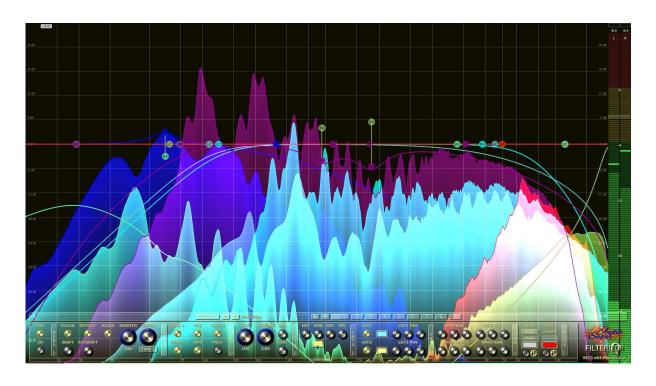


Powerful 2D/3D Multi Channel Equalizer & Filter For Mixing, Mastering & Creative Effects



## Manual

www.sugaraudio.com - support@sugaraudio.com

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## Introduction

Equalizing and filtering in perfect 2D and 3D visualizations using up to 10 out of 255 dynamically overlayed or paralleled channels for detailed spectrum comparisons is the power of Filterizor Q Pro. Benefit from using it in mixing, mastering, live or teaching sessions. Filterizor Q Pro combines analogue vintage designs with the modern advantages of the digital domain. Are you feeling overwhelmed with your EQ settings? Filterizor Q Pro will change it as effective as possible. Are you experiencing masking and interferencing in your sound? Easily find competing frequencies and clean your mix. Quickly link and adjust filters of any plug-in instance together making complementary EQing easier than ever.

Many filter types and models, up to 100 superb sounding filters per instance with up to 20th order for very steep frequency responses, linear/zero phase modes, L/R & M/S processing, flexible automation mapping, inverted filter solo mode to find muddiness/harshness/resonances, note lock and the 4-phase gain protection are some of the highlights.

Spectrums are displayed with wonderful filled/lined graphics using blending, blending types and smoothing. Use the custom UI coloration, free resizing capabilities up to Ultra-HD/5K Retina resolutions and innovative control multi panel to optimize your workflow.

## **Features**

- Powerful 2D / 3D equalizer & filter for mixing, mastering, creative effects & live sessions
- Perfect spectrum interference visualization: clean your mix, eliminate unwanted masking & find sound definition
- Unique parallel mode = your EQ control center: add/delete/change filters of any other instance with the help of send/receive channels
- Makes your mixing workflow easier: dynamically compare shiftable paralleled and overlayed 2D/3D spectrums of any other instance in the 10 channels simultaneous view
- Get the best out of your mix: phenomenal complementary mixing
- Quickly (inverse) link up to 10 filters of any instance(!) in 25 separated link chains and edit/drag/bypass them together. The links are saved with your projects!
- Superb sounding analogue vintage designs combined with the modern advantages of the digital domain
- High quality low cut, high cut, band, band stop (notch), band pass, low shelf, high shelf
   & weighted shelf filters
- Stereo (left/right), M/S (mid/side) and sum processing
- Filter solo mode: easily find muddiness, harshness & resonances
- Assisting multi channel correlation meter
- Up to 20th order filters for all filter types & models (!) with steep frequency responses of up to 180dB/oct and more
- Up to 100 brillant sounding filters of any type per instance
- Highly optimized zero latency, linear phase and zero phase modes
- Customizable 4 phase gain protection protects your ears and speakers

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- 10 channels x 9 parameters automation mapping changes more than one filter with one parameter for custom resonances, dips & effects
- Smart note, frequency and gain lock functions
- On-the-fly edit- and hideable filter info pop up window
- The filter lock mode intelligently protects against unwanted changes and automation
- Useful dB-scale- and hideable RMS, peak & peak hold meter with built-in gain controller
- Filter changes transition fine-tuning controls (fade & hold time)
- FFT size, window (7 functions) & average controls
- Spectrum tilt/slope knob & Nyquist mode
- 255 channels to send/receive spectrums to/from other instances
- Benefit from channel naming and coloration with propagation to other instances
- Wonderful filled/lined spectrums using blending, blending types & smoothing
- Inspirational SA 3D Engine 2.0: Highly optimized and customizable 3D renderer
- Fantastic 360 degrees three axis 3D rotation, free positioning and zooming
- Two independent 3D light sources with extended customization
- Outstanding & fully customizable UI with pleasant spectrum coloration
- Best practices Bypass / Freeze / Freeze all (global freeze) buttons
- Advanced gain, pan, phase, L/R swap, mono and mute track controls for all instances
- Exact mouse wheel zoom in/out to dive into the desired spectrum range
- Handy positioning, scaling & dragging
- Multipanel UI control with all-in-one-mode, menu splitter & control scrolling
- Freely resizable GUI from very small up to Ultra-HD & 5K Retina
- Full window and control hover mode
- Extensive preset manager, many presets, quick save/load preset & A/B comparison
- A range of keyboard shortcuts for the most important functions
- No dongle required (except AAX), low CPU & memory usage (except 3D)
- Supports x64 Windows 10 11 VST® 2/3, AAX (ProTools Native)
- Supports x64 macOS 10.11 12 VST® 2/3, AU, AAX (ProTools Native)
- Supports 16-32 bits sample resolution @ 44.1-192 kHz sample rate
- System requirements: Minimal 2 GB RAM & C2D 2.66 Ghz, 4 GB RAM & i5 and better recommended for multi channel usage and 3D functions

