MFX motto - Operation Manual
ALM-PG010

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Contents

I INTRODUCTION

'MFX motto' is a multi-effects plugin from ALM Busy Circuits, which brings the much lauded FX engines from our 'MFX' Eurorack Module, Guitar Pedal and Desktop plugins now to the iPad with the unique ability to now chain multiple effects.

Inspired by our favourite classic hardware effects processors, the MFX motto incorporates DSP technologies from the dawn of digital effects in the 70s to the present day. This combines with ALM character and uniqueness to form a highly useful, fun and practical iPad effects processor.

Bend time space and pitch with multiple feature rich reverb and delay engines. Modulate signals with the flexible panner, phaser and range of ensembles. Fracture sounds with a one of a kind glitch engine. Reshape sound with the dynamics engine.

Important! MFX motto is an Audio Unit Effects Plugin (AUv3) which requires a compatible host or DAW to work such as Garageband, AUM etc. It does not work as a standalone app.

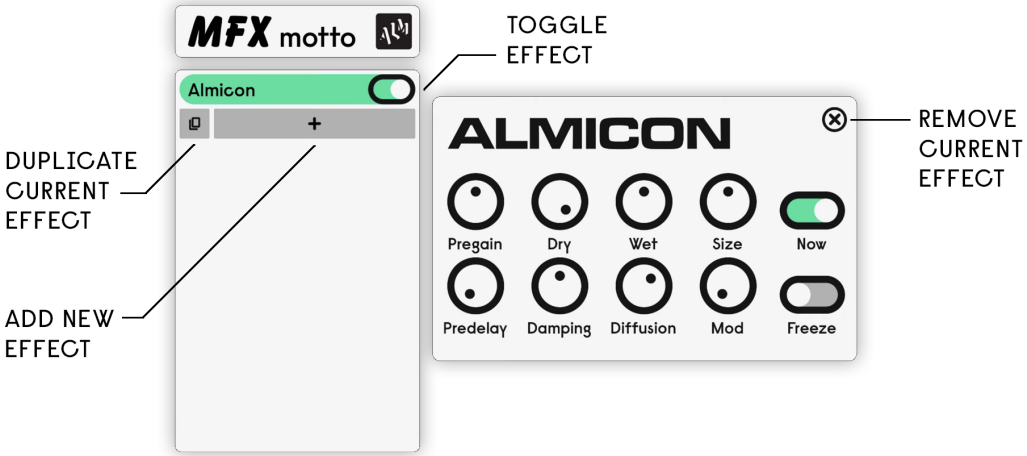
Unique to the MFX motto is the ability to create custom effect chains of up to 11 effects in any order - all within the plugin itself - allowing for clear, efficient routing between multiple effects.

2 OPERATION

2.1 Usage

Once an instance of 'MFX motto' has been loaded into a compatible host or DAW such as Garageband or AUM, up to 11 independent effects can be added from the list shown below. They can each be rearranged to alter the signal path by dragging them on the left hand side, or quickly bypassed by using the switch next to each effect.

Effects can be removed from the signal chain by clicking the X in the top right of the effect controls. To add a new effect to the chain, click the + at the bottom of the effect list. To duplicate an effect just click the duplicate button in the bottom left of the effect list.



2.2 Effects List

2.2.1 QuaidraVerb Reverb

The 'Quaidra Reverb' is a 90s style reverb with a simple, musical set of parameters. It excels at unnaturally large and airy spaces, producing a rich atmosphere from any sound sent through it.

Pregain
Sets the amount of signal boost applied before the reverb.

Size
Sets the size/time of the reverb tail.

Era
Toggles the 'quality' of the underlying reverb algorithm. '90s' uses a lower bit depth with a more grainy sound and poor resilience to clipping. 'NOW' has a much higher resolution and improved saturation.

Predelay
Sets the amount of delay before the reverb is applied to the incoming signal.

Low Cut
Sets the cut off frequency of a high pass filter on the reverb tail.

Damping
Darkens the reverb tail, both shortening its length and reducing high frequencies.

Gate
Applies a gate to the signal after the reverb.

Freeze
When enabled reverb tail decay is disabled and the reverb is 'frozen'.

Tips:

1. Try setting Size around 90-100% and Damping to 0% for massive infinite reverb trails.
2. The Low Cut parameter sits within the feedback path, meaning its setting will multiply over time as the reverb decays.

2.2.2 Almicon Reverb

The 'Almicon Reverb' is a program based on classic 80s high end studio style reverb algorithms. Great for bright small rooms and extending into vast synthetic spaces, the Almicon offers a lush, polished reverb with a classic sound.

Pregain
Sets the amount of signal boost applied before the reverb.

Size
Sets the size/time of the reverb tail.

Era
Toggles the 'quality' of the underlying reverb algorithm. '80s' uses a lower bit depth with a more grainy sound and poor resilience to clipping. 'NOW' has a much higher resolution and improved saturation.

Predelay
Delays the onset of the reverb tail.

Damping
Darkens the reverb tail, both shortening its length and reducing high frequencies.

