another example would be doing the exact opposite: Keep the samples’ entire length in the Close mics but hard-cut the ambient ones and pull up the Teldex Room fader – Gated Reverb!

Remember, the OPR Degree knob works like some sort of multiplier. Thus, some combinations of Release and OPR Degree don’t make sense or have no audible result. An example:

If you have turned the Release knob full right, then OPR Degree values > 100 are useless. If you have turned the Release knob full left, then OPR Degree values < 100 are useless as well.

To see what MIXOSAURUS’ envelope controls can do, watch the “Envelope” tutorial video located in the ‘Documentation’-folder on your MIXOSAURUS hard drive.

MIXOSAURUS Hi Hat patches use individual envelope parameters for Closed Hi Hat sounds and Open Hi Hat sounds:



MIXOSAURUS Cymbal patches use individual envelope parameters for Stick Cymbal sounds and Mallet Cymbal sounds:



Note that in the Cymbals patches, this control is labelled “PR” – the algorithm treats the Overheads as Close mics, the Degree knob sets the offset on PZMs and Room.

5.8 PERFORMANCE VIEW: FILTER PAGE



You certainly know the parameters of a filter. However, three of the MIXOSAURUS filter parameters are somewhat special:

Frq OPR

With the LoPass Filter activated, setting Frq OPR to values <100 will raise the OPR tracks' filter frequency in relation to the Close mics' filter frequency. Values >100 will lower it.

With the HiPass Filter activated, setting Frq OPR to values <100 will lower the OPR tracks' filter frequency in relation to the Close mics' filter frequency. Values >100 will raise it.

Now re-read these two paragraphs aloud 10 times, as fast as you can, and record that; then send me an email with the mp3. Thanks!

With the BandPass filter, the Frq OPR knob has no effect.

Res OPR

This sets the Filter Resonance offset for OPR tracks in relation to the Close mics, and it works with all three filter types.

Toggle FX Order

This button swaps the position of the Filter and Distortion algorithms in the signal flow. Note that toggling will also swap the position of the Filter and Distortion Navigation buttons (see next screenshot) – this allows you to always know the current order – even if you're on some other controls page.

To see what you can do with these controls, please watch the "Filters" tutorial video located in the 'Documentation'-folder on your MIXOSAURUS hard drive.

5.9 PERFORMANCE VIEW: DISTORTION PAGE



You know these parameters – even the Drv OPR knob should not make you wonder anymore. Toggle FX Order is described in the previous section.

To see what you can do with these controls, please watch the “Distortion” tutorial video located in the ‘Documentation’-folder on your MIXOSAURUS hard drive.

5.A AUTOMATION

Currently, Host automation is available for an instrument’s Tune parameter, and for the most important knob controls on every MIXOSAURUS instrument.

Each MIXOSAURUS instrument offers a HELP menu that will tell you which of the controls are Host-automatable: Go to the MIXOSAURUS instrument’s Interface, navigate to its HELP page, then touch any control. The control’s help text will appear. At the end of the help text you’ll find the info whether this control is Host-automatable or MIDI CC-automatable only.

IMPORTANT: Many of the MIXOSAURUS DAW Drums instruments are built from a vast number of samples. Automation might apply changes to so many parameters simultaneously that the engine can’t manage to update all parameters in time.

For this reason, I recommend to use automation with care, and if you can, send single messages/commands instead of sequential ones.

CHAPTER 6

A FEW COMMENTS ON MIXING

6.1 “DUAL MONO” OR STEREO CHANNEL?

MIXOSAURUS Kick Drums, Snare Drums and the Hi Hat each use two “Close Mic” signals. These can be processed individually using separate mono DAW channels, but you also can process them together in a stereo channel – if your DAW offers you to control the L/R balance, the stereo width and the final pan position of a stereo channel separately (in this order).

Processing them as independent dual mono signals obviously gives you the greatest mixing flexibility as you e.g. can apply additional effects plugins separately to each mic, or automate them individually.