# **Application areas**

- EO control center
- Detailed spectrum equalizing & filtering in mixing, mastering, live & teaching sessions
- Effect equalization and custom resonance filtering
- Complementary EQing
- Averaged spectrum comparison of channels (e.g. reference tracks or instruments/voices)

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- Spectrum interference visualization (lightens parts with most activity)
- Stereo & mid/side processing

- ...

## **Free version limitations**

The free version is limited (e.g. no 3D, no multi channel support, fewer controls & filter types/models, max. 2 filters, first filter order, no FFT customization, zero latency mode only).

# **Software installation**

## Mac

Mount and open .dmg and drag the desired package and the manual to the right folder.

## **Windows**

Run the installer and follow the steps. Your DAW host software should find the plugin automatically or let the host rescan your plugins.

## **License installation**

The plug-in automatically searches for the license file at program start. The license that you will receive when you purchase the Pro version has to be simply installed to one of the following directories of your system drive(!).

## Mac

/Library/Audio/Plug-Ins/VST
/Library/Audio/Plug-Ins/Components
/Library/Application Support/Avid/Audio/Plug-Ins

## Windows

The first item is the environment variable (if set on your system). Please remember that 32 bit executables just see 32 bit folders (X86).

 ${\sf PROGRAMFILES} \to {\sf Subfolder} \ {\sf Filterizor}$ 

PROGRAMFILES(X86) → Subfolder Filterizor

VST\_PATH

VST\_32\_PATH

VST\_64\_PATH

VST3\_PATH

VST3\_32\_PATH

VST3\_64\_PATH

PROGRAMFILES → Subfolder Vstplugins

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#### FILTERIZOR Manual

PROGRAMFILES(X86) → Subfolder Vstplugins

PROGRAMFILES → Subfolder Steinberg\Vstplugins

PROGRAMFILES(X86) → Subfolder Steinberg\Vstplugins

COMMONPROGRAMFILES → Subfolder VST3

COMMONPROGRAMFILES(X86) → Subfolder VST3

COMMONPROGRAMFILES → Subfolder Avid\Audio\Plug-Ins

## Example:

If your System drive is C and you didn't move your Program Files folder to an other location than the standard folder, then one possible path would be: C:\Program Files\Steinberg\VstPlugins

# **Mouse Handling**

The mouse handling in Filterizor is a powerful possibility for live EQing, special effects and complementary mixing.

## General mouse handling

Moving the mouse to the left display border automatically opens the channel control of the channel under the mouse. You can change the gain, pan, mute, phase, mono and swap left/right settings of every channel in your display. While it is always a good idea to directly change these values in your DAW there are some good reasons why you could use the in-built features of Filterizor Q Pro e.g. quick mono compatibility checks, live effects, phase checks while EQing (e.g. between bass/kick) and gain settings instead setting the level with your DAW fader. The double click on the gain or pan value resets it to zero. If one or more of the track control values are set, small icons appear at the channel display for your information.

**Hint**: you can deactivate the channel control (and filter info popup) with the "INFO" control or the "I" key.



Hovering above a filter circle shows the filter info and edit popup window. A right click selects a filter of the current instance and fixes and leaves the popup window opened for the selected filter. You can then directly edit the values of it. To close the popup window click the upper right cross, right click any filter or move the mouse out of the display.

You can edit all parameters of all filters in the filter info pop window including lock, enable, filter type/-model and note with cents offset resulting in a speed-up of your workflow. The (propagated) channel name is shown at the bottom of the window to keep everything under control. The little trashcan at the bottom right simply deletes the selected filter.