Diffusion
Reduces or increases the uniformity of the reverb tail, causing reflections to appear more distinct or thicker.

Mod
Sets the amount of modulation over the reverb size.

Freeze
When enabled reverb tail decay is disabled and the reverb is 'frozen'.

Tip:
Keep in mind that the Damping and Diffusion parameters also affect the perceived size and depth of the reverb tail.

2.2.3 Digi-PCM Echo Delay

The 'Digi-PCM Echo' is an unapologetically digital delay inspired by early digital rack delays. It includes an assortment of additional features such as DAW sync, four different delay modes, audio quality settings and wide ranging times.

Mode
Sets the delay mode. Depending on the selection, the output can be mono or stereo.

- Mono - A single delay line with a mono output.
- Dual Tap - A pair of delay lines mixed to a mono output.
- Stereo - A pair of delay lines, each hard-panned to one side of the stereo output.
- Pong - A pair of delay lines that swap sides with each repeat.

Bandwidth
Sets the sampling frequency of the delay line. Doubles delay time with each step down.

Bit Depth
Sets bit depth of the delay line.

Regen
Sets the amount of feedback into the delay buffer.

Time
Sets the length of the delay buffer in ms when 'Sync' is turned off, or as a multiple of the BPM when on.

Sync
Sets whether 'Time' is internal or synced to the DAW.

Low Cut
Sets the cut off frequency of a high pass filter in the delay line.

High Cut
Sets the cut off frequency of a low pass filter in the delay line.

Mod Rate
Sets the rate of modulation over the delay time.

Mod Depth
Sets the depth of modulation over the delay time.

Tap Mult
Sets the time of the second tap as a multiple of the main time, not used in 'Mono' mode.

Tips:

1. Use the ratio set between the Delay Time and the Tap Mult parameters to greatly alter the rhythms of the repeats.

2. Try using the High / Low Cut filters to create distance between the source and the echoes.

3. Remember to experiment with all of the delay modes to find the most suitable echo type for your patch!

2.2.4 Tape-Tech Echo Delay

The 'Tape-Tech Echo' is an analog tape style delay with a pitch shifter bolted on. Inspired by gritty vintage tape echo units, it has a darker analog sound. Several unique parameters including tape age and wow, combined with the built in pitch shifter, make the Tape-Tech a fun and eccentric program.

Feedback
Sets the amount of feedback into the delay buffer.

Time
Sets the length of the delay buffer in ms.

Sync
Sets whether 'Time' is internal or synced to the DAW.

Age
Sets the age of the tape: increases noise, saturation, drop outs and darkness in the repeats.

Wow
Introduces slight changes to the delay time, adding pitch warble and chorusing to the repeats.

Shift
Shifts the pitch of the delay line without affecting the time.

Loop
Loops the currently stored delay buffer.

Ping Pong
Sends the delayed signal to the left and right stereo channels alternately.

Play Heads
Two extra play heads each with their own Level, Pan, and Position (predelay) are able to be turned on or off independently of the main echo.

2.2.5 TY-50 Dynamics

The 'TY-50 Dynamics' is a multi mode dynamics processor featuring both classic compression and transient shaping modes. The flexible stereo compressor mode includes wide ranging attack and release times that make it great for adding punch, smoothing transients or as a clean mix bus compressor.

The 'Transient Shaper' mode offers a different flavour of dynamics processing, utilising rate of change to detect transients, then reshape them via attack and release envelope controls. The TY-50 can range from super subtle to extremely intense, working great to shape the dynamics any source material patched through it.

Threshold
Sets the amplitude at which the compressor begins to take effect.

Ratio
Sets the amount of gain reduction applied to the incoming signal when it crosses the threshold.

Sidechain
When turned on, the main input is compressed based on the level of the sidechain input rather than its own level.

Mode

- Expand - Increase the dynamic range of the input
- Compress - Decrease the dynamic range of the input

Shaper
An alternate mode that uses the rate of change to detect transients and reshape them using the attack and release envelope controls.

Attack
In compression mode it sets the time it takes for the signal's gain to be fully reduced after crossing the threshold.

In shaper mode it will shorten or lessen attack transients of the incoming signal.

Release
In compression mode it sets the time it takes for the signal to return to its original level after being reduced (compressed).

In shaper mode it will shorten or lessen release transients of the incoming signal.

Tilt
Tilt style EQ filter that sets the region of frequencies detected by the envelope followers.

Gain
Sets the final output gain of the compressed or shaped signal.

Auto Gain
Applies automatic gain control to keep the compressed/shaped output at a similar level to the input.

Meters
Set the meter display for the input, gain reduction, and output levels to either RMS or Follower.

2.2.6 Multi Phaser

The 'Multi Phaser' is a rich phase shifting effect great for creating slow subtle timbral changes, swirling motion, or thick doubled sounds. Control over the number of notch filters as well as their shape and the speed of modulation makes it easy to create various classic phasing and flanging effects

Depth
Sets how pronounced the notches are (depth of the phasing effect).

