

Mac OS X • Windows • AAX/Audio Suite/Audio Units/VST • 64 bit

Mikron Crusher

Manual

112dB 

QUICK INDEX



INTRODUCING...

Mikron Crusher gives you an easy way to add a little of the charm of the samplers from the 80s by reducing bit depth or sample rate. However, don't be mistaken, most of those 8 or 12 bit samplers didn't sound that bad at all. Who would pay £30,000 for a sampler that sounded as if you played your sounds through a telephone? If you go to the presets (the preset name will give you a hint which sampler was used as example) you will notice that the effect is usually only subtle. However, with Mikron Crusher it is equally possible to completely destroy your sound, if that's what you are after.

THE MIKRON SERIES

The 112dB Mikron series is all about simplicity. We believe that too many features can stand in the way of the creative process. Simply said: more features also means more tweaking and having to delve into all kind of technical details. And that often distracts you from what it's all about: creating music. You really don't need that many knobs to get a great sound. The effect pedals for guitars are a perfect example of this. Their limited functionality is more than compensated by their fun to use. Or do you really believe that Jimi Hendrix and Kurt Cobain would have made better music if they just had these few extra knobs on their stompboxes? Limitations often inspire creativity instead of blocking it.

INSTALLATION

A. DOWNLOADING THE LATEST INSTALLER

To make sure you are running the latest version of Mikron Crusher please visit our Product Updates page at www.112dB.com/download/mikron/crusher and download the latest installer for your operating system. (If you already have a demo with the same version number installed you may skip this step and continue to C. Authorizing the plugin below.)

B. PLUGIN INSTALLATION

Mikron Crusher comes in the form of a single installer for all available plugin formats: VST3, AAX, and Audio Units.

MAC OSX

1. Double click the Mikron Crusher Installer.pkg file to start the installer. If everything goes as expected, you will now see the welcome screen shown on the right.

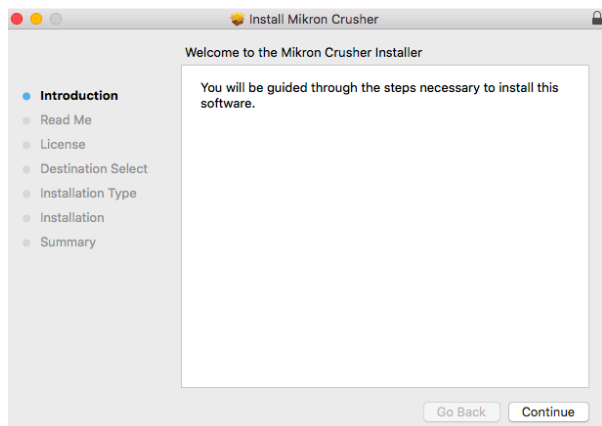
2. You might want to have a quick look at the readme, as it may contain important last-minute information that was not available at the time of writing.

3. You will be asked to agree to the terms of the license agreement.

4. The installer installs all plugin formats (VST3, AAX, and Audio Units) by default.

5.. You will be prompted for your Mac password to complete the installation.

6. If the installer detects you haven't activated your license yet, the 112dB License Manager will be started.



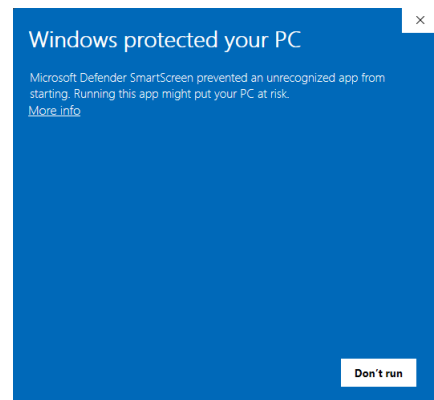
WINDOWS

1. Double click the Mikron Crusher Installer.exe file to run the setup program.

Windows might give you the following warning:
'Microsoft Defender SmartScreen prevented an unrecognized app from starting. Running this app might put your PC at risk'

No need to worry, this simply means that the installer is too new to be recognized by Microsoft Defender yet. We can assure you that we're not in the habit of putting malware in our plugins, so if you downloaded the installer from our website, you can safely ignore this. Click on '[More info](#)'. Make sure that 112dB is mentioned as Publisher. Then click 'Run Anyway'.

