Mikron Delay

Manual

112dB

TONE
(Page 12)

FEEDBACK
(Page 12)

PRESET MENU
(Page 9)

SPIN
(Page 14)

MIX
(Page 14)

1 Bar BBD

PREV   NEXT

TONE   FEEDBACK

BBD 2048
DELAY TYPE

SYNCTIME

○ SYNC

SPIN   MIX

PINGPONG

MIKRON DELAY

DELAY TYPE
(Page 12)

TIME
(Page 13)

SYNC
(Page 13)

PING PONG
DELAY
(Page 14)

ON/OFF
(Page 14)

Introducing...

Mikron Delay has been inspired on the classic bucket brigade delays and tape delays of the past. We haven't tried to emulate one of those classics in particular. What we tried instead is to capture the essentials of these devices that make them sound so incredibly fantastic. We tried to catch their 'spirit', and not their 'body', so to say. Because, with the risk of offending vintage lovers, we dare say that not every peculiarity or artifact of an old school delay is an improvement, or adds much to the final result. And why model all the particulars that you don't need? So instead of making the perfect emulation of one specific device that we admire, we wanted to provide you with a 'flexible vintage delay': to you give you the opportunity to use all the cool 'tricks' of those old machines to create your own old school tape or bucket brigade delay.

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 al 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 Delay please visit our Product Updates page at www.112dB.com/download/mikron/delay 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 Delay 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 Delay 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.
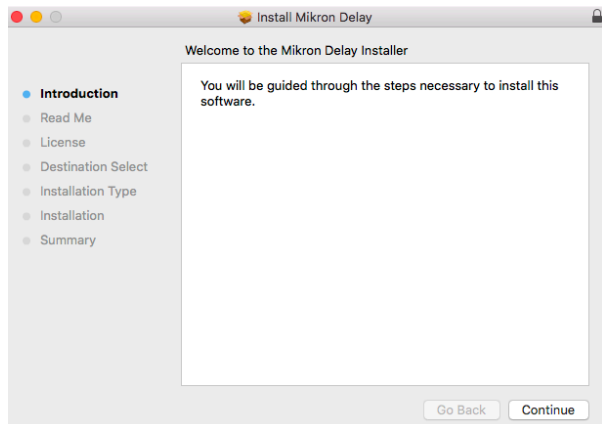
WINDOWS

1. Double click the Mikron Delay 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.
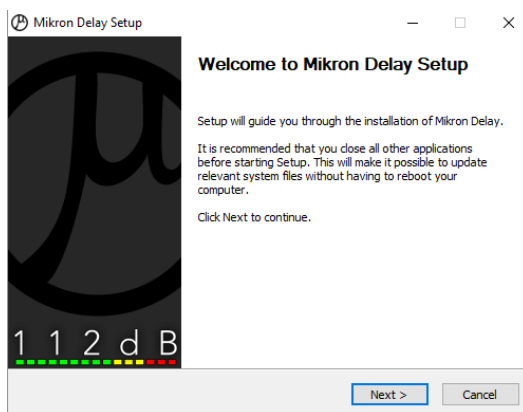

2. If everything goes as expected, you will now see the welcome screen shown on the left.

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 Delay 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 Delay, as it may contain important last-minute information that was not available at the time of writing.
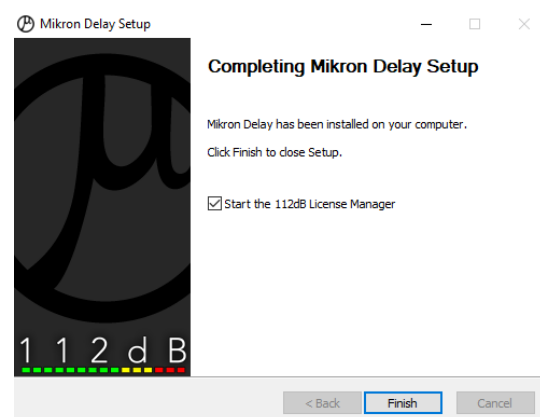
C. Authorizing the plugin

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.
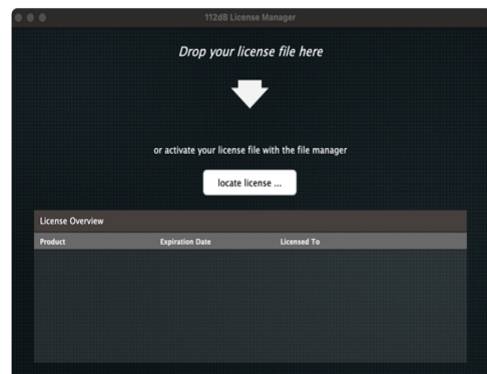
from demo to permanent license

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 Delay. 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 Delay 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 Delay .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 Delay License.zip attachment to your computer instead, unzip the file (this will produce a 112dB Mikron Delay 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.