Rate
Sets the modulation rate of the phasing.

Sync
Sets whether 'Rate' is internal or synced to the DAW.

Spread
Sets the width of the stereo image.

Feedback
Sets the amount of feedback, narrowing the shape of the notches as it is increased.

Delay
Sets the amount of delay before the phasing is applied.

Stages
Sets the number of notches ranging from 2-8.

Infinite

- Up - Mono upward 'barberpole' modulation, up to 4 stages.
- Down - Mono downward 'barber-pole' modulation, up to 4 stages.

2.2.7 Ensembles Ensemble

The ‘Ensembles Ensemble’ is a diverse collection of chorus and ensemble effects based on circuits from the 70s and 80s. It includes many modes inspired by the on-board choruses found in synthesisers like the Juno-60 and Solina. A built in digital pitch shifter takes the effect beyond traditional chorus circuits.

Mode
Selects the chorus or ensemble mode. Modes are as follows:

- Juno I
- Juno II
- Juno II + I
- RS I
- RS II
- Solina (mono)
- Wide
- Wide II
- Vibrato
- Rotary
- Alpha

Depth
Sets the depth of modulation.

Sync
Sets whether ’Rate’ is internal or synced to the DAW.

Shift
Shifts the pitch of the incoming signal without affecting its time.

Gain
Sets the amount of boost applied.

Voices
Sets the number of extra voices that make up the effect.

Spread
Sets the amount that each of the extra voices vary from the main signal.

Rate
Sets the modulation speed.

Delay
Sets the base delay time of the chorus / ensemble effect.

2.2.8 Modulating Panner

The ‘Modulating Panner’ is a syncable mono or stereo auto-pan with a scan mode that cross fades between 2 input signals. It has a range of uses from adding slow stereo motion to synced rhythmic panning.

Mode
Sets the mode. Depending on the selection, the I/O can be mono or stereo.

- Mono - Pans the left input between the left and right outputs.
- Stereo - Pans the left and right inputs between the left and right outputs equally and opposite of one another.
- Scan - Cross fades between the left and right inputs, outputting the mix in mono.

Offset
Offsets the signal towards the left or right side.

Depth
The amount of modulation applied to the signal.

Rate
Sets rate of modulation in Hz when ‘Sync’ is off.

Sync
Sets whether ’Rate’ is internal or synced to the DAW.

2.2.9 Pocket PL8 Reverb

The ‘Pocket PL8 Reverb’ offers all the magic of a massive aluminium plate whilst remaining small enough to fit in your pocket. It is based on early digital reverb algorithms with a dense metallic sound

Size
Sets the size/time of the reverb tail.

Tightness
Simulates a tighter physical plate dampening the reverb.

Predelay
Delays the onset of the reverb tail.

Low Cut
Sets the cut off frequency of a high pass filter on the reverb tail.

High Cut
Sets the cut off frequency of a low pass filter on the reverb tail.

Freeze
When enabled reverb tail decay is disabled and the reverb is ‘frozen’.

Reverse
'Reverses' the reverb tail.

Gate
Applies a gate to the signal after the reverb.

Tip:

- Try using the High and Low Cut parameters to emphasise different metallic qualities in the virtual plate.

2.2.10 Slinky Reverb

The 'Slinky Reverb' is loosely modelled on a spring type reverb, where an audio signal is passed through coiled metal springs, creating a distinctive 'boingy' and dubby-style reverb tail.

Length
Sets the length of the spring and therefore the overall size of the reverb. High values reach more into echo territory.

Damping
Sets the amount of feedback into the spring. Lower values equal longer, more resonant decays.

Brightness
Changes timbre of the spring sound.

2.2.11 2051 Bit Corrupter

The '2051 Bit Corrupter' is a real-time audio buffer designed to imitate malfunctioning digital audio equipment. A large range of low res, rhythmic stuttering and glitch effects can be created with this one of a kind program.

Mode
Sets the I/O mode.

- Pre - Applies the Bit Depth and Sample Rate reduction pre-mix, to both the dry and wet signals.
- Post - Applies the Bit Depth and Sample Rate reduction post-mix, to the wet signal only.

Sample Rate
Sets the sample rate of the signal.

Bit Depth
Sets the bit depth of the signal.

Time
Sets the size of the buffer in ms when 'Sync' is off.

Sync
Sets whether 'Time' is internal or synced to the DAW.

Lock In
Loops playback of the buffer (even if there is no audio in it).

Glitch
The chance that a glitch will occur.

Repeat
Random variation to the amount of repeats.

Max
Maximum number of repeats may occur with every glitch.

Reverse
Reverses playback of the buffer.

Fade In
Applies a smoothing envelope to the attack and decay of repeats in the buffer

3 SYSTEM REQUIREMENTS

- An iPad running iOS 11 or later
- A DAW that supports Audio Unit Effects Plugin (AUv3).

4 SUPPORT

For the latest news, additional info, downloads and firmware updates please visit the ALM website at busycircuits.com and follow @busycircuits on Instagram.
Questions? Email help@busycircuits.com.