Depending on your system settings, you now might get another message: 'Do you want to allow this app to make changes to your device?' Click 'yes' to continue with the installation.



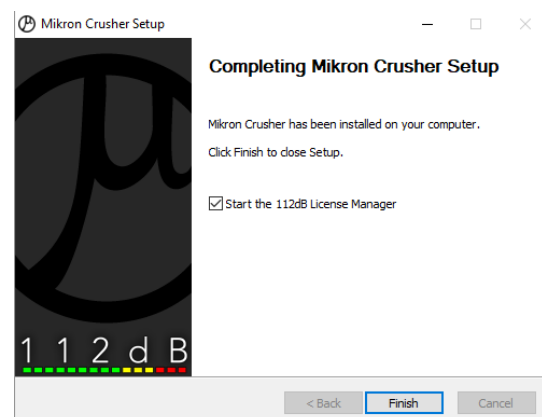
2. If everything goes as expected, you will now see the welcome screen shown on the left.

3. In the next step you will be asked to agree to the terms of the license agreement.

4. The installer installs all plugin formats (VST3 and AAX) by default.

5. When Mikron Crusher has been installed, Setup is complete and you may click the Finish button. By default 'Start the 112dB License Manager' will be selected. Keep it selected if you haven't activated your license yet, and want to activate it now. If you already have a license installed, you can deselect it.

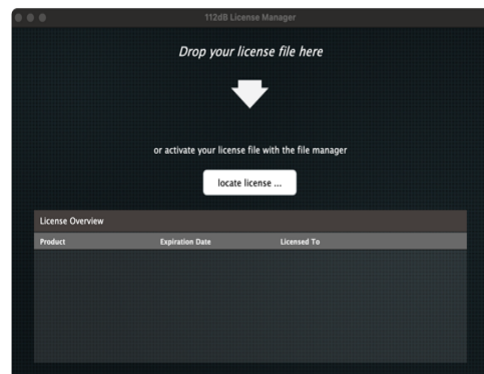
6. You might want to have a quick look at the readme, that was installed in \Program Files\112dB\Mikron Crusher, as it may contain important last-minute information that was not available at the time of writing.



C. AUTHORIZING THE PLUGIN

With your purchase or demo download you should have received an email containing a license file (in the form of an XML-document). Save this file to your computer.

The 112dB License Manager will be started automatically after the installation is finished. Drag and drop your license file on the License Manager window. Or alternatively click on 'locate license...', navigate to the folder where you saved the license file, select it, and click 'Open'. You can decide to skip this step, and activate your license later from within the plugin.



FROM DEMO TO PERMANENT LICENSE

To replace a demo license with a permanent license, first save the permanent XML license from your purchase confirmation email to your computer. Open the 112dB License Manager (see 'Where can I find the License Manager?' below). Drag and drop your license file on the license manager window to activate Mikron Crusher. Or alternatively, click on 'locate license...', navigate to the folder where you saved the license file, select it, and click 'Open'. In your License Overview you will now see 'perpetual' instead of a specific expiry date for Mikron Crusher under 'Expiration Date'.

WHERE CAN I FIND THE LICENSE MANAGER?

The 112dB License Manager can be found here:

Windows: \Program Files\112dB

Mac: /Applications/112dB

TROUBLESHOOTING

Some email clients do not like plain text attachments. For this reason the license is attached in both text (.xml) and zipped (.zip) formats. If you receive an error message saying that the 112dB Mikron Crusher .xml license is invalid or corrupt, the most likely cause is that it got corrupted during email transfer. In this case please save the 112dB Mikron Crusher License.zip attachment to your computer instead, unzip the file (this will produce a 112dB Mikron Crusher License .xml file) and try authorizing again.

SUPPORT

If you encounter any problems during the installation or authorization process, please contact us by email at support@112dB.com.

INSTALLING ON MULTIPLE COMPUTERS

The license file you received is not tied to a specific computer, only to a specific person. You can use the same license file to authorize the plugin on any system, as long as it is yours. This way you can install and use the plugin on your studio setup, your home computer, and your travel notebook at the same time.