On the other hand, processing them in a stereo channel allows you to change the balance of the two mics without having to adjust the volume, which can save a few mouse clicks or adjustments on your hardware mix controller. Also, compressing them together can produce more “glue”.

To see an example of the stereo method, please watch the “Dual Mono or Stereo” tutorial video located in the ‘Documentation’-folder on your MIXOSAURUS hard drive.

6.2 THE “COMMON” TRACKS: OVERHEADS, PZMS, TELDEX ROOM

These three stereo tracks play at each hit of each instrument. They are very important for the overall “glue” and authenticity.

The Overheads are the most important tracks to create a realistic drumset sound. Many engineers mistake them for Cymbal microphones – they are not. My advice is that you always start with the Overheads, then bring in Kick and Snare.

TIP: MIXOSAURUS allows to set the Overheads’ L/R pan position – individually, for each instrument.

The PZM tracks may sound crazy and overeffected when you listen to them alone. Especially the type of compression initially sounds “faulty” due to its heavy L/R-differences and movements. However, this is not an error. You’d use the PZM tracks to add that expensive “air” and more width to the drums. If you find that they sound too wide or bring too much movement into the instruments’ positions, then you probably have set them too loud (in the MIXOSAURUS Demo mixes, they’re set about 18dB lower than the Close Mics or Overheads tracks). If you’re sure that you want them this loud, then use a stereo modelling effect to narrow them down as much as you feel necessary.

TIP: MIXOSAURUS allows to set the PZMs’ L/R pan position – individually, for each instrument.

The Teldex Reverb Chamber or Room Track provides a killer drum reverb right out of the box. It sounds great no matter if you use it stereo or mono (for mono application, I prefer using just one side instead of summing both), and you will find that it sits well in a mix – with a full arrangement, it can almost vanish but still add a lot of depth and realism to the drum sound.

The initial balance of the individual signals' room sound can be changed easily – each instrument has its own Teldex Room level control.

TIP: MIXOSAURUS allows to set the Teldex Reverb Chamber's L/R pan position – individually, for each instrument (when used stereo).

6.3 “INTERNAL” AND “EXTERNAL” MIXING

MIXOSAURUS Kit A has its name for a reason – it allows to change sound parameters and insert effects at several positions in the signal flow. As you've seen in the previous chapter, you can use controls on the instruments' GUIs and work on each MIXOSAURUS instrument individually.

Next in the signal flow and still “inside” the plugin, Kontakt Player 2's Output Busses can be used to add effects or change levels (changes are applied to the output busses). Lastly, you have all the options in your DAW.

If using MIXOSAURUS DAW Drums as a multichannel plugin, there's no great difference between Kontakt Player 2's Output Busses and your DAW channels (the Output Busses directly feed the DAW's channels, so the signals are the same). However, you can use Native Instruments' integrated effects algorithms there, which you can't use in your DAW, and vice versa.

If using MIXOSAURUS DAW Drums with a stereo output configuration, then the internal Output Busses are a great feature as they allow to apply buss mixing – limited to some extent, but a great difference to applying changes to the individual mics only.

I won't list all of the mix options and Kontakt Player 2 internal effects here – you certainly know how to explore the possibilities. But keep in mind that you have these “internal” and “external” options. There will be very little you *can't* do.

CHAPTER 7

“EVER PLAYED A DRUMSET?!”

Programming virtual drums so that they sound real is a very difficult task for non-drummers, actually impossible for someone who hasn't played or has at least seen & listened to other drummers play many times.

With MIXOSAURUS DAW Drums, it's easier to program a realistic sounding drum performance because, by design, it IS authentic (if you haven't tweaked its parameters to death, that is).

I recommend you study the included grooves closely, especially with regard to the different articulations used, and with regard to the Modulation MIDI CC that determines the Hi Hat's foot pressure.

