DAGE AUDIO AUDIO TOOLS CRAFTED WITH LOVE

Essence

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1 Introduction

1.1 About Essence

There are two ways to design a De-Esser.

For de-essing vocals, it's common to use a compressor that's configured to detect sibilance. For deessing a full mix, it's usual to filter the signal to isolate the sibilance and compress it, before mixing it back in with the rest of the signal. Essence can do both.

De-essing vocals with software is fairly easy; and using Essence, you need three controls and you're set.

De-essing a full mix is MUCH harder, and mastering engineers invest THOUSANDS in hardware boxes to get usable results. In fact, for about a decade, a mastering engineer wanting to invisibly de-ess a vocal in a full mix has been faced with only one, incredibly expensive option.

Essence replaces both.

But the flexibility of Essence allows you to do MUCH more than de-essing. You can use it like a dynamic EQ to manage all manner of subtle (or extreme) mix issues. And best of all, it's INCREDIBLY transparent. No weird artefacts; it's as if the original mix was just better.

It turns out that starting with the design for the world's best de-esser concludes with having the most powerful mastering processor in the world today.

It's priced as an A-list De-Esser, but that belies the fact that it will allow you to replace expensive outboard hardware, with improved results and as many instances as your computer can handle.

You can run it in a zero-latency ultra-low CPU mode, or crank it up, and even at its most processor hungry, you'll still be able to run dozens across a mix.

This is a magical and revolutionary product at an unbelievable price-point. An absolute must for any mastering engineer, and a life-saver for mix and post work. And that's before we even get to use for creative effects.

What if you wanted to just remove a kick from a mix every time the snare hit?

Or what if you want to invisibly solidify your sub-bass? Just suddenly make it sound more rich and full, but sounding like it was that way to begin with - no clue left that you've improved it.

There's nothing with the power and flexibility of Essence, regardless of price.

Xmas has come early for audio power-users.

- Dave Gamble, December 2014

NB: This book cites Mastering Audio 3rd Ed / Bob Katz in the format Katz (2014) Bob Katz presets can be found under "BK Mastering Presets" in the preset menu. Our thanks to Bob for manual and concept contributions and alpha testing.

1.2 System Requirements

1.2.1 Windows

Essence works with Windows XP, Vista, 7 and 8, 32bit and 64bit. VST, VST3 and AAX are supported in both 32bit and 64bit hosts. RTAS is supported in 32bit ProTools 7 or newer.

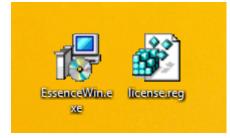
1.2.2 Mac OS

Essence requires OSX 10.5 or newer on Intel mac. VST, VST3, AU and AAX are supported in both 32bit and 64bit hosts. RTAS is supported in 32bit ProTools 7 or newer.

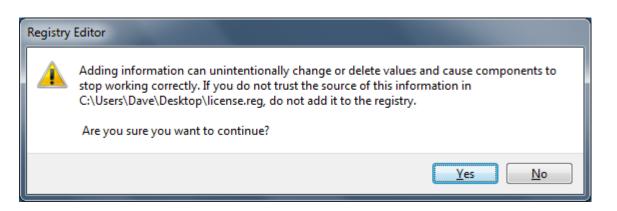
1.3 Installation and Setup

1.3.1 How to Install on Windows

You need two files to install; the plugin installer and the license file. Both are available from the My Stuff area of the DMGAudio site whilst logged in. If you're using a demo, download the installer from the site, and use the form to have your license file emailed to you.



Double-click license.reg, and this box will open:



Click "Yes" and the license is installed. Now double-click the zip-file which contains the installer. Double-click the installer; it will look like this:

B	Setup - DMGAudio Essence – 🗖 💌
	Welcome to the DMGAudio Essence 1.00 on your computer. This will install DMGAudio Essence 1.00 on your computer. It is recommended that you close all other applications before continuing. Click Next to continue, or Cancel to exit Setup. Window Snip
	Next > Cancel

Click "next" (changing any options if you need to), and Essence is installed! Reload your host, and enjoy!

