

SUGAR BYTES

Turnado iPad Edition



Manual

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What is Turnado

Welcome to the Turnado iPad Edition.

Turnado is a new multi-effect tool for real-time beat and audio manipulation. With 24 new effect algorithms and a completely new, one-knob approach to working with Effects. On iPad, Turnado offers even more power for live or bathtub use.

Turn the Knob ...The effect is on.

Turn the Knob further ...The effect parameters are being modified.

Turn the Knob back ...The effect is off.

Features of the iPad Edition

The Turnado iPad Edition offers the full functionality of the Mac/PC version, plus some extra features. We added 4 XY-Pads which control all Main Knobs. We added an audio player with iTunes import, a recorder, a handy “All Effects Off” button and many little tweaks to improve the handling.

Touch

After a control has been touched, you can still use it when you move your finger away from the control, still touching the screen. This is nice for using controls which would otherwise be covered by your finger.

Keep pressing a control, in order to open the “[MIDI learn](#)” menu.

Zoom

Double click an empty area in order to zoom in or out. The zoom factor can be change in the Zoom Settings.

iCloud Drive

Through iCloud, you'll be able to share your saved presets across multiple devices including your desktop computer.

AUv3

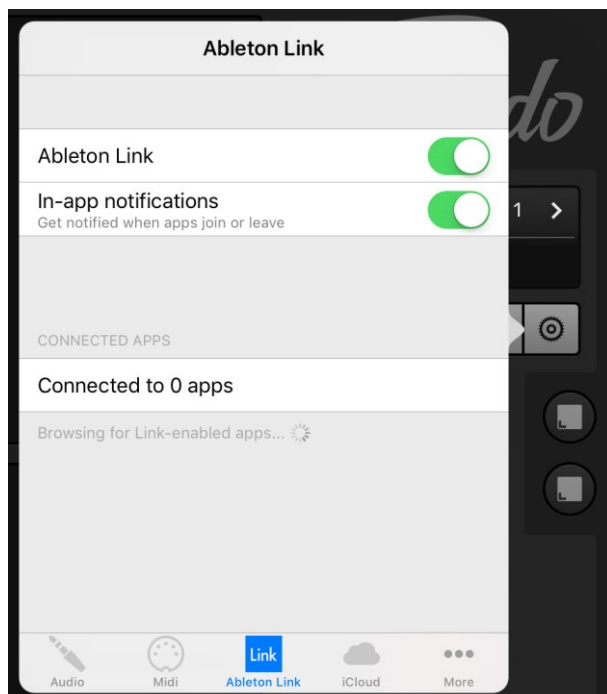
Allows Turnado to be used as a plugin within applications that support AUv3.

MIDI

Turnado can send and receive MIDI from any source, including virtual MIDI.

Ableton Link

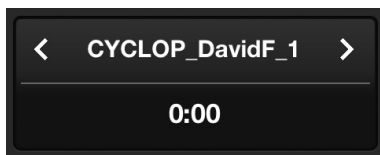
Hop on to the same network and jam with others using multiple devices running Link-enabled software. Anyone can start and stop their part while others keep playing. And anyone can adjust the tempo and the rest will follow. Call up the dialogue on the Settings page [here](#).



Turnado iPad Controls

Additionally to the fully functional Turnado product, we created another control screen, especially for the iPad Edition. Here you find all controls explained:

Audio Player Menu



Here the currently loaded track is displayed. Click into the menu to load another track. ([see Select File](#))

You can load any number of tracks and access them with the arrow buttons.

Transport controls



Play: Plays or stops the current track.

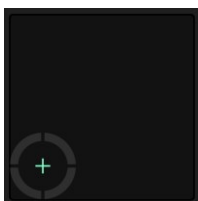
Loop: Repeats the played track.

Record: Starts audio recording of the Turnado Output.

Export File: Export or delete audio files

Settings: Settings related to the iPad Edition.

XY-Pads



Control all 8 Main Knobs simultaneously, using the 4 XY-Pad. Each of the pads is connected to two Main Knobs, one on the x-axis and one on the y-axis.

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Effect control will snap back to the neutral position.



Effect control will remain at the current position.

All Effects Off



Click on this button and all effects are off.

BPM Control



Turnado requires tempo information in order to synchronize loopers, slicers or delays to the beat.

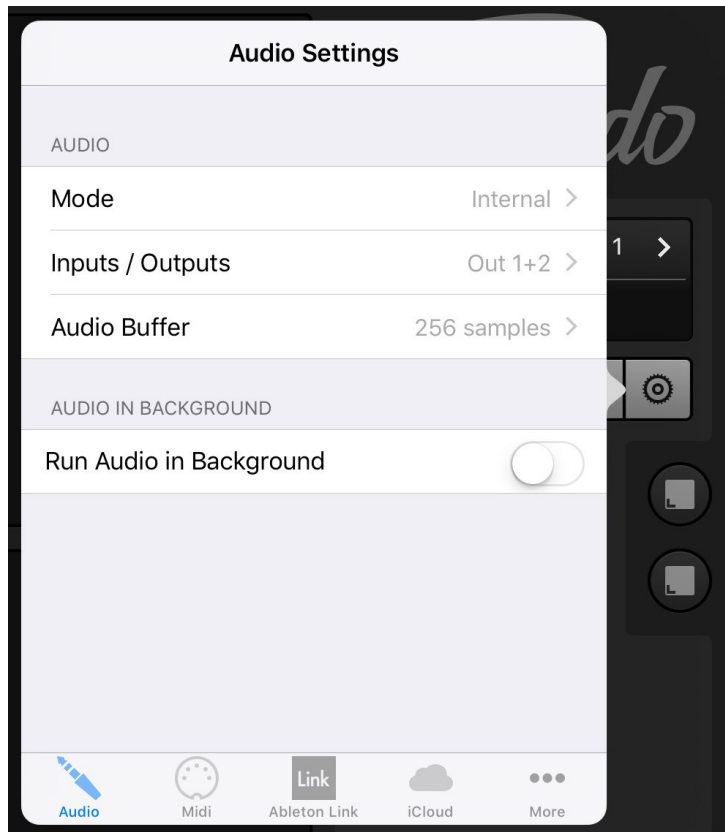
Tap the BPM Control panel to match the tempo or move the BPM control up or down to manually set up the tempo.

The tempo of audio loops with a length up to 32 bars will be analysed automatically during load.

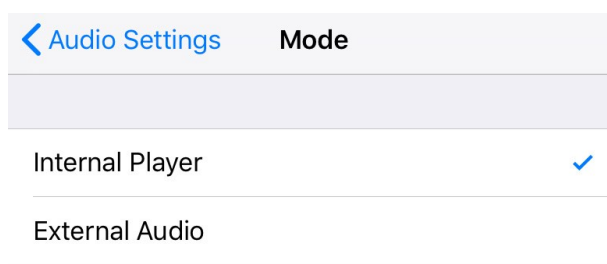
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Turnado iPad Settings

Audio Settings



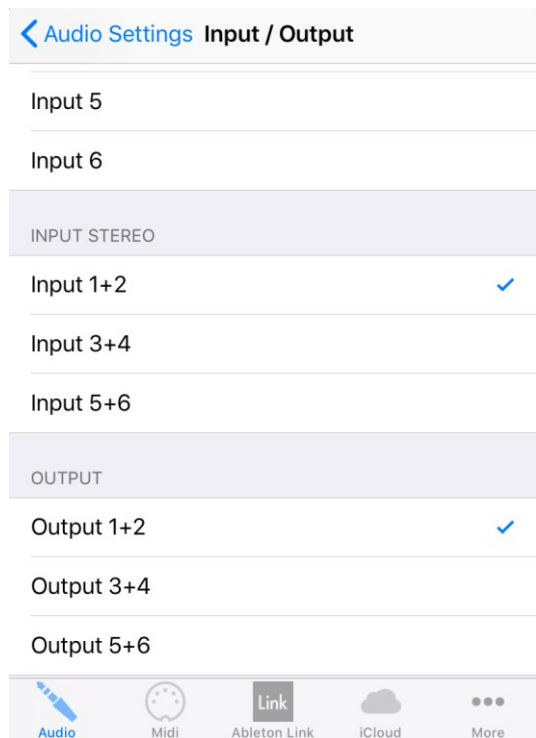
Mode



Here you can select the audio input source. For audio input you can choose the internal audio player or the mic/line input of your iPad.