U N I N S T A L L I N G

The uninstaller for Mikron Crusher can be found here:

Mac: /Applications/112dB/Mikron Crusher

Windows: \Program Files\112dB\Mikron Crusher

In addition the uninstaller will be listed on Windows under Control Panel » Add/Remove Programs.

I N S T A L L A T I O N L O C A T I O N S

Factory presets:

Mac: /Library/Application Support /112dB/Mikron Crusher

Windows: \Program Data\112dB\112dB\Mikron Crusher

User presets:

Mac: /Documents/112dB/Mikron Crusher/User Presets

Windows: \Documents\112dB\Mikron Crusher\User Presets

License Manager:

Mac: /Applications/112dB

Windows: \Program Files\112dB

VST3-plugin:

Mac: /Library/Audio/Plug-Ins/VST3

Windows: \Program Files\Common Files\VST3

AAX-plugin:

Mac: /Library/Application Support /Avid/Audio/Plug-Ins

Windows: \Program Files\ Common Files\Avid\Audio\Plug-Ins

AU-plugin:

Mac: /Library/Audio/Plug-Ins/Components

M A N U A L

The manual for Mikron Crusher can be downloaded from our website:

<https://www.112db.com/plugins/mikron/crusher/help/Manual.pdf>

BASICS

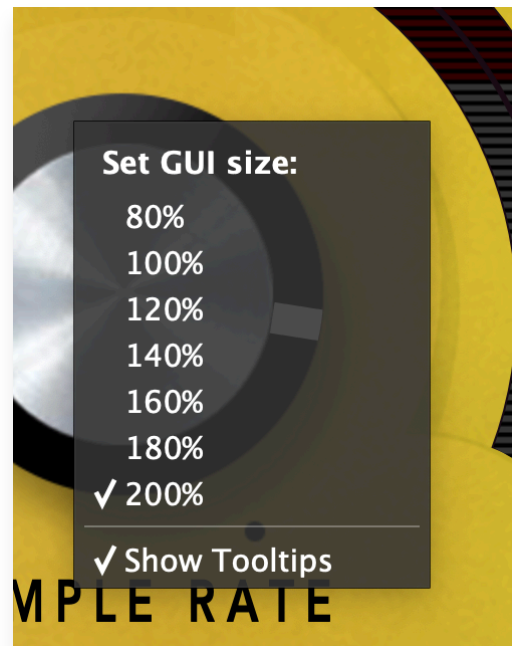
The Mikron Crusher user interface has been designed to be as intuitive and easy to operate as possible. There are functions that might not be immediately obvious, however, and could use some explanation.:

RESIZE

To change the size of the GUI, you can drag at the corner of the plugin window, but you can also right (cmd)-click anywhere on the plugin interface and select your size of choice in the pop-up window that will appear.

TOOLTIPS

Hovering over any item of the interface brings up a floating tooltip window with a brief description of that control's function. If you want to disable this function, right (cmd)-click anywhere on the plugin interface and deselect 'Show tooltips' in the pop-up window that will appear.



NUMERICAL ENTRY

Turning a knob or hovering over it will change the name below the knob into its value. Clicking on this number will open a small edit window that allows you to change this value by typing in a new one. To dispose of the edit window either hit <Enter> or click anywhere outside it.

RESET TO DEFAULT VALUE

<Ctrl>-clicking knobs and sliders will reset them to their default value.

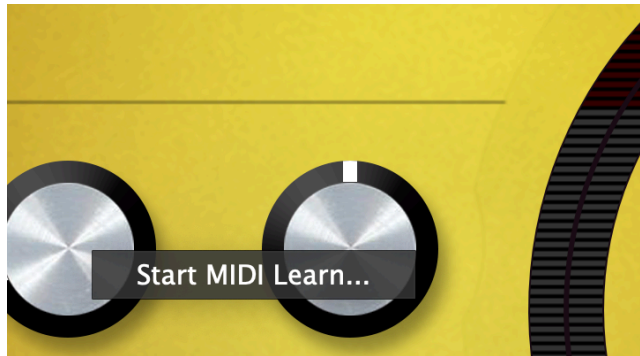
FINETUNE

Cmd-click-drag makes very small moves with the knob possible.