1.3.2 How to Install on OS X

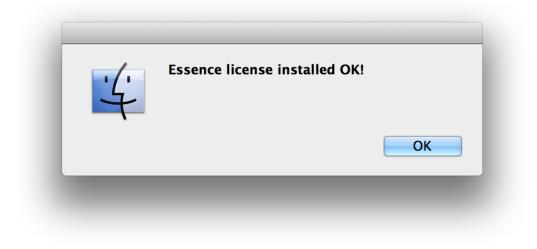
You need two files to install; the plugin installer and the license file. Both are available from the My Stuff area of the DMGAudio site whilst logged in. If you're using a demo, download the installer from the site, and use the form to have your license file emailed to you.

Name	
TAR	DMGAudio_Essence_license.tar
ZIP	EssenceMac.zip

If you are using Safari, one or both of these files may be automatically unzipped for you. If not, double-click them to decompress them, so you get this:

Name	
CMND	DMGAudio_Essence_license.command
TAR	DMGAudio_Essence_license.tar
- 💝	Essence Installer.pkg
ZIP	EssenceMac.zip

Double-click "license.command" to install the license. The license will install, and you'll get the following message to confirm:



Now double-click the installer, and it will launch. It looks like this:

	Icome to the Essence 1.00 Installer
 Introduction License Destination Select Installation Type 	You will be guided through the steps necessary to install this software.
Installation Summary mpunpunpunpunpunpunpunpunpunpunpunpunpunp	e 10
	Go Back Continue

Click through until it installs, and everything is set! Now relaunch your host and enjoy!

2 About Essence

DMG AUDIO ESSENCE	EXT MS	вотн	PRESET	\sim \sim	сору то	📢 оцтрит 📕	SETUP	\bigcirc
							8_ ^{0.0}	
							4 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
THRESHOLD -18.0 dB								
							6	
RATIO 3.33:1							12-	
							28	
FREQUENCY 5.3 kHz							53	
							73	
						-inf	nf	
•						-1111	-1111	
U								X

For De-Essing with Essence, all you need are the three controls shown above, and by default this is how it opens. Set Threshold so that it is finding the offending sibilance, tune the Frequency if needed, and adjust the Ratio to taste. This simple view is discussed in detail in the next chapter.

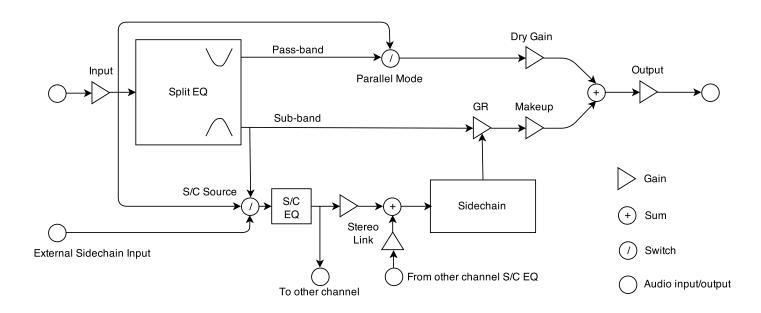
Presets are accessed using the Preset button, as discussed in the Presets section of the manual.

A/B for parameter settings is accessed from the bar at the top of the screen and allows A-H banks of settings for quick comparison.

On the other hand, if you want to use Essence as a fully featured sub-band processor, clicking the icon left of Setup will show the full UI, as shown in Advanced Controls. There's extensive discussion of the advanced functionality of Essence throughout the manual. The advanced section offers you a toolbox of controls, and there are further settings for configuration in the Advanced DSP page in the Setup.

You can drag the bottom-right of the UI to resize the plugin UI.

2.1 Block Diagram



The block diagram shows the signal-flow for each channel. There's also an M/S encoder/decoder that can be engaged around the channels, and a balance control at the end of the signal chain.

In the block diagram, the signal arrives top-left, and is fed into the Split EQ, which separates the signal into the sub-band to be processed and the pass-band. The sub-band has GR applied, and is mixed with either the pass-band or the input to form the output.

Either the input signal or the sub-band can be fed to the Sidechain EQ filters, which are then mixed to achieve channel linkage or separation. That mix is then sent to the input of the Sidechain circuit, which determines how much gain reduction (or increase) should be applied to the signal.

3 Main Controls

DMG AUDIO ESSENCE	_	EXT MS	вотн	PRESET	🗠 🔿 А	СОРҮ ТО	📣 ОИТРИТ 📘	SETUP	\bigcirc
								8_ <mark>0.0</mark> 4	
THRESHOLD -18.0 dB									
RATIO 3.33:1								6- 12	
FREQUENCY 5.3 kHz								39 19	
								73 07 nf	
i							-inf	-inf	x

3.1 Controls

The Controls section includes Threshold and Ratio controls for the processing, and when a sub-band is being used, a Frequency slider allows you to tune the sub-band filtering.