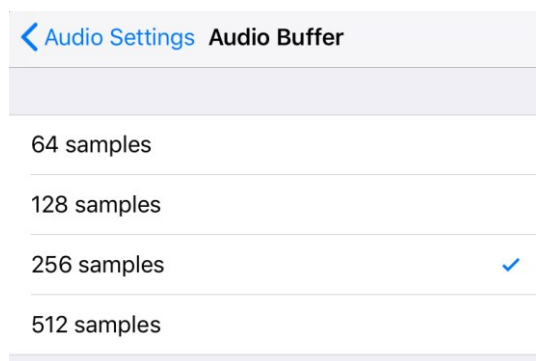
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Input / Output



If a multichannel sound card is connected, you can choose all available in- and out ports here.

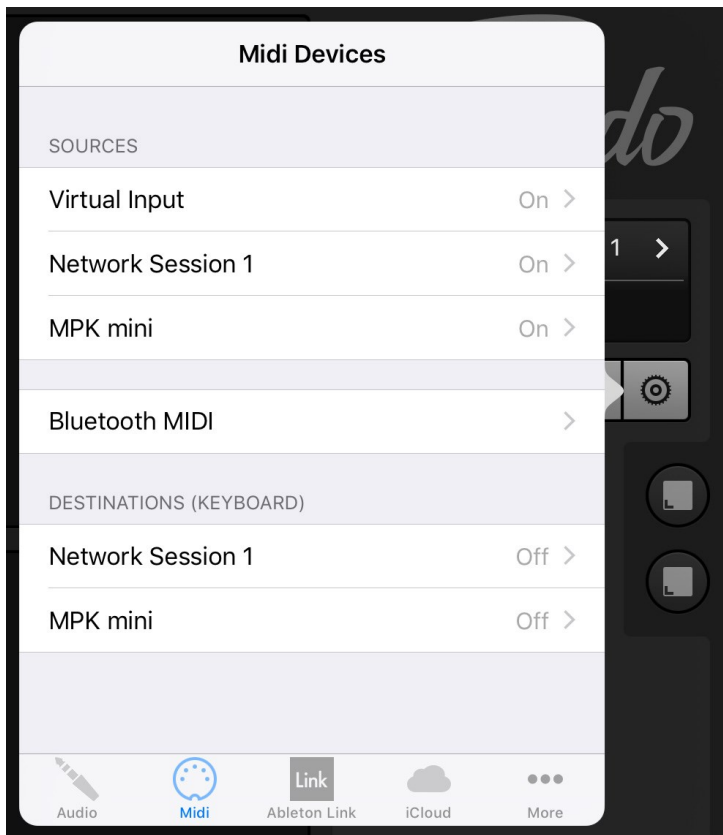
Audio Buffer



The Audio Buffer section allows you to change the audio latency. If you experience crackles in the audio signal, you should use a larger buffer size.

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MIDI Settings



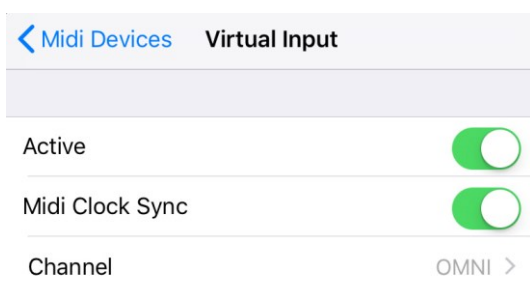
All connected MIDI devices are listed here.

Supported MIDI Types:

- CoreMIDI virtual ports (to/from other apps)
- CoreMIDI network (as a session originator or receiver to/from Mac or PC)
- CoreMIDI physical devices (USB MIDI Controller)

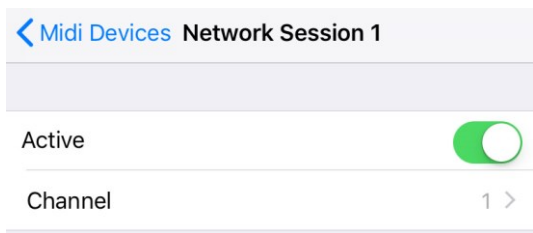
Turnado receives MIDI from other apps at its Virtual Input. Therefore Turnado has to be selected in the MIDI sending app.

The following MIDI input settings are available:



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The following MIDI output settings are available:



MIDI Clock Sync

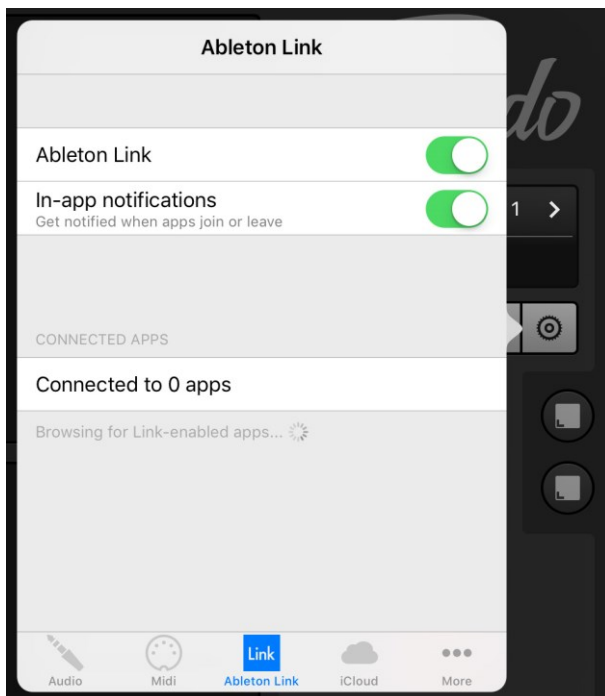
Internal Player / Audiobus Input:
Start, Stop and Continue will be processed

External Audio / Audiobus Filter:
Start, Stop, Continue, Song Position Pointer and Clock ticks will be processed. The tempo will be calculated automatically.

Turnado does not send MIDI clock signals!

Ableton Link

When activated, Link will sync tempo across apps.

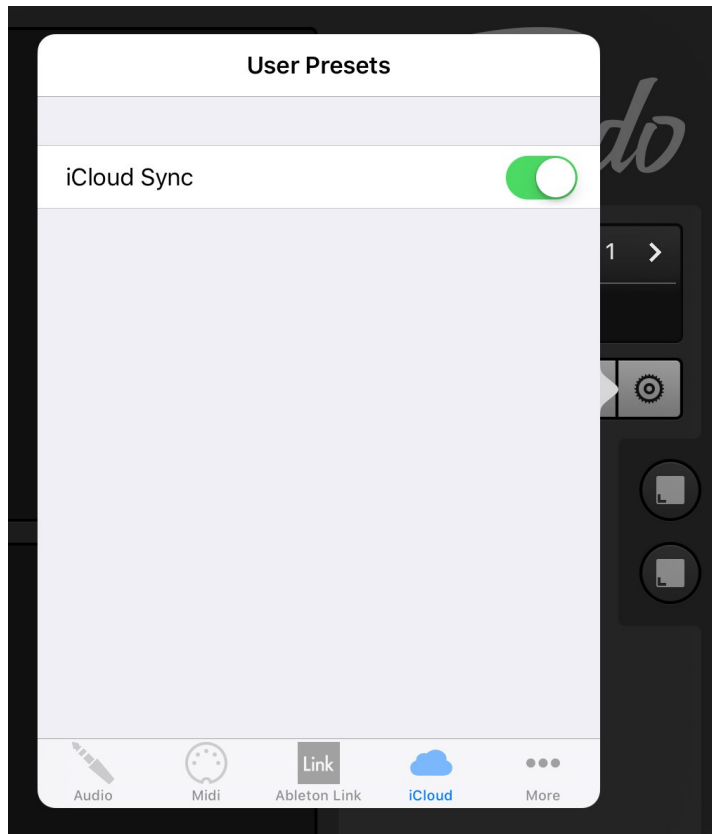


Find out more about Link [here](#).