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Left click and dragging a selected filter changes the frequency and (if the filter type supports it) the gain of it. Additionally holding down the STRG / CMD <u>after</u> you have clicked a filter locks the frequency at half notes (imagine a virtual keyboard), holding down the shift key locks the frequency so you can only make gain adjustments and holding down the alt key locks the gain so you can only make frequency changes.

Double left click a filter circle to reset the gain to 0 dB, elsewhere the double left click adds a default band filter to the current instance at the chosen dB/frequency. In parallel mode the double left click adds a filter to any received instance you wish! This will enable you to EQ a whole project from just one Instance of Filterizor Q Pro without switching to other instances/tracks. With holding down the ALT key during the double left click, the filter will be added at 0 dB.

In the spectrum display use your mouse wheel to zoom exactly in/out the display at the current mouse position. Additionally holding down the shift key adjusts the quality of a filter when the mouse cursor is above a selected filter circle.

Right mouse click on parameters shows the popup menu from the parameter/host or enables direct value input (depending on the parameter). Additionally holding down the shift key when changing knobs activates the value fine tuning mode.

# Additional mouse handling in 2D

The right mouse button + mouse dragging moves the display to the right and left. Left mouse button + mouse dragging marks an area and automatically zooms this area in.

# Additional mouse handling in 3D

The right mouse button + mouse dragging rotates around the X and Y axis. Additionally holding down the STRG / CMD key rotates around the Z axis. Left mouse button + mouse dragging moves the 3D object.

# Linking filters

Filterizor has the incredible ability to link up to 10 filters in 25 link chains with the mouse resulting in combined frequency and (optionally inverse) gain changes when you drag one of the filters. This enables a unique workflow to easily create custom filter resonances, use

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complementary EQing (e.g. bass guitar and kick drum) and create special effects or custom tilt shelf filters. The possibilities with Filterizor Q Pro are endless.

To link two filters press and hold the CTRL/STRG key <u>before</u> you left click a filter and drag it to any other filter regardless of wheather it is a filter of the current instance or a filter of a received channel. Repeat the procedure until you have connected up to 10 filters. If you release the CTRL/STRG key <u>before</u> you release the left mouse button the link mode is automatically changed to **inverse linking** for the current link. The current mode is shown at the bottom left corner of the display. Additionally the small balls rotating around the filter circle show if you are in normal mode (clock wise rotation) or in inverse mode (counter clock wise).

To delete a link chain, easily drag one of the linked circles to a free place of the display. Of course the filter links are saved with you projects and will be reconstructed during the reload in your DAW.

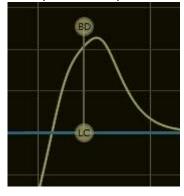


*Hint:* Dragging one circle of linked filters adjusts the gain for <u>all</u> linked filters. When the linked filters are on the same instance, the frequency will also be logarithmically shifted for the same amount. On other instances the frequency will be set to the same adjusted value. This allows the unique feature to use complementary mixing and create custom resonances and effects within one workflow.

**Another Hint:** If you just want to change the gain in general, hold down the SHIFT key while dragging. Holding down the ALT key while dragging adjusts the frequency only. Of course you could also directly change the relevant field in the popup info window or by the knobs at the bottom, that will have the same effect.

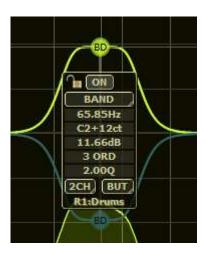
**Next Hint:** The filter enabling is also linked! So you can bypass all linked filters and can easily hear what your are complementary mixing or turn on special effects on demand.





Example of complementary EQing with inverse linking:

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# **Keyboard shortcuts**

Filterizor Q Pro comes with a bunch of keyboard shortcuts that will optimize your workflow and visualizations. Is is necessary that your DAW reports the keyboard inputs to the plug-in, some DAWs don't do this or at least have an option to activate it. Some DAWs implement a buggy plug-in format keyboard handling. In this case try to activate the alternative keyboard handling (AKH) by double clicking the title bar with the license/tempo information, that could fix it for these DAWs.