The Threshold determines the level of signal above which Essence will start to react.

The Ratio determines how aggressively Essence will react to a signal that exceeds the threshold. Holding Alt while dragging the Frequency slider will allow you to immediately preview the sub-band signal for fine-tuning.

You can adjust these controls by dragging the sliders or text values, or by double-clicking the textvalues to enter text.

Double-clicking a slider will cause it to jump to where you clicked, and shift-dragging allows fine adjust.

3.2 Time-Series Graph

The Time-series graph shows a scrolling graph of the signal which Essence is responding to, alongside a display of the gain reduction at that instant.

The graph is scaled to allow easy reading of levels relative to the threshold. The red bars on the graph delineate signals above and below the threshold. The colour of the signal changes to highlight signals that cross the threshold.

The top half of the graph shows the Left/Mid channel, and the bottom half shows the Right/Side channel.

Dragging the waveform section of the graph will adjust the Threshold level (for both channels, or for the channel dragged), and dragging the GR section will adjust the Ratio level (channel-sensitive as before).

3.3 PPM / GR Meter

The PPM/GR meter shows the output levels of the Left/Right or Mid/Side signals, alongside the gain reduction per-channel. Labels under and above the meter show current signal/gr peak values.

Right/double-clicking the meter switches to a configurable Zoomed view, allowing you to zoom in to see fine GR levels.

4 Advanced Controls



4.1 Controls

Each control includes a draggable text-readout that can be double-clicked to allow text-entry.

Essence can be used as a compressor or as an upward expander. The **Upward** control engages upward expansion.

The **Knee** parameter allows you to configure a soft-knee around the Threshold, which effectively widens the threshold, so signals below the Threshold will still receive some gain-reduction, and gain reduction will increase gently as the level of the signal increases.

The Ceil control sets a limit for the amount of gain reduction/increase that Essence may apply.

The **Attack** control configures how quickly Essence will respond to the detection of a transient. Longer times are more gentle, but will cause Essence to allow transients to pass. To capture transients with longer attack times, ensure that Lookahead in Advanced DSP is used.

The **Release** control specifies how fast Essence will reduce gain reduction once a signal that crossed the threshold has passed. Longer Release times sound more gentle, but can reduce the overall level. Shorter release times tend to increase the average loudness and potentially make the material sound more "lively".

When the **Dual Release** in Advanced DSP is used, the **RMS** and **Rel Fast** parameters are shown. These allow you to configure the dual-release detector. The detector has a hybrid peak/RMS behaviour. When the signal level is within 6dB of the RMS level, the regular Release timing will be used. However, when the signal level exceeds 6dB of the RMS level, the detector has determined that it is responding to a transient, and switches to the Rel Fast timing. The RMS control allows you to set the timebase for the RMS calculation used.

If you simply want to make both release values the same (which is essentially single release), then hold down alt while dragging either release value and both releases will be set the same.

StereoLink configures whether each channel of the sidechain sees its own signal (at 0%) or whether both channels receive the same signal (at 100%). This control is independent of control-linkage, so both channels can react independently but share controls, or be controlled differently but react to the same input signal, or share input signal and controls, or be used as two independent processors within the same instance.

Lookahead adjusts the Lookahead time and corresponding circuitry, to allow Essence to react more slowly (and hence more transparently) to signals that require processing. The audio signal is delayed by the given amount (which translates to additional latency), so that the attack can be slower and still catch transients.

4.2 EQ Graph

The EQ Graph includes controls for the Sidechain EQ, the Split EQ, and a spectrum analyser. Clicking the Sidechain or Split EQ text above the graph allows quick auditioning of the filtered signal.

The Graph is zoomable using the mousewheel, or the scrollbar at the base. Each circular node on the graph indicates an EQ band that can be adjusted. Moving the pointer over the nodes opens up a tooltip that allows fine configuration of the band.

The Sidechain EQ includes three bands - one peak, a high-pass/low-shelf band and a low-pass/highshelf band. Switching between filter and shelf is achieved by clicking the LPF/HPF/Shelf text in the tooltip.