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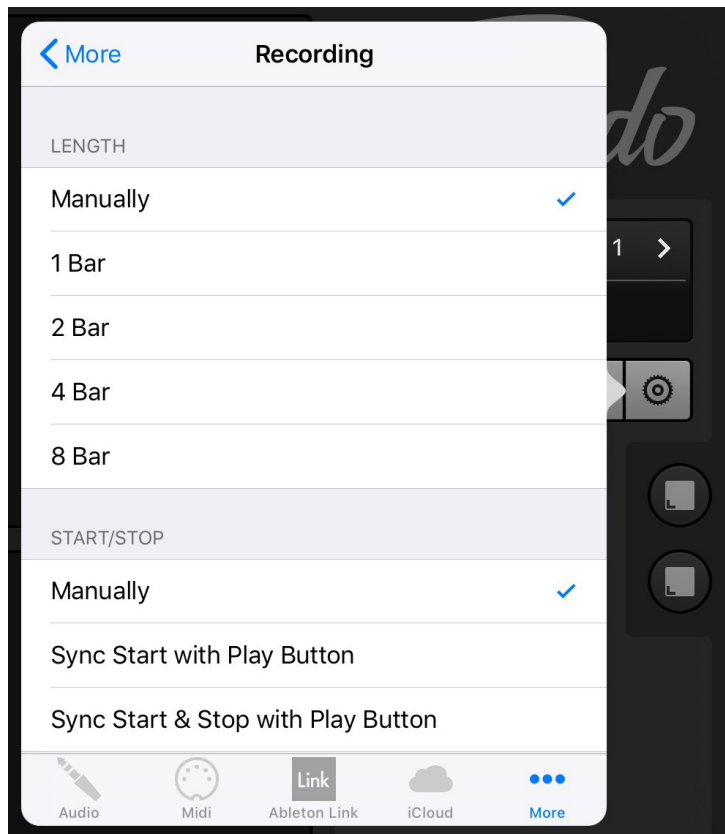
iCloudDrive

Enable or disable preset file sharing between Turnado iOS and multiple devices via [iCloud synchronization](#).



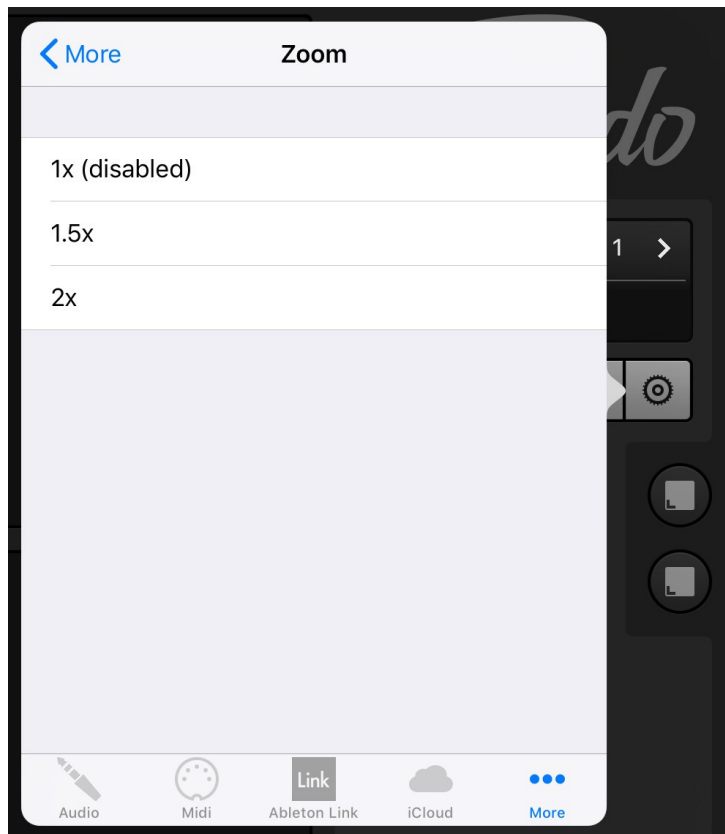
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Recording Settings



Here you find all settings related to recording audio. Determine how to start and stop the recording and create loops with the record length feature.

Zoom

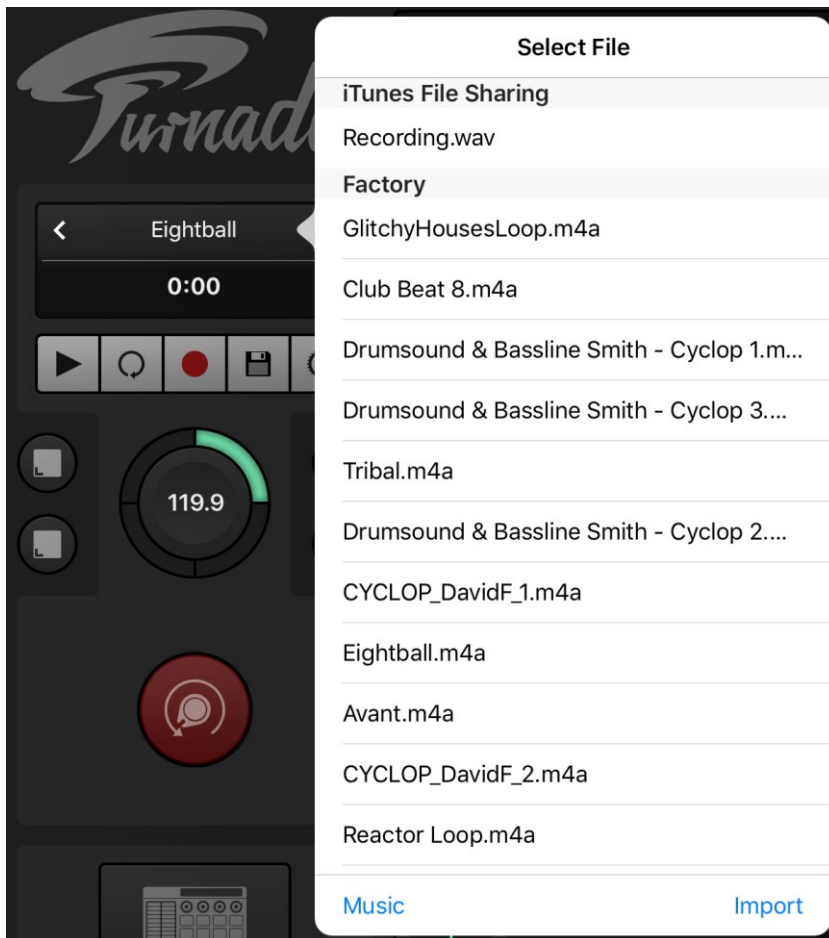


At the Zoom Tab you can define the zoom factor.
You can choose between 1.5x, 2x or just set the zoom to disabled.
Double click an empty area in the instrument in order to zoom in or out.

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Select File

Load a track from the factory content, iTunes library, use Audiopaste or AudioShare, or select a file from the Factory/Shared folder.



The recorded audio file will be automatically available in the Select File menu.