ESC Closes the dialog under the mouse pointer (e.g. preset manager)

Enter Accepts the chosen dialog option and closes the dialog (e.g. filter type or color dialog)

- A Turns the all in one mode on/off
- B Toggles the 3D mode
- C Hides/shows the filter circles
- D Changes the display mode (the same as a right mouse click at the small resizing triangle)
- E Disables/enables the currently shown/selected filter
- F Toggles the filled/unfilled spectrum and filter response
- G Deactivates/activates the two display grids
- H Turns the tool tip help off/on
- I Deactivates/activates the filter info and channel control pop up windows
- L Locks/unlocks the currently shown/selected filter
- M Hides/shows the RMS meter
- N Turns the nyquist mode on/off
- O Activates/deactivates the correlation meter(s)
- P Activates/deactivates the parallel mode
- Q Fixes/unfixes the currently opened filter info popup window
- R Toggles the display of the filter response
- S Enables/disables the filter solo mode
- T Turns the two channel mode on/off

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- U Mutes/unmutes the channel under the mouse pointer
- V Unhides all channels (except the side chain channel)
- X Hides the channel under the mouse pointer (or unhides the send channel)
- Y Solos/unsolos up to two channels near the mouse pointer
- Z Freezes/unfreezes all
- Left Subtracts 1 cent from the frequency of the currently selected filter
- Right Adds 1 cent to the frequency of the currently selected filter
- Down Subtracts 0.1 dB from the gain of the currently selected filter
- Up Adds 0.1 dB to the gain of the currently selected filter
- 1-4 Select the panel number (not all in one mode) or moves the scrollbar to the choosen controls (1=CTRL/EQ, 2=FFT/TOOLS, 3=GFX, 4=SEND/RECEIVES)

# Sending & receiving channels and how to sync to them

- Insert Filterizor instances at every channel from where you want to send signals and one instance at a channel where you want to receive the channels.
- At the channels panel choose at every sending instance a different "SEND" channel number between 1 and 255.
- In the receiving instance choose the same channel numbers at different "RCV x" columns. You should now see the different channels.
- Optionally choose channel names and colors. Check that the "S" (solo) and "H" (hide) buttons are not set. You could also activate "PARAL" (parallel) view mode at the "MAIN" panel.
- Initially the channels are in-sync.

**Hint**: Some circumstances could cause that the channels or some of them are out of sync. For example: if you freeze one channel, the other channels are not frozen and the sync offset in your receiving channel is no longer correct and the channels are out of sync. To repair this just press the "SYNC R" button. You could also use "FRZ A" (freeze all) to freeze all channels and analyze the channels in great detail without trouble.

**Another hint:** Some DAWs create more than one process for audio plug-ins. In order to let the plug-in instances communicate with each other, these have to be executed in the same process. Please refer to the manual of your DAW how to set it up, usually you will find some options in the settings of your DAW.

# **About levels**

If you are directly sending signals from instrument/voice tracks to other instances of Filterizor Q Pro, these levels are usually pre-fader (because plug-ins are insert effects) - so the levels are at the original or "normalized" volumes of the recorded materials/sound sources. If you want to see the adjusted spectrums at post-fader volumes (e.g. to identify frequency collisions), you have some options:

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- 1) Adjust the shift knob in the sending instance and set the dB level to your fader dB level.
- 2) Adjust the external shift knob in the receiving instance to the dB level of the sending instance' fader but please note that the knob acts for all incoming receives!
- 3) Use buses in your DAW! Send one or more tracks (e.g. some or all parts of your drum set) to a sum bus track of your DAW and insert Filterizor Q Pro into the bus track. You will automatically see the post fader volumes of your drum set parts.
- 4) Set the fader level for the DAW track where Filterizor Q Pro is inserted to 0 dB and adjust the gain inside of Filterizor Q Pro (with the slider of the RMS meter).

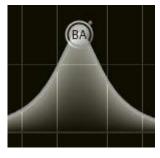
# **MIDI Mapping**

Filterizor Q Pro has inbuilt MIDI mapping capabilities (except for the VST 3 format – because it doesn't support freely received MIDI CC commands). You can map the frequency, gain and/or quality of any filter (internal and external) to a MIDI control of your choice. The mappings are plug-in instance related and will be saved with your projects. Remember that most times just the first plug-in in an effect chain will receive MIDI inputs by the DAW. Please refer to the manual of your DAW to setup an audio plug-in that also receives MIDI input. Most times you will have to add a for recording armed MIDI track with setting the input from your MIDI device and the output to Filterizor Q at the audio track of your choice.

The On/Off switch in the menu is the main switch, you can activate/deactivate the complete MIDI input handling with it. CLALL clears all mappings of the current instance. "LEARN" learns a MIDI control to filter parameter mapping. Touch and change a frequency, gain or Q knob or value in the filter popup window before you begin the learning. Filters with mapped MIDI controls show a small dot at the right top of the filter circle.

"CLEAR" clears a MIDI control to filter parameter mapping. Touch your MIDI control afterwards and the related mapping will be deleted.