4.2.1 Split EQ

The Split EQ is a single band that can be configured to achieve numerous effects.

Hovering over the Split node opens up a tooltip, labelled "Split". Immediately to the right is a label for the filter shape, set to either HPF, LPF or BPF. Clicking the filter label opens up a menu which offers the different Split EQ types.

Coincident BPF

The coincident BPF is the preferred choice for De-Essing. It has a Q control to adjust the bandwidth

of the filter, and two controls for steepness of the left-hand and right-hand (high-pass and low-pass) edges. Filter slope (steepness) can range from 6dB/oct to 192dB/oct. 96dB/oct is a good compromise between overall selectivity and smoothness in the pass-band. The de-ess soft and hard presets use these "ideal" de-ess Qs and slopes.

Butterworth BPF

The Butterworth BPF has the same functionality as the Coincident BPF, but with much steeper slopes. This type is excellent for surgical work.

EE BPF

This offers a 12dB/oct adjustable-Q textbook BPF. It can be used to achieve extremely tight Q values.

Coincident LPF/HPF

This offers a low-pass or high-pass coincident filter, with slope between 6 and 192dB/oct. At 24dB/oct, these filters create a Linkwitz-Riley 4th order crossover, which can be used with flat response in Minimum Phase mode.

Butterworth LPF/HPF

This has the same functionality as the Coincident design, but allows much sharper slopes for surgical work.

4.3 Mixer

The Mixer section includes gain controls for all parts of Essence. Each gain includes a fader and text value for quick adjustment. The gains allow you to adjust the Input Trim (pre-threshold), the Makeup-gain (for the compressed/expanded signal), the Dry gain (for the Dry signal in parallel mode, or the unprocessed signal), and the Output Trim (after all processing).

Hovering over the label for Makeup, Dry and Output will allow you to click-to-mute the signal.

The Balance control allows quick adjustment of signal balance, by attenuating one channel or the other.

Parallel mode determines whether the output signal is a mix of the processed signal and the input, or the processed signal and the unprocessed signal. This is discussed in Parallel mode.

5 Advanced DSP

ESSENCE SETUP			×
LD -27.0dB	GLOBAL		
Advanced DSP	Noise Detector:	50%	
Instance Prefs	Oversample:	Off	
Global Prefs	HQ Oversample:	Off	
About/Credits	Lookahead: Sidechain Source:	10.00ms Split	
	Dual Release:	On	
	Smoothing: Linear Phase:	Off On	
	HQ Split: TEQ	Off	
	RELEASE		
	Release Hold:	0.80ms	

5.1 Global

Noise Detector enables a dedicated sibilance detector which will cause Essence to only react to sibilance in the signal. For de-essing mixes, this should stay at 0%, but for solo vocal signals, setting this to 50% (and ensuring Sidechain Source is set to Input) will allow any harmonic signal to pass, whilst grabbing sibilant and fricative sounds. Try the "Solo Vocal De-Ess" presets for a demonstration. At 50% this works like magic. You can calibrate the percentage for different dialects/languages, though only small adjustments will be necessary.

Oversampling engages a 2x oversampling mode which runs the sidechain at double the session sample rate, to make it more sensitive to inter-sample peaks, and runs the gain-reduction phase at double the session sample rate to prevent aliasing from intermodulation distortion.

HQ Oversample engages a very high resolution antialising filter, which can mitigate the audibility of oversampling, but at the cost of additional CPU.

Sidechain Source is set to Split or Input, and determines whether Essence responds to the filtered sub-band or to the input signal. In both cases, the sidechain EQ bands are used.

Dual Release engages a sophisticated signal level detector that switches between two release times, based on an assessment of whether the signal is a transient that needs quick handling, or a longer-term loud signal.

Smoothing switches on a pair of filters on the gain-reduction signal which acts to make gain reduction more gentle.

Linear Phase uses a linear-phase circuit to separate the signal into the sub-band to compress and everything else. When this is disengaged, a zero-latency minimum-phase circuit is used. Note that for perfect reconstruction with minimum phase filters, you should use a 24 dB/oct Coincident LPF

or HPF, which will create a 4th-order Linkwitz-Riley crossover. If more gentle filtering is required, a 6dB/oct can be used. For mastering applications, Linear Phase should always be engaged.

HQ Split increases the length of the FIR filter used for linear phase crossovers by a factor of 4, which will improve selectivity when used at low frequencies.