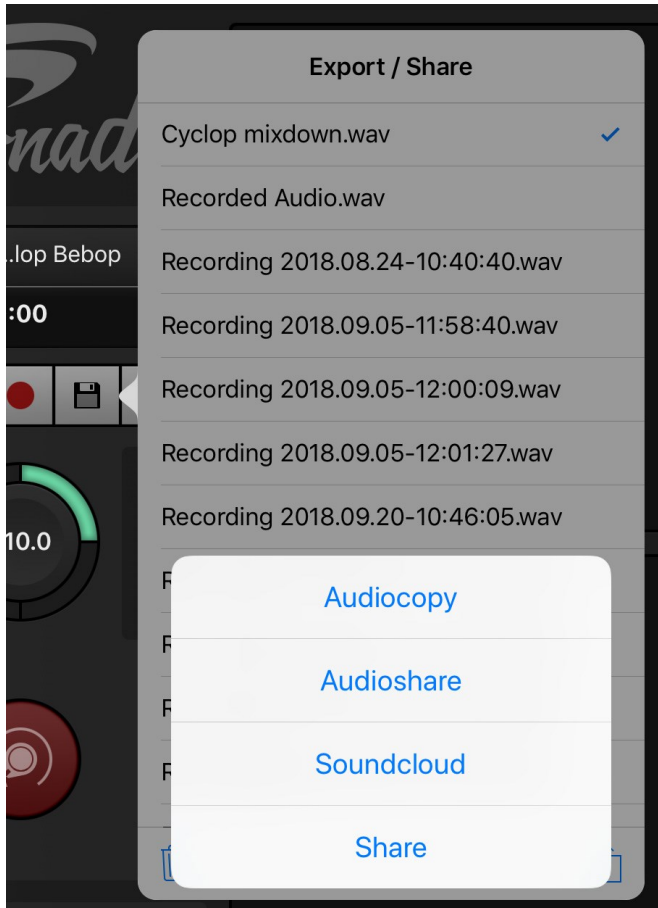
The “Music” button will take you to your iTunes library, “Import” to AudioCopy and AudioShare (requires installation of these apps on your iPad) and to File Import, which lets you browse right from inside the standard iOS Files app (requires iOS 11 and higher).

Supported File Formats: .wav, .aiff and .m4a

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Export File

Here you find the list of your recorded audio files.



Click on the Trash icon to get rid of unwanted data.

Click on the Action (Share) icon to put the recorded file into other apps. Choose between four destinations: AudioCopy, AudioShare (requires installation), Soundcloud (you'll need a login) or Share. Under Share you'll find all compatible apps on your device which support the iOS share menu.

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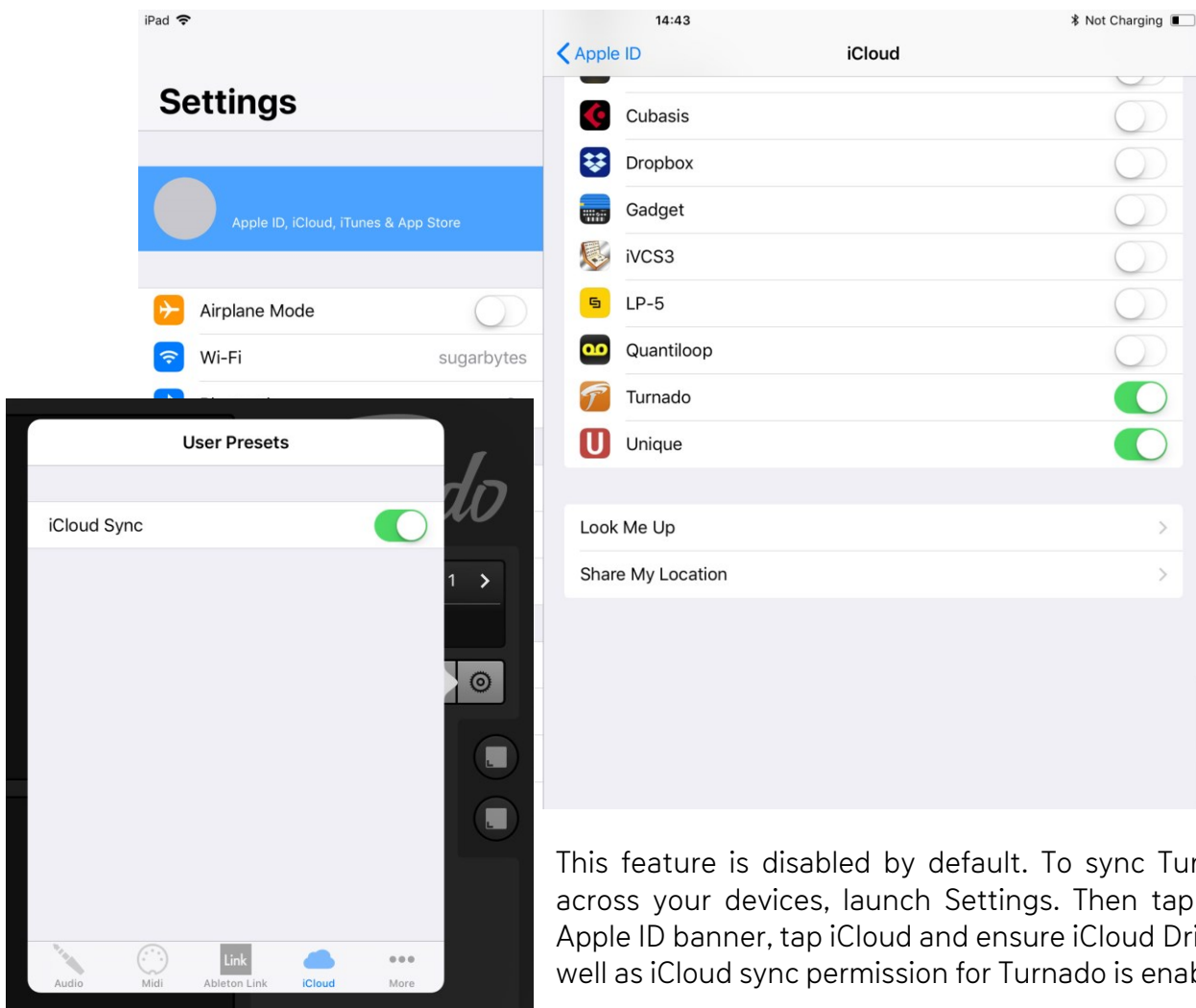
Connectivity

SETTINGS

- [iCLOUD SYNCHRONIZATION](#)
- [USING TURNADO AS AN AU EFFECT](#)
- [ABLETON LINK](#)

iCloud Synchronization

Through iCloud, you'll be able to share your saved presets across multiple devices including your desktop computer.



This feature is disabled by default. To sync Turnado across your devices, launch Settings. Then tap your Apple ID banner, tap iCloud and ensure iCloud Drive as well as iCloud sync permission for Turnado is enabled.

After that head over to your Turnado iOS version and open the **Turnado Settings**. There choose iCloud, tap iCloud and set iCloud to On. Once activated, presets you save in the Turnado iOS version are synced automatically to your iCloudDrive.

To share a preset from your **Turnado iOS version to your computer**, you'll need to drag and drop or copy/paste the preset from **iCloudDrive/Turnado/Presets/User** into **~/Documents/Sugar Bytes/Turnado/Presets/User**

To share a preset from your **computer to your Turnado iOS version**, you'll need to drag and drop or copy/paste the preset from **~/Documents/Sugar Bytes/Turnado/Presets/User** into **iCloudDrive/Turnado/Presets/User**

The presets will then automatically appear in the User folder of Turnado's preset browser.

Please note that creating and then reading out a subfolder is technically not possible.

MIDI Learn



Long press a control and click “Learn” to assign incoming MIDI CC’s and Clear to delete the assignment.

Turnado sends the values of the 8 Main Knobs as CC’s 1-8.