CHAPTER 8

MIXOSAURUS ARTICULATIONS

KICK DRUM (4 DIFFERENT BEATERS)

CO ▶ D#0

Soft	Soft felt beater
Medium	Medium felt beater
Hard	Wood beater
Coin	Wood beater + coin taped to the head

SNARE DRUM (3 DIFFERENT MUFFLINGS, 7 ARTICULATIONS*)

FO ▶ G#1

Tip Out	Stick's tip hits the head, very close to the rim
Tip Halfway Out	Stick's tip hits the head, equal distance to rim and center
Tip Center	Stick's tip hits the head in the center
Rim Shot Out	Stick's tip hits the head close to the rim, at the same time the stick's shank hits the rim
Rim Shot Halfway Out	Stick's tip hits the head, equal distance to rim and center, at the same time the stick's shank hits the rim
Rim Shot Center	Stick's tip hits the head in the center, at the same time the stick's shank hits the rim
Rim Only	Stick's shank hits the rim

(* the "vintage death muffling" Snare Drum is limited to 2 articulations, "Tip Center" and "Rim Shot Center")

SIDESTICK (2 VARIATIONS)

A1 ▶ A#1

Full	Stick's bottom end hits the rim while the tip is being pressed against the head, close to the center
Crisp	Stick's bottom end hits the rim while the tip is being pressed against the head, close to the rim

TOMS (3 ARTICULATIONS)

C-1 ▶ B-1

Tip	Stick's tip hits the head in center
Rim Shot	Stick's tip hits the head in center, at the same time the Stick's shank hits the rim
Rim Only	Stick's shank hits the rim

HI HAT (29 ARTICULATIONS)**C2 ▶ B2**

Closed Tip**	Stick's tip hits the shoulder of the top Hi Hat cymbal
Closed Shank**	Stick's shank hits the shoulder of the top Hi Hat cymbal
Closed Crash**	Stick's shank hits the border of the Hi Hat, like playing a crash cymbal
Open < Tip	Stick's tip hits the shoulder of the top Hi Hat cymbal. Hi Hat is almost closed at the hit and opens up immediately after the hit
Open < Shank	Stick's shank hits the shoulder of the top Hi Hat cymbal. Hi Hat is almost closed at the hit and opens up immediately after the hit.
Open < Crash	Stick's shank hits the border of the Hi Hat, like playing a crash cymbal. Hi Hat is almost closed at the hit and opens up immediately after the hit.
Open = Tip	Stick's tip hits the shoulder of the top Hi Hat cymbal. Hi Hat is fully opened at the hit.
Open = Shank	Stick's shank hits the shoulder of the top Hi Hat cymbal. Hi Hat is fully opened at the hit.
Open = Crash	Stick's shank hits the border of the Hi Hat, like playing a crash cymbal. Hi Hat is fully open at the hit.
Foot >	Foot, open to closed
Foot > <	Foot, open to open (foot splash)

(**) The three "closed" Hi Hat articulations make use of 7 different foot pressure levels each, controlled via the "Modulation" MIDI CC (ModWheel). This makes 21 sub-articulations for the "closed" Hi Hats alone. The Modulation CC values are:

Too Tight	0
Very Tight	20
Tight	40
Medium	60
Medium Loose	80
Loose	100
Very Loose	120

The seven foot pressure ranges use continuous values, not only exactly the values shown here – but this way is the easiest to remember them. When you want to apply a specific foot pressure, set the Modulation CC according to this table.