MIDI AUTOMATION

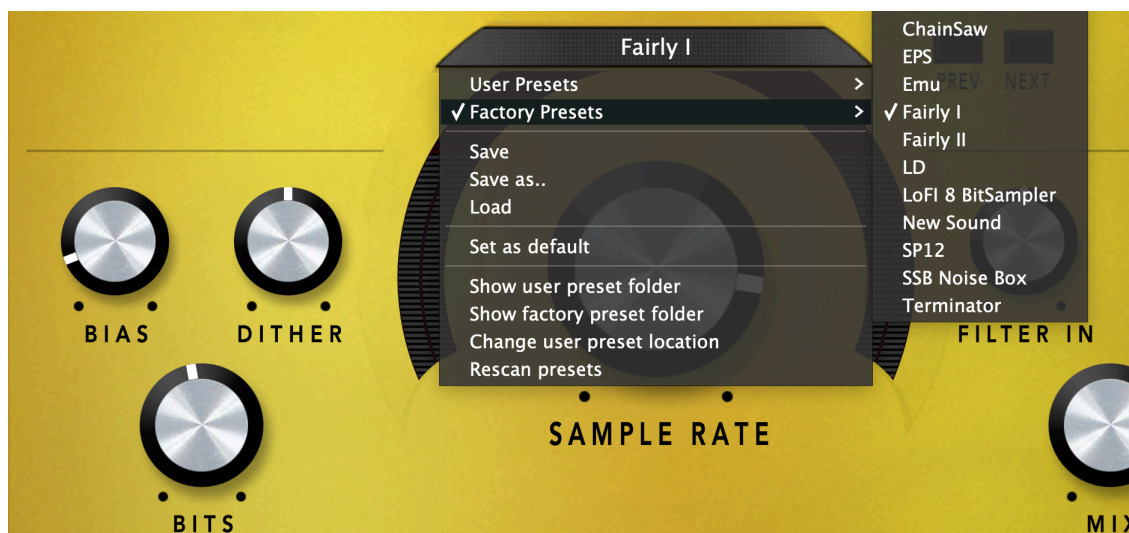
All knobs can be controlled by an external MIDI keyboard or MIDI controller. To assign a MIDI control simply right- (cmd-)click on the knob you want to connect and a window will pop up: 'Start MIDI learn'.

Click on this window, and move the control on your external MIDI keyboard or controller that you want to assign to this knob. If everything goes as expected, you will now see the knob moving when you move the control on your MIDI keyboard. Right-click (ctrl-click) on the control again and click 'Stop MIDI learn'. Do you want to detach the knob again? Right (ctrl)-click on the knob, and choose: 'Detach from midi automation'



PRESETS

Mikron Crusher comes with a set of carefully selected factory presets, and of course, there is an option to add your own presets as well. The name of the currently selected preset is displayed in the preset display at the top of the plugin.



For quick access to presets there's the preset menu: a drop-down list of presets you can scroll through. Clicking on the preset name will open up a menu. At the top of it you will find two items: Factory Presets, and User Presets. Factory Presets contains the presets that come with the plugin. They can't be altered. Under User Presets you will find the presets that you added yourself. Those you can change in any way you like.

Clicking on 'User Presets' or 'Factory Presets' brings up a complete list of currently loaded presets, optionally organized by category, from which you can select a new preset. The currently selected preset is shown with a checkmark (✓) in front of it, as are the category folders in which it resides.

Alternatively you can use the prev/next buttons next to the preset menu to move one preset up or down

CREATING A PRESET

So you found a great new setting that you want to save as a preset. Use 'save' to save it under the current name (the name that is shown in the display). 'Save as' gives you the option to choose a different name and/or a different location for your preset.

ORGANIZING PRESETS

Clicking on 'Show User Preset Folder' will open a file manager window of your computer. If you want to delete a preset or change its name, you can do it here. You can also add subfolders, or anything else you would do in the file manager. After you are done select 'Rescan Presets' from the drop down menu to see you changes reflected in the menu.