Turnado as a plugin inside your favorite portable DAW

Turnado supports the Audio Unit V3 standard making it possible to load multiple instances into any DAW that supports AUv3.

It will be up to the host app on how it implements the AUs menu, but in most host apps you'll find the menu where other effects or editing tools can be applied.

Here is how to add Turnado in...

AUM:

Tap the Inserts & Effects slot of a Channel and load Turnado from the list of Audio Unit Extensions.

Beatmaker:

Tap the “Add Effect” button from the FX panel, go to Audio Unit / IAA Effect and select Turnado from the list of Audio Units V3.

Cubasis:

Select the track you wish to add Turnado to. Open the track Inspector and select the Insert or Send effects panel. In the effects menu tap one of the slots and select Turnado from the Audio Units category.

GarageBand:

Select Plug-ins & EQ from the mixer panel on top left and tap the Edit button. Tap the plus button of a free FX slot to select Turnado from the list of Audio Unit Extensions.

Auria:

Press the "FX" button on a track to open the "ChannelStrip" window and load Turnado as an AU effect (green fond).

Audiobus:

Press on the + button on an empty effect slot of Audiobus and select Turnado from the list of Audio Units

Modstep:

Tap the "Browser" button, go to Effects and select Turnado from the list of AU effects.

Audio and MIDI connections are now made between your iHost and Turnado and you can control it using the iHost virtual keyboard or Performance view.

Parameters and presets are automatically saved within your iHost sessions and banks.

Main Page

The Main Page of Turnado is divided in three sections.

Overview



Here you can chose a global preset, sequentially using the arrow tabs, or from a drop-down menu accessed by clicking on the Preset Name Display. If you want to make your Turnado presets available on multiple devices activate [iCloud Synchronization](#).

Click on the grey buttons to access the Settings or Dictator window. Click on the Turnado or Sugar Bytes logo to open the About Screen.

Below the preset menu you find the Global DRY WET control to set the Overall Dry/Wet Mix of Turnado.

To reverse or to recover changes use the Undo/Redo Buttons. Above is a randomize button, which randomizes all effects.

About Screen



The About Screen displays the version number and names of contributors.

Just click on the little book for quick access to this manual.

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Settings



Default settings can be made to adjust the way Turnado operates in certain situations. Every adjustment can be made Per Preset or applied generally.

The available settings are:

- Dynamic Displays: The displays of the parameters show Real-time values.
- CC Recall Lock: MIDI Learn Settings will be kept and not be changed when selecting a different preset.
- Dynamic Signal Flow: When checked, the last activated effect lies in front of the previously activated effect in the signal chain. Otherwise the signal flow follows the sequence of the respective effect slots.
- Ignore Program Change: Incoming program changes will not change effects.
- Reset After Load: The Main Knobs will be set to zero when a preset is loaded.
- FX Off at Knob Full On: The effect will be deactivated at zero and full rotation of the Main Knob
- Activation Threshold: Determines the position at which the Main Knob triggers the effect.
- Activate MIDI Out: Sends the position of the 8 main knobs as CC data. The knobs are mapped to CC 1-8.
- Turn Off Knobs on Host Stop: When stopping your host, all effects are turned off in Turnado.
- Keep Bypass State: The Bypass State will be changed or not when loading another preset.

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Effect Browser



There are 24 effects in the effect browser. You can drag and drop them into any of the 8 available Effect Slots. The effects groups are labelled with colours for easy differentiation.

Be aware that some effects sample the audio signal and then interchange it for the original signal. For example, Looper or Slice Arranger turned on before audio was played can lead to unexpected silence.

Effect Slots



Each of the 8 Effect Slots has a Preset Menu for the chosen effect type. To adjust parameters and performance control of the current effect there is a separate Edit Page, which can be opened using the Edit button

Main Knob



Each Effect Slot has a corresponding Main Knob. This is used to turn the effect on or off and adjust the assigned Effect Parameters. The standard MIDI allocation is CC1 to CC8 and the 0 to 127 scale corresponds to the MIDI specification. Each Main Knob bears a number corresponding to the Effect Slot number, when illuminated this number indicates that the effect is active.

Use the little lamp beside the Main Knob to bypass the effect.

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Edit Page

The Main Controller, in the centre, is simply the Edit Page representation of the corresponding Main Knob on the Main Page. The Main Controller shows the position and activity of the Main Knob. Coloured circuits help to illustrate possible routing options between Effect Parameters, Modulators and the Main Controller.



Edit Page Sections

Main Controller Overview

In the top left is a set of Mini Controllers, one for each of the eight effects. It is intended to give an overview of the Main Knob positions and quick access to the other Effect Slot's Edit Pages. By clicking on one of the eight controllers you can jump to the corresponding Edit Page. Moreover, the eight Main Knobs can be controlled here. This enables you to quickly test different combinations of effects, by turning each effect on or off without leaving the Edit Page. The controller of an active effect is illuminated in green and the currently edited effect is illuminated red.

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Effect Name/Menu

Right of the Main Controller Overview is the Effect Name. This drop-down menu enables you to choose other effects for a particular slot right from the Edit Page.

Effect Preset

Here you can chose a preset, sequentially using the arrow tabs, or from a drop-down menu accessed by clicking on the Preset Name Display. With the Save function, you can also save your own presets and modifications.

Key Sync

The Key Sync enables you to quantise Turnado effects to the beat. When set to “Off” then the effect will activate as soon as you turn it on. If it is set to “¼” bar, then the effect will activate at the beginning of the next beat regardless of when you turn the effect on.

Close

Click the close button in the top right corner to quit the Edit Page and return to the Main Page.

Effect Parameters

The Effect Parameters of the chosen effect can be adjusted using the five red controllers in the top half of the Edit Page. The red display to the right of each Effect Parameter shows the current value, while the green display, when present, is a drop-down options menu for that Effects Parameter.

Dry/Wet

All effects have the same Dry/Wet Effect Parameter. The five different modes give you greater control over how Turnado works within the mix.

Equal: The cross-fade is shaped according to the “Equal Power Law”, which leads to some signal attenuation at a 50/50 mix.

X-Fade: Source audio and effect signal are being mixed using a linear transformation.

Dry: The original signal is being mixed into the effect signal.

Wet: The effect signal is being mixed into the original signal.

Wet Only: Only the effect signal is audible and the Dry/Wet Effect Parameter becomes a volume controller. This setting is particularly useful when using Turnado as a send effect.

Gain

The Gain fader lets you adjust the volume of the effected signal.

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Amount Controller



The Amount Controller, located underneath each parameter controller, determines the influence of the Main Controller on that parameter. Double clicking on any controller will return it to centre, in this position nothing happens. If the Amount Controller is turned anti-clockwise, then the Main Controller has a subtractive relationship to the Effect Parameter. When the Amount Controller is turned clockwise, then the Main Controller has an additive relationship to the Effect Parameter.

In the middle of the Amount Controller is a waveform illustrating the transformation curve, which the modulated parameter will follow, in response to movement of the Main Controller. Underneath the Amount Controller is a drop-down menu for choosing transformation curves. These curves offer a range of transformation patterns allowing modulation to occur at a later point in time, stop intermittently, follow steps, or follow logarithmic and exponential curves.

On the right hand side of the Amount Controllers are the Modulator Allocation Switches. When the Modulator Allocation Switches are in centre position, the Modulators have no influence on the Effect Parameters. In position “+” the modulator has an additive relationship to the Effect Parameter. In the “-“ position the modulator has a subtractive relationship to the Effect Parameter. The intensity of the Modulators is adjusted with the Amount controller in the respective Modulator.

The parameter range, and therefore expected intensity of the modulation, is shown in the middle of the Effect Parameter controller itself. The white band illustrates the defined range of the modulation. The red indicator arm shows the real-time value, as well as the influence of the Modulators and the Main Controller.