5.2 Release

When the **Dual Release** detector is in use, the **Release Hold** control allows you to set a hold time, which prevents the sidechain from releasing before a certain period of time has elapsed (see Katz (2014) p.88, Release Delay).

6 Other UI

6.1 The Menu Bar

DMG AUDIO ESSENCE	EXT	MS	вотн	PRESET	\sim	\sim	А	сору то	N ουτρυτ	SETU	· ()
-------------------	-----	----	------	--------	--------	--------	---	---------	-----------------	------	------

6.1.1 Ext

Essence will accept an external sidechain signal (see your DAW's documentation on how to route to a plugin sidechain). Engaging "Ext" will use that signal to trigger Essence.

6.1.2 MS / LR

This button is used to determine whether Essence operates in Mid-Side or Left-Right mode. The current mode is shown on the button, and is toggled by clicking.

6.1.3 Both / Left / Right / Mid / Side

When "Both" is shown, both channels (mid, side or left, right) are configured by the same parameters, as shown onscreen. Clicking the "Both" button will change the display to show controls for Mid or Left (in Mid-Side mode and Left-Right mode respectively). Clicking again will toggle to to show controls for Side or Right. To re-link both channels, right-click the button and pick "Relink" and both channels will be controlled with the settings that were on the first (Mid or Left) channel. When channels have been unlinked, the Relink menu also offers options for copying settings from Mid->Side, Side->Mid or Left->Right,Right->Left.

6.1.4 Preset

Pressing this button will pop out the Preset tray. See "Presets".

6.1.5 Undo / Redo

A full undo/redo for any parameter changes on the UI.

6.1.6 A / B and Copy To

Essence maintains 8 banks of controls at all times, so you can easily A/B (or A/H) through different variants of your settings.

For example, you might create a curve, then use Copy To to copy it to B, then modify that a little, and keep going to get as many different settings as you want to evaluate. Then you can use the A/B menu to audition each setting.

If you'd like the auditioning process to happen with one click, simply right-click on the A/B button. You can configure (in Global Prefs, A/B Toggle) whether this toggles between the last two settings you visited, or between all visited.

6.1.7 Listen Button

Clicking the Listen button opens a menu to allow you to select a signal to monitor. The options are: Sidechain EQ, Split Filter, Output, Passband (anything outside the split filter which is not being processed) and Difference (which allows you to hear the change that Essence is making).

Right-clicking the Listen button allows you to quickly toggle between the last two Listen signals, or to cycle through all options (configured by preference).

6.1.8 Layout Button

Clicking the Layout button allows you to hide or show the Advanced controls.

6.1.9 Setup Panel

This opens the Setup Panel, which allows further configuration of Essence. See "Preferences and Options".

6.1.10 Bypass

The Bypass button bypasses all processing within Essence, and routes the input directly to the output.

6.2 Presets



Essence includes a set of presets, which you can add to, to build up your library of settings.

By default, on mac they reside at /Library/Application Support/DMGAudio/Essence/Presets and on windows, at C:\Users\<you>\Documents and Settings\DMGAudio\Essence\Presets You can change the location of the presets on Windows by re-running the installer and changing the "DMGAudio Essence resources folder" path during the install.

Saving presets into these folders will allow you to select them from the Preset menu. Don't forget to include these files in your backups.

6.2.1 Previous / Next

These buttons allow you to quickly jump back and forward within the list of presets. They grey out to show you when there's no further to go.

6.2.2 Preset Menu / Name

This shows the Preset name, and you can right-click to modify the name. Clicking here will open the Preset Menu, which is a multi-level menu of all of the presets you currently have saved. You can arrange this folder to suit your needs, but be aware that installing updates will reinstall the factory set.

6.2.3 Load / Save

Use these buttons to open a window to save or load presets.

6.3 MIDI Learn



You can right-click (or Ctrl+Click on mac) any control to open the MIDI Learn menu. Selecting "Learn..." will wait for MIDI CC input and bind the control to the first MIDI CC controller received. Parameters are displayed in green to indicate that they have been MIDI Learned. MIDI Learn mappings affect all instances of a plugin and are saved globally, making it easy to map the plugins to your MIDI Controller. Right/Ctrl clicking a Learned parameter displays a menu with information about the mapping and an "Unlearn" option to forget the MIDI mapping.