CRASH CYMBALS (8 ARTICULATIONS)**C3 ▶ G4, A#6 ▶ D#7**

Tip	Stick's tip hits the cymbal's shoulder
Shank	Stick's shank hits the cymbal's Shoulder
Crash	Stick's shank hits the cymbal's border
Bell Tip	Stick's tip hits the cymbal's bell
Bell Shank	Stick's shank hits the cymbal's bell
Muted Short	Cymbal played using the "Crash" articulation, and hand-muted shortly after the hit (the highest velocities offer an extremely aggressive sound with a very short time between hit and mute)
Muted Long	Cymbal played using the "Crash" articulation, and hand-muted some time after the hit
Mallet	Processed version for convincing crescendos or sustained rolls

() The 15" Cymbal does not offer Tip, Shank and Bell articulations as these don't produce relevant sound with a small cymbal*

RIDE CYMBALS (6 ARTICULATIONS)**C5 ▶ B5, E7 ▶ G7**

Tip Out	Stick's tip hits the shoulder of the cymbal, rather close to the cymbal's border
Tip In	Stick's tip hits the shoulder of the cymbal, closer to the cymbal's bell
Shank	Stick's shank hits the cymbal's shoulder
Bell Tip	Stick's tip hits the cymbal's bell
Bell Shank	Stick's shank hits the cymbal's bell
Mallet	Processed version for convincing crescendos or sustained rolls

CHINA CYMBAL (5 ARTICULATIONS)**C6 ▶ E6, G#7 ▶ A7**

Tip	Stick's tip hits the cymbal's shoulder
Crash	Stick's shank hits the cymbal's border
Muted Short	Cymbal played using the "Crash" articulation, and hand-muted shortly after the hit
Muted Long	Cymbal played using the "Crash" articulation, and hand-muted some time after the hit
Mallet	Processed version for convincing crescendos or sustained rolls

SPLASH CYMBAL (5 ARTICULATIONS)**F6 ▶ A6, A#7 ▶ B7**

Crash	Stick's shank hits the cymbal's border
Choked	Stick's shank hits the cymbal's border while the cymbal is muted by the other hand
Muted Short	Cymbal played using the "Crash" articulation, and hand-muted shortly after the hit
Muted Long	Cymbal played using the "Crash" articulation, and hand-muted some time after the hit
Mallet	Processed version for convincing crescendos or sustained rolls

STICKS (*You know this sound*)**E0, B1, G#4, B4****ALL CYMBALS OFF** (*Mute Key*)**A4 ▶ A#4**

Fades out ALL currently sounding Cymbal & Hi Hat samples

MIXOSAURUS KEYBOARD LAY-OUT 1/3

KEY NAME	MIDI NOTE #		MIDI NOTE #	
C-1	12	TOM 14" TIP		
	14	TOM 14" RIM ONLY	TOM 14" RIM SHOT 13	
	16	TOM 12" RIM SHOT	TOM 12" TIP 15	
	17	TOM 12" RIM ONLY		
	19	TOM 10" RIM SHOT	TOM 10" TIP 18	
	21	TOM 8" TIP	TOM 10" RIM ONLY 20	
	23	TOM 8" RIM ONLY	TOM 8" RIM SHOT 22	
	CO	24	KD SOFT FELT BEATER	
		26	KD WOOD BEATER	KD MEDIUM FELT BEATER 25
28		STICKS CLICK	KD WOOD BEATER + COIN 27	
29		SD OPEN TIP OUT		
31		SD OPEN TIP CENTER	SD OPEN TIP HALFWAY OUT 30	
33		SD OPEN RS HALFWAY OUT	SD OPEN RIM SHOT OUT 32	
35		SD OPEN RIM ONLY	SD OPEN RIM SHOT CENTER 34	
C1		36	SD MUFFLED TIP OUT	
		38	SD MUFFLED TIP CENTER	SD MUFFLED TIP HALFWAY OUT 37
	40	SD MUFFLED RS HALFWAY OUT	SD MUFFLED RIM SHOT OUT 39	
	41	SD MUFFLED RS CENTER		
	43	SD "VINTAGE DEATH" TIP	SD MUFFLED RIM ONLY 42	
	45	SIDESTICK FULL	SD "VINTAGE DEATH" RS 44	
	47	STICKS CLICK	SIDESTICK CRISP 46	