Main Controller

The Main Controller in the centre of the page is simply the Edit Page representation of the corresponding Main Knob on the Main Page. The Main Controller shows the position, and activity, of the Main Knob. It is useful for testing the current effect settings, as well as keeping track of the current Main Controller position when using a MIDI control device.

Modulators

Turnado has three independent Modulators. There are two LFO's, which can be used as Step Sequencers or Envelope Generators. Between the LFO's is an Envelope Follower, which generates an envelope from the incoming audio signal. The Modulators can be assigned to any Effect Parameter and can have an additive or subtractive influence on the parameter value. You do not have to choose between the Modulators, all three Modulators can be used on each Parameter at the same time.

LFO Function Panels



To the left and right of the Main Controller are the LFO Function Panels for the two LFO's. Here, LFO curves or the Step Sequencer can be chosen and edited by clicking/dragging values directly on the panel itself.

Waveforms

In this menu the LFO Waveforms are selected. The Step Sequencer is at the bottom of this list and can be edited directly on the LFO Function Panel.

One-shot/Loop/Host Sync

Here you can choose whether the LFO/Step Sequencer triggers only once or loops continuously. When Host Sync is selected the LFO will run synced to the host clock.

Time Factor

Here you can choose between the three Time Factors; Sync (LFO Rate synchronized to the beat), Hz (LFO Rate in Hz) and Triplet Sync (LFO Rate in synchronized to the beat in triplet and dotted patterns).

Quantise

This setting defines the number of steps in the LFO Waveform and Step Sequencer data. When Quantise is "Off" the LFO Waveform and Step Sequencer will allow the full data range to be used. Changing the Quantise to "2" will reduce the data range to two values, maximum and minimum. Increasing the Quantise value further increases the number of data points between maximum and minimum, from "3" to "12".

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Main Parameters of the Modulators

Each of the Modulators has three Main Modulator Parameters. The Main Controller can influence the Main Modulator Parameters in the same way as Effect Parameters. There are separate Amount Controllers for each of the Main Modulator Parameters, allowing you to define the range of modulation and select different transformation curves.

LFO



The LFO (Low Frequency Oscillator) generates modulation with a continuously repeated waveform. In addition, the Turnado LFO offers a Step Sequencer, which is also capable of triggering a sequence only once, enabling you to generate many different types of envelopes. The Main Controller also activates the LFO.

Rate

The LFO Rate determines the frequency of the LFO, or the speed of the Step Sequencer pattern. Note that with the 1.5 update you have a rate multiplier in the waveform view, which allows you to multiply the selected rate up to 8 times. This allows ultra slow movements.

Phase

Here, the starting point within the LFO Waveform and the Step Sequencer is chosen.

Amount

Determines the intensity of the modulation being sent. Whether the modulation affects the end Parameter in an additive or subtractive way, is determined with the “+” and “-” buttons of the respective Effect Parameter.

Envelope Follower



The Envelope Follower generates an envelope from the source audio signal. This Modulator is very dependent on the dynamics of the incoming signal. Whilst strong beats create obvious modulations, signals without significant dynamics will create more subtle modulation.

Attack

Determines the lead-in time of the Envelope Curve. The shorter the lead-in time the faster the reaction to the audio dynamics. While a longer lead-in time gives a slower reaction it can also massively reduce the effect of the Envelope Follower.

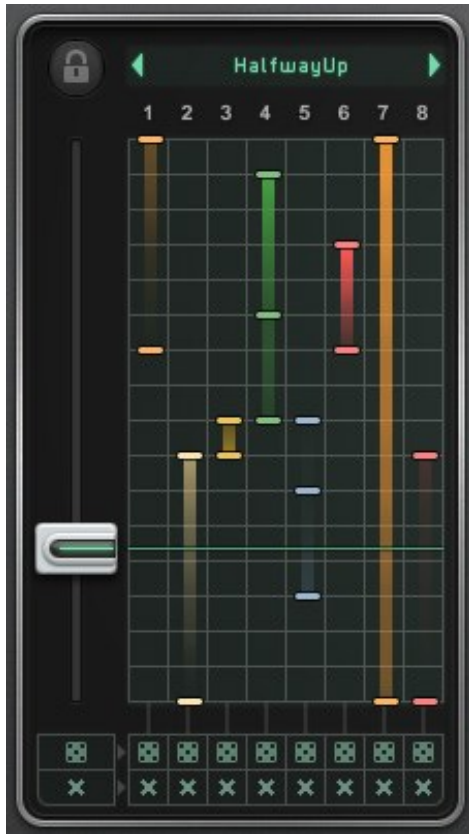
Release

Determines the decay time of the envelope. Short decay times enable the Envelope Follower to react quickly to the audio signal whereas long decay times create a more sustained modulation.

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Dictator

The powerful Dictator mode enables you to create an automation sequence for the 8 Main Knobs and assign the entire sequence to one fader.



The Dictator window shows eight vertical tracks, which correspond to the 8 Effect. On the left is a fader that enables you to move through the sequence of Main Knob automations. To create automation for one of the Main Knobs, simply click on the vertical track corresponding to the effect you want. A coloured bar will appear with a shadow, this is an Automation Point. The intensity of the shadow's colour indicates the value of the Main knob at this position. Holding the mouse button, and dragging up or down, creates/selects an automation point and moves it. Load the "HalfwayUp" preset from the Preset Menu at the top of the Dictator window. Moving the Dictator fader up and down while watching the Main Knobs will give you a good indication of how the Dictator works.

Alternatively you can just put the Dictator fader at a certain position, then move the Main knobs as you want them to be at that Dictator position. This only works if the Dictator window is open and the Lock button is inactive.

Some of the key functions are:

- Automation Points can be created and moved directly with the finger
- Automation Points can be created and altered by moving one of the Main knobs
- Long press to delete Automation Points
- The Dice Buttons allow for random generation of automations for all or individual tracks
- The X Buttons delete all or single tracks
- The Lock Button inhibits the creation/modification of Automation Points by moving a Main knob
- The Preset Menu enables you to load and save Dictator Presets

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The Effects

Delays

Pattern Delay



The Pattern Delay has 8 delay lines and offers a number of pre-defined Patterns, each with different timing and pitch. The first Effect Parameter is Delay Time, which can be synchronised or unsynchronised in relation to the tempo. The second Effect Parameter selects the Pattern. Every pattern is individual so you should test the various settings to get a feel for them. Changing the Pattern option to "Fade" enables cross-fading between patterns. The Amount Parameter determines the intensity of the pitch component of the Pattern Delay, while the Decay Parameter determines the volume relationship of the 8 delays. Alternate delay lines can be turned off using the Option Settings 2nd and 3rd, which respectively enable only every 2nd or 3rd delay line to be heard.

Reverse Delay



Reverse Delay layers a played-backward delay signal over the source audio. The Time Left and Time Right Parameters control the delay time as well as the length of the played-backwards material. The reversed signal is blended in and out to avoid clipping. The Fade Parameter determines the length of the cross-fade, while the Feedback controls the intensity and duration of the delay tails.

Pitch Delay



Pitch Delay is a classic delay with an integrated filter and the additional option of modifying the pitch of the delay tails. The Time Left, Time Right and Feedback Parameters are standard delay controls. Along with synchronisation settings you can also set up when the incoming signal is routed into the delay.

" $\frac{1}{4}$..." Allows the incoming signal to pass only once for the length of a quarter note.

" $\frac{1}{4}$ --- ..." Allows the incoming signal to pass once for the length of a quarter note and then pauses for 3 quarter notes.

" $\frac{1}{4}$ - ..." Allows the incoming signal to alternate between passing and pausing for the length of a quarter note.

Option settings for eighth note and sixteenth note denominations follow the same pattern.