7 Preferences and Options

7.1 GUI

ESSENCE SETUP								
		- Graph	• Graph					
Advanced DS	iP	Readout	Off	Analyser	Graph	I/Save ▼ Both		
GUI 3.33:1		 Analyser 				l/Save ▼		
Global Prefs		Decay	Instant	Fast	Med	Slow		
About/Credit	s	Range	96dB	80dB	64dB	48dB		
		Тор	0dB	-12dB	-24dB	-36dB		
		Display	Filled	Outlined	Both			

The settings in GUI are per-instance and can be saved with a preset.

Graph

The **Readout** values, if selected, are displayed at the top of the EQ graph.

Analyser

Decay sets the decay time for the smoothing of the response. The attack characteristic is always an instantaneous peak-type response.

Range sets the range of the graph in dB.

Top allows you to reduce the highest gain level shown on the graph.

Display allows you to configure the standard Analyser mode to be plotted filled or outlined.

7.2 Global Prefs

The settings in Global Prefs are shared between all instances.

ESSENCE SETUP					×
	Mouse and Meter				
Advanced DSP	Meter Ballistic	Digital	PPM	VU	BBC
GUI 3.33:1	Meter Peak/Hold	5Sec	Clicked	Off	
Global Prefs	Meter Scale	FS	K-12	К-14	K-20
	Meter Peak	Red	Yellow		
About/Credits	Meter Zoom Range	1.5dB	3dB	6dB	12dB
	Meter Auto Range	Off	On		
	ProTools Opt/Shift	Off	On		
	MouseWheel Sensitivity	Broad	Med	Fine	
	Hide Mouse	Off	On		
	Graph				
	Tooltips follow	Mouse	Adjustment		
	MouseWheel Zoom	Active	Disabled		
	Swap Alt/Right	Off	On		
	Misc				

Meter Ballistic allows you to pick the ballistics used by the meters.

Meter Peak/Hold sets the holding behaviour of peaks.

Meter Scale allows configuration of a K-Meter scale for the PPM meter, between the K-12, K-14 and K-20 standards.

Meter Peak is used to select the colour of the peaks shown on the PPM meter.

Meter Zoom Range configures the range shown in PPM zoomed mode (when the meter is doubleclicked or right-clicked).

Meter Auto Range allows the PPM meter to zoom out to ensure that GR values can be displayed when in PPM zoomed mode.

ProTools Opt/Shift determines whether you expect ProTools style keyboard modifiers (Opt/Alt for reset to default and Apple/Ctrl for fine-adjust).

MouseWheel Sensitivity configures mousewheel response for knobs and textboxes.

Hide Mouse will cause the mouse to disappear while you're adjusting a value to reduce distraction.

ESSENCE SETUP					X
	MouseWheel Sensitivity	Broad	Med	Fine	
Advanced DSP	Hide Mouse	Off	On		
Instance Prefs	Graph				
Global Prefs	Tooltips follow	Mouse	Adjustment		
About/Credits	MouseWheel Zoom	Active	Disabled		
About diedits	Swap Alt/Right	Off	On		
	Misc				
	Save Compression	Off	Fastest	Med	Smallest
	A/B Toggle	Last 2	Visited	MIDI Learn	
	A/B Automation	Just AB	All		DIFF MIXER
	Listen Toggle	Last 2	Cycle		24dB IN
	Listen Buttons	SC/Split	All		
48.0dB	Mouseover Help	Off	On		12dB
3.15ms	OpenGL	Disable	Enable		
200.00ms	Save As Default	Save			OdBC

Graph

Tooltips follow allows you to choose whether the EQ graph tooltips respond to mouse movement, or adjustments made by a control surface.

Mousewheel Zoom can enable or disable zooming into/out of the EQ graph.

Swap Alt/Right swaps over Alt and Right, so that Alt-dragging engages autolisten, and right-click-dragging adjusts Q.

Misc

Save Compression allows you to adjust the degree of compression used when saving state for a preset or within a session. If you want to text-edit presets, or want fastest-possible save times, switch this Off. By default this is set to Smallest to minimise session file sizes.

A/B Toggle allows you to determine how right-clicking the A/B menu cycles through A/B banks. Last 2 swaps between the last two A/B banks you have visited. Visited allows you to cycle through all A/B banks you've visited so far. If you want to assign the A/B bank selector to a MIDI CC parameter, select 'MIDI Learn' and then a right-click on the A/B menu will bring up MIDI learn options.