MIXOSAURUS KEYBOARD LAY-OUT 2/3

KEY NAME	MIDI NOTE #		MIDI NOTE #	
C2	48	HI HAT CLOSED TIP		
	50	HI HAT CLOSED CRASH	HI HAT CLOSED SHANK 49	
	52	HI HAT OPEN < SHANK	HI HAT OPEN < TIP 51	
	53	HI HAT OPEN < CRASH		
	55	HI HAT OPEN = SHANK	HI HAT OPEN = TIP 54	
	57	HIT HAT FOOT >	HI HAT OPEN = CRASH 56	
	59	ALL HI HATS OFF	HI HAT FOOT >> 58	
	C3	60	CRASH 18" TIP	
		62	CRASH 18" CRASH	CRASH 18" SHANK 61
		64	CRASH 18" BELL SHANK	CRASH 18" BELL TIP 63
65		CRASH 18" MUTED SHORT		
67		CRASH 18" ALL SOUND OFF	CRASH 18" MUTED LONG 66	
69		CRASH 15" MUTED SHORT	CRASH 15" CRASH 68	
71		CRASH 15" ALL SOUND OFF	CRASH 15" MUTED LONG 70	
C4		72	CRASH 17" TIP	
		74	CRASH 17" CRASH	CRASH 17" SHANK 73
		76	CRASH 17" BELL SHANK	CRASH 17" BELL TIP 75
	77	CRASH 17" MUTED SHORT		
	79	CRASH 17" ALL SOUND OFF	CRASH 17" MUTED LONG 78	
	81	ALL CYMBALS OFF	STICKS CLICK 80	
	83	STICKS CLICK	ALL CYMBALS OFF 82	

MIXOSAURUS KEYBOARD LAY-OUT 3/3

KEY NAME	MIDI NOTE #		MIDI NOTE #	
C5	84	RIDE LIGHT TIP OUT		
	86	RIDE LIGHT SHANK	RIDE LIGHT TIP IN 85	
	88	RIDE LIGHT BELL SHANK	RIDE LIGHT BELL TIP 87	
	89	RIDE LIGHT ALL SOUND OFF		
	91	RIDE HEAVY TIP IN	RIDE HEAVY TIP OUT 90	
	93	RIDE HEAVY BELL TIP	RIDE HEAVY SHANK 92	
	95	RIDE HEAVY ALL SOUND OFF	RIDE HEAVY BELL SHANK 94	
	C6	96	CHINA TIP	
		98	CHINA MUTED SHORT	CHINA CRASH 97
100		CHINA ALL SOUND OFF	CHINA MUTED LONG 99	
101		SPLASH CRASH		
103		SPLASH MUTED SHORT	SPLASH CHOKED 102	
105		SPLASH ALL SOUND OFF	SPLASH MUTED LONG 104	
107		CRASH 18" MALLET	CRASH 18" MALLET 106	
C7		108	CRASH 15" MALLET	
		110	CRASH 17" MALLET	CRASH 15" MALLET 109
	112	RIDE LIGHT MALLET	CRASH 17" MALLET 111	
	113	RIDE LIGHT MALLET		
	115	RIDE HEAVY MALLET	RIDE HEAVY MALLET 114	
	117	CHINA MALLET	CHINA MALLET 116	
	B7	119	SPLASH MALLET	SPLASH MALLET 118

CHAPTER 10

CREDITS / THANK YOU

MIXOSAURUS DAW DRUMS - KIT A

Produced by MIXOSAURUS DAW Drums GmbH
Recorded at Teldexstudio Berlin (<http://www.teldexstudio.de>)
Recording Engineer: Tobias Lehmann
Assistant Engineers: Mathias Ramson, Ansgar Wempe

All MIXOSAURUS graphics by Bas Rikke

Concept, drum setup & maintenance, drumming, editing, programming and scripting by MIXOSAURUS

This documentation by MIXOSAURUS
Graphic design and page lay-out by Bas Rikke

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Thank you.

www.MIXOSAURUS.com
support@MIXOSAURUS.com

12 BARS OF DRUMMING

▶ **Most drummers have four limbs.**

This means they cannot play more than four sounds at the same time. Two of those four simultaneous sounds would have to be Hi Hat and Kick Drum sounds.