The Pitch Parameter adds a positive or negative pitch change to the delayed signal. Furthermore you can add the filter to create special new Dub-style delay effects. There are several filter settings available so you can decide whether the Pitch and Filter work separately, together, or inversely. For every Filter Type there is a low and high (Q) resonance setting. The first menu entry "Pitch" has no filter and only modifies the pitch. A "+" in front of the menu entry gives an additive cutoff modification, when turned up the Pitch Controller also increases the Filter Frequency. A "-" in front of the menu entry will result in the Filter Frequency decreasing when turning up the pitch. If the menu entry has no prefix then only the filter is active. With the 1.5 update there are new modes with a constant filter-frequency, the knob will adjust the input level of the signal.

Modulation Effects

Flanger



This is a classic Modulation Effect using very short delay times to create Flange and Chorus effects. The Delay Left and Delay Right Parameters enable you to set independent delay times for each of the respective channels. Using the Flanger/Chorus settings you can select different delay time ranges. In Flanger Mode the range is 1-20 milliseconds and in Chorus Mode the range is 25-50 milliseconds.

The Feedback Parameter returns the signal back to the delay input to enhance the effect. The "Inverse" Option of the Feedback Parameter inverts the phase of the feedback by 180 degrees and creates a softer, more diffused sound. With a negative setting the Filter Parameter works as a Low-pass filter and with a positive setting as a High-pass filter. The menu on the Filter Parameter offers three different resonance values to give different tonal qualities to the filter.

Phaser



As well as generating classic phase effects using the LFO's, you can also directly change the Phaser value. Assigning the Phase Parameter to the Main Controller and applying different transformation curves can create some interesting effects. The intensity is modified with the Feedback and Depth Parameters. Feedback can be inverted for a fluffier sound here too and the Width Parameter shifts the phase of the left and right channel creating stereo movement.

Tonalizer



The Tonalizer is a special delay that uses short, tonal delay times and high feedback to create tuned delay tails. Note Right and Note Left Parameters define the pitch of the left and right channel, while the Option Menu enable you to choose between various tonal intervals, from semi-tones through to octaves. High settings of the Feedback Parameter will widen and intensify the tonal effect. When turned clockwise of centre position the Hold Parameter freezes the wet signal, creating a continuous tone. In this position no incoming audio is being processed and only the frozen, Tonalized delay will be heard.

With the 1.5 Update there are some new modes available.

In the Hold menu you'll find the root note option which let's you define a root-note. The notes defined by the first 2 parameter are then on top of this one. For the first 2 parameter there are now scales available. This makes sure that the delay-tuning fits into the selected scale. This gives you the possibilities to adjust the sound related to your song tuning.

Reverbs

Reverb



The Reverb is a first class Echo Effect. The Size Parameter controls the room size, while Reverb Time defines the length of the reverb tail. The Reflectivity Parameter determines the intensity of reflections from the virtual reverb space. The Input Parameter determines the volume of the incoming signal being sent to the effect. Special effects can be created through dynamic activation of the Input Parameter. For example you can set up an LFO to control the Input Parameter so the Reverb activates in a rhythmical way. Taking this idea further you can assign a Step Sequencer to the Input Parameter to trigger the Reverb effect in more complex patterns. There are some filter modes under the reflectivity control. You can add a highpass filter with fixed cutoff or BP, Comp or HP where the cutoff is controlled by the Reflectivity knob.

Freezeverb



The Freezeverb Effect is a special Echo Effect that freezes the Echo signal. The Size Parameter defines the virtual room size and the Damp Parameter dampens the reflection of the virtual reverb space. Width Parameter creates a broader stereo picture by slightly offsetting the left and right signals. The Freeze Parameter has two positions, off and on. When turned anti-clockwise of centre the Freeze is inactive, when turned clockwise of centre it is active. Remarkable effects can be created by modulating the Freeze Parameter with the Envelope Follower. Be aware that when the Freeze Parameter is active no audio is being sent to the reverb. Freeze should be off when you start the audio otherwise there will be silence when you play the source signal.

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Transformation Effects

Ringmodulator



The Ringmodulator is an effect where an oscillator modulates the amplitude of the audio signal. The VCA Parameter transforms the Ringmodulator defining how the internal oscillator is being amplified or the incoming signal multiplied. The AMT Parameter determines the harmonisation between the source signal and the oscillator. A major chord for example, has 4 ring modulators instead of one. Use the Waveform Parameter to select from four available waveforms: Sine, Triangle, Pulse or Sawtooth.

Vocodizer



The Vocodizer is more an instrument than an effect as it can create independent melodies, rhythms and sounds. The Sound Parameter is the spectral-dynamic reaction to the incoming signal. There are four base waveforms: Sawtooth, Triangle, Pulse and Sine. In the sub-menu these are also available in Unison Mode with the suffix "2" for a more powerful and harmonically richer sound. The *NOTE* Parameter determines the base note. The submenu defines the note range (one or two low or high octaves). The Parameter *SPREAD* creates a chord and determines the number of voices. In the sub menu, the chord type is chosen. The parameter *ARP* creates an arpeggio out of the selected chord. In the sub menu the arp style and pattern is chosen. The "Trig"-Entries make the Arp play the next note when the Arp Control gets above 50%. Therefore the envelope follower should be used, but also using the stepsequencer is a good choice. When the menu entry contains a „2“, duophonic arp melodies will be created.

Amplifier

Levelizer



The Levelizer is a basic effect for modifying volume, panorama, bit depth and sample rate. Although these parameters are relatively simple, with the use of Modulators many classic effects like Compression, Autopan, Tremolo or Gating can be achieved. The Volume Parameter can double the amplitude of the audio signal or reduce it to silence. The Pan Parameter moves the signal into the left or right channel. The Crush Parameter reduces the bit depth and has three options: "Normal" reduces the bit depth to create a classic low-bit sound. "Hi" mode reduces the signal in a non-linear way, resulting in loud signals being bit-reduced more than quiet ones. "Low" mode works inversely, so quiet signal parts are being bit-reduced more than loud ones.

There are also three Options for the Sample Rate Parameter. "Hard" creates classic sample rate reduction until complete destruction. "Dynamic" reduces the sample rate dynamically according to the amplitude of the incoming signal. The louder a signal the greater the reduction of the sample rate will be. In "Absurd" mode the sample rate will drop towards zero, creating even harsher overtones than in "Hard" mode.

Guitar Amp



The Guitar Amp is an Amplifier/Distortion emulator with integrated multi-band EQ. It allows for individual amplification or distortion of the three EQ Bands and therefore offers greater control of the amplifier overtones. The **Drive** Parameter controls the total amplification. Stereo and Mono mode are available. The Low, Mid and High Parameters define the frequency bands which are to be amplified. Dynamic effects can be created through modulation of the Effect Parameters using a fast Envelope Follower. Direct assignment to the Main Controller also creates some interesting sound effects. With the 1.5 update there are now some options available to limit the output of the amp. The 3 limiting options will make sure the signal stays in 0db range.

Loop Effects

Looper



Besides the classic looping, this effect can add swing to your looped signal. The Size Parameter determines the length and repetition rate of the loop. You can choose between the three synchronisation styles in the Option Menu. “Sync”, “Sync TP” and “Free” options dictate the synchronisation style. “Sync” quantises the loop length into ½ to 1/128-bar steps. Triplet or Dotted Note steps can be selected using “Sync TP”. “Free” mode offers loop lengths from 1 to 500 milliseconds. SyncX mode ensures that Size changes will only be activated at sync time. The Swing Parameter defines the relative lengths of alternate loops, lengthening and shortening them in order to create swing while maintaining synchronisation. The Trigger Parameter samples new audio material into the Looper when turned clockwise from centre. Assigning this parameter to an LFO or Step Sequencer can automate the sequential sampling of source audio producing excellent beat and rhythm variations. The AMP Parameter determines the volume and serves to gate loops or blend them in and out.