LOAD

This enables you to load presets from a different location than your User Preset Folder.

SET AS DEFAULT

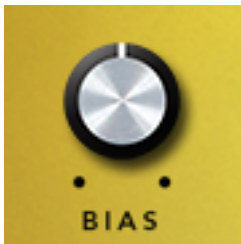
This sets the current preset as the default preset Mikron Crusher will start up with.

EXCHANGING PRESETS

You created a preset on another computer or want to use some presets that someone else made? No problem. The only thing you need to do is to save these preset(s) in the User Presets folder on your computer. If you haven't changed the location of this folder, it can be found in / Documents/112dB/Mikron Crusher

Or if you just want to have a quick look at a preset, use 'Load' in the preset menu, go to the place where you saved your presets, select a preset, and click 'open'. Note that you have to save this preset to your User Presets if you want it to show up in the preset menu .

THE KNOBS



BIAS (0-1)

Adds a DC component to the signal. By changing the bias, you can change the point where the bit crusher will switch to another step. In practice this means that 0 will give you the most 'buzz', 1 is the most clean. This is especially noticeable if you reduce the signal to only a few bits.

DITHER (0-1)

Adds noise to mask harmonic distortions. With low bit depths, quantization errors will create a square wave after a sound. Dither adds noise to let the sound disappear into noise rather than a pulse. The higher you will set this knob, the more noise will be added. Zero means no noise. Adding dither only works if the bias is higher than 0.



BITS (1-16)

Sets the number of bits the input signal is degraded to.

SAMPLE RATE (44 Hz - 44100 Hz)

Sets the frequency at which the signal is resampled.





FILTER IN (-60 - +60)

Shifts the cut off point of the input filter. The input filter is a steep low pass filter which purpose is to make sure that the input signal doesn't contain frequencies higher than Nyquist. The cut off point is therefore set relative to the sample rate. The filter is deliberately not perfect: the filters in old samplers aren't either. Shifting the cutoff point will either remove some of that aliasing or add some aliasing.

FILTER OUT (-60 - +60)

Shifts the cut off point of the output filter. The output filter is a steep lowpass filter which purpose is to make sure that the output signal doesn't contain frequencies higher than Nyquist. The cut off point is therefore set relative to the sample rate. The filter is deliberately not perfect: the filters in old samplers aren't either. Shifting the cutoff point will either remove some of that aliasing or add some aliasing.

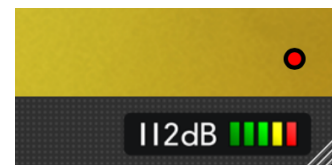


MIX (0-100%)

Allows you to mix between a dry and a wet signal..

ON/OFF

Gives you an easy way to bypass Mikron Crusher. When the light is on, the effect is applied to the signal. When it is off, the effect is disabled.



WHAT IS NYQUIST?

The Nyquist-theorem, from electronic engineer Harry Nyquist, states that to play back a tone of a certain frequency accurately you need to use a sample rate of at least twice this frequency. In other words: a frequency needs to be half the sample rate in order to be accurately represented. This frequency is called the Nyquist frequency, or simply 'Nyquist'. If a tone is higher than Nyquist you will get artifacts, and the tone will change in pitch. So for example midi note 60 (261.63 Hz) needs a sample rate of at least 523.26 Hz to be in tune.

SYSTEM REQUIREMENTS

OPERATING SYSTEM

- Windows 10 or up
- Mac Os X (Intel or Apple Silicon): 10.11 (El Capitan), and up

HOSTS

Mikron Crusher is compatible with any host that understands the AAX, VST3, and/or Audio Units protocol.

UPDATES AND SUPPORT

Updates will be made available at

www.112dB.com/download/mikron/crusher

For product support, questions, comments, feature suggestions, and anything you feel is worth sharing, please contact our support staff by email at

support@112dB.com

CREDITS

Mikron Crusher © 2020 112dB. All rights reserved
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112dB team: Anouschka Busch, Klaus Voltmer, Martijn Zwartjes.

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AVIR image resizing algorithm designed by Aleksey Vaneev

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Special shouts to our dedicated beta testers