▶ **A limb has a mass and obeys physics.**

A few examples:

A limb can only perform up to a certain speed. Fast sequences of hits need to be played by two or more limbs, which takes us back to #1.

A limb can't play an instrument on the far right side of the set and the next millisecond play an instrument on the far left.

A limb can't play a heavy strike on a lowly positioned instrument (like Snare Drum or 14" Tom) and the next millisecond play a cymbal way above the drummer's head.

Playing a strong hit requires preparation, the limb must be given enough time to be raised.

▶ **Each drum groove consists of "big" and "small" notes.**

In most cases, the "big", very important notes in a groove will be the strong ones, e.g. Kick and Snare Drum – however, this doesn't necessarily have to be the case. Listen to the groove and ask yourself "exactly which of the notes in this pattern create the special character/feel?"

The "big" notes are played with great consistency/focus, "small" notes may vary in velocity, might even be left out now and then.

▶ **Complexity is demanding, both physically and mentally.**

The more complex and thus demanding a pattern is, the greater will each bar differ from another in terms of velocities and timing, and the more of the played notes might actually deviate from the desired sound/articulation, be "imperfect" or even a miss.

▶ **When playing a repetitive pattern (Hi Hat, Ride etc.), the limb(s) playing it will perform a certain cyclic movement (wrist/arm up/down).**

This movement will result in equally cyclic changes in articulation and velocity.

▶ **During a fill, drummers like to play time on the Hi Hat (foot).**

Very few drummers do this steadily, though. The foot Hi Hat sounds vary greatly. Sometimes, instead of quarter notes they will be "offbeat" ones, and some of them might be missing.

- ▶ **An open Hi Hat must be closed before the next closed hit can happen.**

Moving the top Hi Hat cymbal down results in sound artifacts shortly prior to the final “chick” sound. These artifacts will be missing if you cut off the open Hi Hat sound just by the following “closed” MIDI note.

- ▶ **Each individual articulation has a specific level of energy and attack.**

Playing accents, drummers will automatically choose the right articulation for the desired energy. Instead of playing the same articulation at a higher velocity, they probably play a different articulation using the same velocity.

- ▶ **One-handed rolls aren't static.**

Playing press rolls with one hand, the fingers' pressure on the stick determines the velocity of each hit as well as the time between them, and this pressure will vary during the roll. Higher pressure means higher velocity and less time between the hits.

- ▶ **The spring in the Hi Hat stand and the foot on the pedal obey physics, too.**

You can't play a closed Hi Hat sound and the next millisecond play a “wide open (=)” one.

- ▶ **Playing two drums at a time will sound fatter when played as a flam.**

This applies to both grooves and fills. However, in a groove the focus would be more on playing in the pocket, thus the gap between a flam's two notes would be rather small (unless for a specific artistic reason). Fills can use larger gaps.

- ▶ **Sound/Articulation variations have a far greater beneficial effect on the “human touch” of a programmed track than timing variations.**

Try it. Create a static drum groove without Alternating Samples (make x copies of the same bar), then make a copy of that MIDI track. Now add timing deviations (only) to Track A, and add Velocity and Articulation deviations (only) to Track B and compare.

Of course the result depends on the kind and range of your programmed deviations – in most cases though, Track A will sound like a broken drum machine whereas Track B will sound like a really tight drummer. The remaining question: Which of the two would you rather like to have?

Yeah ... you will find some of them rather obvious, and I do, too – funny enough though, many of their consequences are being ignored in a large number of today's programmed drum tracks.

Do better!

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