Uninstalling

The uninstaller for Mikron Delay can be found here:

Mac: /Applications/112dB/Mikron Delay
Windows: \Program Files\112dB\Mikron Delay

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

Installation locations

Factory presets:

Mac: /Library/Application Support /112dB/Mikron Delay
Windows: \Program Data\112dB\112dB\Mikron Delay

User presets:

Mac: /Documents/112dB/Mikron Delay/User Presets
Windows: \Documents\112dB\Mikron Delay\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

Manual

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

https://www.112db.com/plugins/mikron/delay/help/Manual.pdf

The Mikron Delay 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.
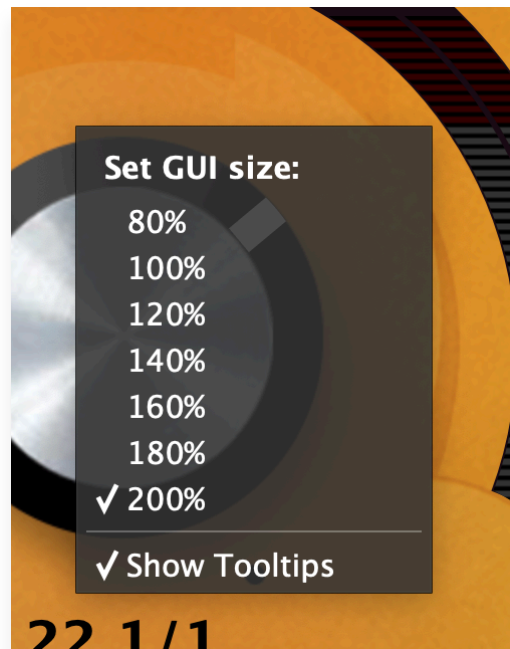
NUMERICAL ENTRY

Turning a knob or hovering over it will change the name below the knob into it's 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

Cmnd-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 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'

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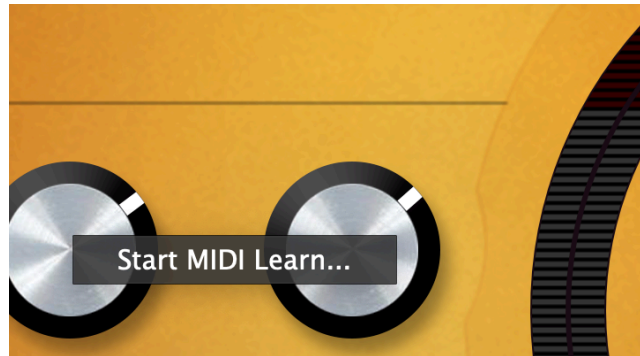
Mikron Delay comes with a set of carefully selected factory presets, and of course, there is an option to add your own presets as well. The name of the currently selected preset is displayed in the preset display at the top of the plugin.

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 a checkmark ($\sqrt{}$) 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 Delay 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 Delay

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 .

TONE (0-127)

Determines whether the focus of the feedback will lie more in the low, mid or high (whether the low frequencies will decay quicker or the high frequencies). The number stands for the center frequency of the filter in midi pitch. For example 69 = middle A = 440 Hz.

If you turn the feedback all the way up to create a self-oscillating, infinite repeating effect, you can use the tone knob to create the echo effects that are typical for dub music.

FEEDBACK (0-127%)

Determines how long it will take for the delayed signal to decay. Usually every repetition will be a little softer, until you won't hear the delayed signal anymore. 50% feedback means that the first repetition will be 50 percent as loud as the original signal, the second one will be 50 percent as loud as the first, etc. With feedback put on 100% the volume of the signal will stay the same and the delay will go on forever. If you turn up the knob all the way up to 127%, the signal will in theory grow 27% louder with each repetition. Except that the signal will saturate. Instead of getting louder and louder, the signal will get more distorted. This gives a snowballing effect where the echoes grow noisier and more extreme as they layer up on top of each other.

DELAY TYPE (TAPE DELAY (0), BBD 1024 (1), BBD 2048(2), BBD 4096 (3), BBD 8192 (4), BBD 16384 (5) BBD 32768 (6))

Allows you to choose between tape delay and several types of bucket brigade delays. BBD is short for bucket brigade device. The number stands for the amount of 'buckets' that are used.