A/B Automation allows you to determine whether changing A/B bank writes full automation to the session, or just records the change of A/B bank.

Listen Toggle allows you to determine how right-clicking the Listen menu cycles through options. Last 2 swaps between the last two Listened signals. Cycle will advance through all listen options.

Listen Buttons selects which listen buttons are available at the top of the EQ graph in advanced view. With 'All' selected, Passband/Difference options will be available in addition to Sidechain/Split EQ.

Mouseover Help allows you to hide or reinstate the help display at the base of the plugin window after it has been closed.

OpenGL allows you to disable OpenGL in case there are compatibility issues with your machine. Toggling this option will require you to close and re-open the UI. Save current state as default is used to save the state of this instance as the state that new instances will have when created.

8 Advanced Topics

8.1 Parallel mode

By default Essence will split the signal into two parts - the frequency band to process and the frequencies to leave unaffected. For De-Essing this is the way to achieve invisible results.

However, for more creative uses you can engage Parallel mode which will allow you to process a band of frequencies and mix it against the full input signal. When the Split EQ is disabled this allows you to achieve traditional parallel (New York-style) compression.

Parallel mode with the Split EQ can allow for very creative enhancement of a signal - for instance by allowing you to mix in a compressed version of part of the spectrum to invisibly smooth out the dynamics in that region or for wilder "Tonalisation" strategies.

See Katz (2014) pp.102-103 for more discussion on the topic.

8.2 Getting good results with low CPU usage and low latency

By default, Essence uses a linear-phase crossover, which guarantees perfect reconstruction and the absence of any phase artefacts. However, it is possible to generate a perfectly flat crossover using minimum phase designs, such as the fabled Linkwitz-Riley crossover. To use the Linkwitz-Riley crossover, set the Split EQ to either Coincident HPF or Coincident LPF, with 24dB/oct slope, and disengage Linear Phase mode in Advanced DSP.

It's also possible to get a flat crossover with the Coincident filters at 6dB/oct, if less frequency selectivity is desirable.

8.3 Mastering and dynamic EQ applications

This section lists a few examples of strategies for more esoteric processing that can prove invaluable in a mix context.

To solidify sub-bass, set the Split EQ to a low-pass, and adjust until the uneven sub is selected. Now compress until it has solidified, and use the Makeup gain to set the desired level.

To de-harsh a signal, approach like De-Essing, using either a Band-pass or High-pass Split EQ, and gently compress to tame the excess dynamics. You can use a slow attack without risk of transients escaping by ensuring that you use a lookahead of about twice the attack time. Using Dual Release mode also acts to ensure that the audible effects of the compression are minimised.

Invisible reduction of dynamic range for part of the signal can be achieved by engaging Parallel mode, compressing the desired band heavily, and using a low Makeup gain to reinforce that part of the spectrum.

If you encounter a signal that needs attention in a full mix which is hard to selectively target with the full mix, you can try finding its signature in the Side signal, filtering out the Mid signal, and setting Stereo Link to 100%. Then disable the ratio for the Side, and use the signal detected in the Side to compress the Mid.

Essence is an incredibly versatile processor which allows an extraordinary range of subtle modifications to tighten, relax or otherwise enhance a signal.

9 Bob Katz Mastering Presets

In the BK Mastering folder you will find the following presets. All of the mastering presets (except for the parallel compression presets) begin with a threshold of +12 dB and will have no audible effect until you adjust the threshold downward.

9.1 Downward Compression Presets

Gentle Compression Wideband LR This preset has a very "analog" feel. It is initialized with a very low ratio of 1.05, 0 ms. lookahead so it won't catch any short transients. It is in LR (stereo) mode with a slow attack and gentle release times. It is initially bright and clear, letting through most of the high frequency and short information from snare attacks, for example. Shorten the attack if you want to soften the snare transient. Adjust threshold to taste, it is initially off, set to +12 dBFS.

Gentle Compression Warming Band LR This preset enhances and fills in the upper bass and low mids. The makeup gain is already boosted by 1.3 to get you started. Use the makeup as a form of tone control along with the compression action. Lower Threshold and adjust frequency and other parameters to taste.

Gentle Compression Presence Band LR This is the yang to the yin of the above preset. Notice the shape of the presence filter is quite broad so it doesn't sound harsh or brittle, it tends to give "presence" in a very natural way. This preset also includes some makeup gain to get you started.