Pitch Looper



The Pitch Looper gives you the ability to add pre-defined pitch sequences to the looped slice. The Size Parameter defines the loop length and the Pattern Parameter selects the pitch sequence. In the Options Menu you can select “Glide” to bend between pitches in a similar way to Portamento. The Trigger Parameter functions in the same way as the in the Looper. The Decay Parameter sets the number of loop repetitions, and for silencing individual slices it also has a few Options:

2nd	...	Every second slice is being played
Triple 1	...	Two out of three slices are being played
Triple 2	...	Two out of three slices are being played (Variation)
Swing	...	A swing is being generated

Pan Looper



In addition to the alteration of the stereo picture of the slices, the Pan Looper can also manipulate the pitch. The Size and Amp Parameters define the loop length and volume respectively. The Pan Parameter changes the panorama of the loop. The Pitch Parameter defines the pitch, while the Amp Parameter offers additional options to create swing and rhythmical elements.

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Reactor



The Reactor effect is a Transient Looper and is therefore a self activating loop tool. The Active Parameter adjusts the responsiveness of the loop trigger. The Holdtime Parameter defines the length of the sampling period. Parameters two and three are switchable. Selecting “Freeze” from the Option Menu the Parameters Speed and Pitch are operable. With the Option “Reverb”, Parameters Mix and Intensity are available. The

Intensity Parameter is a special Reverb Hold Level that produces some great effects when combined with Modulators. With the 1.5 update there is a new sync option available called SyncX. In this mode changes of the size will be done as if they had run from the beginning. This means for example if you start with 1/8 size and then change to 1/4, another 1/8 slice will be inserted in order to ensure correct alignment for the 1/4 slice.

Slice Arranger



The Slice Arranger does exactly that, slicing the incoming signal into new patterns. The audio signal is recorded in real-time, then divided into slices and arranged according to the Pattern and Fill Parameters. With the Pattern Parameter there are a number of pre-defined patterns. You can choose from eight pattern types in the Options Menu with 50 patterns for each type. The two Fill Parameters incorporate Rolls and Microloops into the selected Pattern. Furthermore, each pattern allocates different slices to the Fills.

Here are the Fill Options:

- Repeat: The final phase of the slice is being looped
- Up: Upwards-pitch
- Down: Downwards-pitch
- Hard: Dramatic repeat
- Pong: Forwards and backwards repeat
- Soft: Simple more subtle repeat

The Decay Parameter controls the length of the slice envelopes as well as highlighting the end of the sliced audio with help of an amplitude envelope. With the Options “Beat” and “2 Beats” the slice arranging can be applied to the audio over one or two beats.

DJ Tools

Granulizer



The Granulizer is a Grain Effect with control over tempo and pitch. The Amount Parameter has two Options: "Amount" mode sets the tempo to be changed in relation to the original audio signal. Full off is the original tempo and full on is stop. In "Position" mode the Amount Parameter navigates you through the recorded audio signal. The Grainsize Parameter defines the length of each individual grain in milliseconds. There are also several Options for cross-fading and the tempo of the individual grains is determined using the Distance Parameter. To avoid gaps in the audio signal, the Grainsize value should be larger than the Distance value. To change the play-direction of the grains, the Distance Parameter has several Options, "Forward", "Backward" and "Ping Pong". The Pitch Parameter determines the pitch of the grains. If no time-stretching is active and the pitch is being moved upwards, then a minimal delay is being mixed into the audio signal which may not be audible.

Stutter



The Stutter Effect continually adds an Amplitude Envelope to the audio signal. The Size Parameter determines the repetition rate of the envelope. As with all the other time based parameters there are also synchronisation options. SyncX mode ensures that size changes will only be activated at sync time. The SyncPPQ mode will sync the stuttering to your host clock. The Decay Parameter determines the absolute end of the envelope and offers in the options "rhythmic", "shuffled" and "swing" variations. The Shape Parameter determines the waveform of the envelope. This parameter blends continuously through the following waveforms: Downwards Sawtooth, Sine, Pulse and Upwards Sawtooth. The Pan Parameter enables control of the stereo position of the effect signal and can be combined with Modulators to create dynamic Panning effects.

Vynylizer



The Vynylizer Effect simulates the stopping and scratching of vinyl discs. The Size Parameter defines the time interval of the stops and scratches. If the value is set to OFF it will stop only once. With the Slow Down Parameter the speed of the stopping is determined and there are three options. “Stop” stops the audio signal with the rate defined by the Slow Down parameter. “Scratch” plays the audio signal alternately forward and backwards while slowing down and speeding up the audio signal. This happens in relation to the selected interval with acceleration rate controlled by the Slow Down Parameter. The Downslope and Upslope Parameters define the shape of breaking and acceleration. In full anti-clockwise position the slope becomes logarithmic this transforms into an exponential curve as you rotate through to a fully clockwise position. Setting these two parameters differently gives you the quick-stopping and slow-starting vinyl record sound.

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Filters

Filter



With the Filter Effect a quality, Stereo, Multi-mode-filter is available. The Cutoff Parameter controls the cutoff frequency and offers the modes “Highpass” (only allows frequencies above the cutoff to get through), “Bandpass” (only allows the frequencies around the cutoff to get through), “Lowpass” (only allows frequencies below the cutoff to get through), and “Comb” (a special delay which works with filter frequencies as delay times). To synchronise the left and right channel there is a sub-menu on the Cutoff R Parameter with the option to “Link”. The resonance for the left and right channel is set with the Reso L and Reso R Parameters. **Be careful with resonance values, high settings can produce harmful volumes for you and your equipment.**

Filter Pattern



The Filter Pattern Effect adds pre-defined Filter Patterns to the audio signal in which filter settings run through a sequence. The Pattern Parameter enables you to choose from 25 different patterns, each with 10 variations. With the 1.5 update there is a new variation called 'Beardyman', this variation will offer more simple filter rides with only one filter type. The Resonance Parameter controls the Q Factor. When in centre position the Sweepspeed Parameter will set the filter sweep to complete once. Turned anti-clockwise the speed of the sweep is reduced so it will only partially complete. Turned clockwise the sweep will accelerate and complete more than one cycle. In this situation the option setting dictates what happens to the sweep, either being repeated “Repeat”, passed forward and backwards alternately “Ping Pong” or synced to the host clock “Synced”. With the 1.5 update there is a new mode here called Synced X. In this mode the sweepspeed is always aligned to the original clock. (see Looper for detailed description)

The Sweeprange Parameter defines the range of the frequency sweep. **Be careful with resonance values, high settings can produce harmful volumes for you and your equipment.**

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Vowel Filter



The Vowel Filter offers a powerful Talkbox sound, making the audio signal sound as if it were being spoken. The Vowel A and Vowel B Parameters identify the vowels between which the Mix Parameter cross-fades. The Vowel A Parameter can have a filter assigned to it from the sub-menu, "Highpass", "Lowpass", "Bandpass" and "Comb". Keeping the Resonance Parameter settings high will ensure you get a rich vowel sound.

Spectralizer



The Spectralizer is a filter-bank with 32 delays. Every delay has its own delay time and filter frequency. The delay time and density are determined by the Delay Time Parameter. Available modes are "Tonal", "Sync" and "Free". The Frequency Parameter adjusts the cutoff frequency with which the delays work, the available sub menu offers different relations of the delaylines and their frequencies. The Resonance Parameter controls the resonance of all the filters. You can select 2 Pan modes here which will bring some space into the sound. The Bands Parameter determines the number of delays used. Be aware that this effect is quite complex and results depend greatly on the source audio. With drum parts for example, a high resonance value with full delay size produces a very bizarre effect. Test the various presets to get an overview of the variety of sounds that you can create with this effect. With the 1.5 update there are 2 pan modes (under the resonance parameter) available which offers stereo distribution of the bands.

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FAQ

Silence

- Take note that some effects sample the audio signal and then replace it with the sampled signal. For example if a Looper or Slice Arranger controller is turned on, or the Freeze in Freezeverb active before audio is played, you will hear nothing.

Contact

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