Bucket brigade delay versus tape delay

Tape delays and a bucket brigade delays have some similarities. Other than in a digital delay, in these type of delays the pitch of the delayed signal will change when you change the speed. When you turn the speed of the delay up, the pitch will go up. If you slow it down, the pitch will go down.
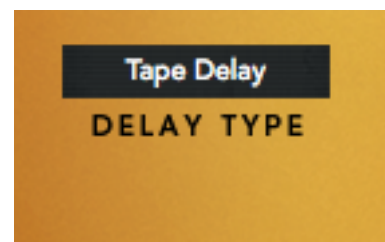
The most important difference between a bucket brigade delay and a tape delay is that the first has all kinds of artifacts, especially with longer delay times, while the latter will stay relatively clean under all delay times. More specifically a bucket brigade delay will have a high frequency roll-off. Which means that the longer the delay time is, the less will be left of the high. In most tape delays high frequencies will stay more or less intact.

Why the number of buckets matters

A traditional bucket brigade delay is a combination of digital and analogue technology. How the device works is easiest to understand by comparing it to a fire brigade passing buckets with water to extinguish a fire. However instead of passing the buckets to each other, the firemen empty the content of their bucket in the bucket of the person standing next to them. In the same way a bucket brigade delay has a certain number of memory locations, the buckets. The analogue signal is passed from one bucket to the next until it reaches the last one. The content of that last bucket is the delayed signal. If the delay time is shorter, the signal needs to be passed faster to the next bucket. The slower the buckets are passed, the less high frequencies can pass through. This is comparable to using a lower sample rate.

Old school bucket brigade devices vary in the number of buckets they have. For example most guitar pedals use 2048 or 4096 buckets. The Moogerfooger delay has 8092. We added 16384 and 32768 because Mikron Delay gives you the option to use extremely long delay times, far longer than traditional bucket brigade delays. If you want something to be left of the high frequencies at those delay times you need a high amount of buckets.

Sync (on/off)
Turning on sync will sync the rate of the repetitions to the hosts tempo.
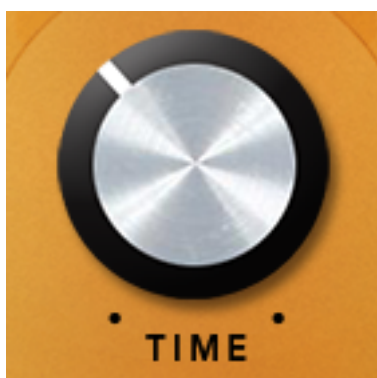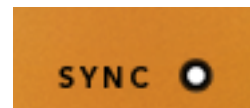
Time (10-4000 ms) (1/64T – 2/1)

Sets the delay time in milliseconds, or in note length if you have activated sync. For example if the tempo of the host is 120 bpm then 1/2 note will last 1/4 th second. We chose to use the standard musical notation for note value. T stands for triplet: playing three notes in the space of two. In other words: 1/1 T equals 2/3. A dot after a note adds half its value to it, making it one and a half times its original duration in total. In other words 1/1. stands for 1/1 +1/2= 3/2 note.

Spin (0-100%)

Adds movement to the delay. Spin mimics the subtle pitch variations of a tape delay. The movement of the tape through the machine undergoes subtle speed variations. The result is a slight pitch warbling of the delayed signal. Although in a tape delay this effect was unintended, it turned out to be very pleasing to the ear. The reason for this is that a delayed signal that builds up will give you 'standing waves'. A spin effect will break this 'sound wall'.

A bucket brigade delay doesn't have a spin. But it often does have knobs for mod rate (speed of modulation) en mod depth (amount of modulation) that can be used to create the same effect. You could see the Spin knob in Mikron Delay as a combination of those two knobs. It controls both the speed and amount of modulation. When the speed of the modulation goes up, the amount will go up as well.

When you choose a short delay time and mix the delayed signal with the dry signal, the spin effect is similar to a subtle chorus – adding depth and complexity to the output signal. Be careful though, if you turn spin all the way up, the result will be out of tune.

Mix (0-100%)

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

Ping pong (-1-+1)

Allows you to fade between a 'ping pong' and 'pong ping' delay. A ping pong delay is a stereo delay that 'bounces' from one side to the other. It sounds as if you watch a ping pong match from the side of the table, hence the name. In the ping pong delay, the first delay will be in the left channel, and the second in the right, then back to left, then back to right etc. In the pong ping delay the order is turned around: the first delay will be in the right channel, and the second in the left. When you turn the knob to the centre (0) the ping pong effect will be turned off: a delayed signal that is in the center will stay at the same spot. Put the knob somewhere in between if you want to have subtle ping pong effect where the delayed signal will be only a little to the left or the right.

On/Off

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

SYSTEM REQUIREMENTS

OPERATING SYSTEM

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

HOSTS

Mikron Delay 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/delay

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

Special shouts to our dedicated beta testers