Soften cymbals MS Sometimes the cymbals are too loud or forward in a mix but we want to maintain the presence in general. This preset does a good job. Try giving different thresholds or frequency ranges to M and S channels if the ride and crash are primarily on the sides of the stereo field, concentrate on the S channel. If a high hat is giving trouble, change to LR mode and try right or left channel only compression since the high hat is usually on one side or the other.

De-Ess Soft MS Starts with thresholds turned all the way up. It's possible to de-ess a center lead vocalist with separate parameters than side-predominant background vocalists. As an indication that all you need are three controls, this preset opens up in simple mode, but you can adjust the advanced parameters by clicking on the icon to the left of the setup button.

De-Ess Hard MS This preset grabs faster and harder but has a long slow release so it may still be relatively invisible. Use with caution, can easily expose itself. Like the above, it opens in simple mode.

9.2 Parallel Compression presets

For further discussion of these strategies, see Katz (2014) pp.102-104.

Parallel Compression tonalization Wideband LR This wideband preset is the ultimate fattener. Leave all the other controls alone and just raise the makeup gain to taste. It starts with the makeup gain muted (off). Unmute it and you'll hear a big surprise! As with all the parallel compression presets, if you're disatisfied with the action, adjust threshold or other parameters to taste, but remember that the real key is in how much of the parallel compressor you mix in, which is the makeup gain.

Parallel Compression tonalization Bass band LR This preset will give you big bass or your money back! Leave all the other controls alone and raise the makeup gain to taste. It starts with the makeup gain muted (off). Unmute it and enjoy the liquidity!

Parallel Compression tonalization Presence LR Nice subtle presence enhancement, adds a nice sheen. As with all the parallel comp presets, leave all the other controls alone and raise the makeup gain to taste. It starts with the makeup gain muted (off). Unmute it and — instant presence.

Parallel Comp transparent wideband LR This preset is a completely different approach to parallel compression, suitable for the most delicate compression of classical music. It begins with the makeup muted at a fairly low mix level. It's designed to be subtle, so it's possible you may only know it's acting by careful comparison of in/bypass, or more simply, by muting/unmuting the makeup gain. Of course if you turn the makeup gain up too far, it will no longer be invisible nor transparent, but you may like that! Yes, the gain reduction is supposed to be very heavy and constant in the transparent preset.

9.3 Upward Expansion Presets

Upward Expansion Bass Drum This preset is designed to selectively enhance the attack of the beater of a bass drum. It starts with threshold at +12 dB (off). Just turn it down, to taste. Don't hesitate to set the threshold very low if that achieves the desired result. If it's not selective enough, split into MS and turn off the threshold on the S channel (+12 dB).

Upward Expansion Snare Drum LR This preset is designed to enhance the attack and impact of snare drum and other rhythm. It's extremely effective, selective and delightful! Starts with threshold off, turn it down till the snare pops or snaps. If it snaps and you want pop instead, try turning the frequency down a bit. If it's not selective enough, split into MS and turn off the threshold on the S channel (+12 dB).

Upward Expansion Snare Drum M channel Same as the above but changes to MS mode. Just lower the threshold of the M channel if the snare is in or near the middle. Too much M channel expansion, however, can reduce the stereo separation in the chosen frequency range.

Upward Expansion low pass LR This preset is good for general microdynamic enhancement without sounding too bright. Adjust threshold to taste. If the initial attacks of the rhythm are not snappy enough, lower the lookahead, or vice versa.

10 Troubleshooting

10.1 Get in touch

If you run into trouble, get in touch! We're here to help, after all!

For technical support, feature requests and general discussion, visit: http://dmgaudio.com/contact.php

Or you can just email us directly at: contact@dmgaudio.com

For support with DMGAudio software, sending email is the way to go. It allows us to be much faster and more responsive, and we try to spend more time answering our emails than hanging out on social media!

For general discussion though, please feel free to drop by on Facebook/Twitter and tell us how you're getting on. We'll be posting news about updates there too - but also do join the DMGAudio mailing list to make sure you never miss out.

f http://facebook.com/dmgaudio

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Questions about licensing, license transfers and discounts are covered in our FAQ. Information about version numbers, updates, features and bug fixes is listed under the Specifications tab on the Essence Product Page.

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