In the filter info popup window, a small line at the right side of a mapped parameter shows, that it is mapped to a MIDI control. Hovering with the mouse over the right side of the value shows the control number where the parameter is mapped to. You can also easily delete a mapping by a double click at the control when the MIDI control number is displayed.

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## **User Interface**





## Questionmark

Shows this help file (if it is installed correctly).

## Display resolution width

Direct input the display width.

## **Display resolution height**

Direct input the display height.

## **Bottom right window edge**

Freely resize the window dimensions. The right mouse button or a double click switches between default, control hover and full window mode.

**Hint**: Some DAW hosts or some versions of them have problems resizing plugin windows correctly. Results could be cut window edges or a closed window. A workaround is to just close (not remove) the plugin and reopen it.

## PRO VERSION - LICENSED TO: Sugar Audio - Single User License

**Hint**: When you move the mouse pointer over the license information line, the line changes to an information line containing informations about the current host tempo, run & loop state, sample rate, samples per beat and host sync position(!).

Tempo/Init:120/120 P:-1 PPQ:-1.000000 Cyc:-1,-1 Run:0 Loop:0 Last:-1 Num:0 SR:44100 SB:22050 SP:-1

## Filter response vertical top position (Fader left top)

Sets the vertical top position of the filter response.

## Filter response vertical bottom position (Fader left top middle)

Sets the vertical bottom position of the filter response.

## Signal vertical top position (Fader left bottom middle)

Sets the vertical top position of the signal.

## Signal vertical bottom position (Fader left bottom)

Sets the vertical bottom position of the signal.



## **Spectrum horizontal left position**

This is the horizontal left position in the spectrum. Also use the right mouse button at the spectrum display to move the display.

## **Spectrum horizontal right position**

This is the horizontal right position in the spectrum.

## RMS, peak, peak hold meter & gain controller

Shows the different levels and applies the chosen output gain. The gain knob will be automatically colored red and lowered if the gain protection is active.

# **Presets control panel**



#### **Presets**

Opens/closes the preset manager.

## Arrows / preset name

Previous slot → Navigates to the previous slot.

Previous preset → Navigates to the previous preset of the slot.

Preset name → 1.character F = factory preset / U = user preset

2.character = slot from A to Z

3.character = preset of slot from A to Z

Next preset → Navigates to the next preset of the slot.

Next slot  $\rightarrow$  Navigates to the next slot.

## A/B comparison

Compares the last two quickly loaded presets from A-H.

## Quickly load/save preset (A-H)

Loads this global quick preset. Long holding the left mouse button down for 2 seconds saves the current settings to this global quick preset.

# Main panel



## AIO (all in one)

All controls are dynamically muxed into one scrollable panel (depending on the current display width).

## **3D**

Turns the 3d visualization mode on/off.

*Hint.* Vertical menu bars - by clicking on a vertical menu bar (e.g.CTRL) with the left mouse button, the associated controls will be hidden.

#### **Bypass**

Bypasses the complete analyzation, processing and user interface.

## <u>Freeze</u>

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Freezes just the real time analyzation. The user interface and processing stay fully functional.

## **Sync R (sync to receives)**

Syncs the display offset of all receives to the position of the current instance of Filterizor.

## Freeze all / Global freeze

Freezes all instances of Filterizor. The text "Freeze All" will be shown in the analyzation window to remind you that everthing has been frozen by the user.

## M/S (mid/side) mode

Switches from stereo L/R=left/right to M/S=mid/side mode.

## Two channel mode

Displays two channels (L/R or M/S) of all displayed signals.

#### **Parallel**

Shows all active channels in parallel mode instead of showing them in overlay mode.

#### Avg Sum

Turns the much quicker average sum method on/off used for the sum calculation of the spectrum analyzer mono mix.



## **Previous filter**

Navigates to the previous filter.

#### Filter number

The filter number of the selected filter.

#### **Next filter**

Navigates to the next filter.

#### Add filter

Adds a filter at 0 dB (use also a mouse double click at the spectrum to add a filter - with the ALT key pressed at 0 dB).

#### **Delete filter**

Deletes the selected filter.

#### Solo and invert filter

Deactivates all other filters than the selected one. And instead of hearing the selected filter itself, the filter will be inverted to recognize the affected spectrum range of it e.g. what will be cutted away by a high cut filter or to find a resonance with a notch filter.

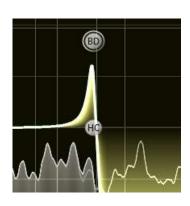
#### Filter automation channel

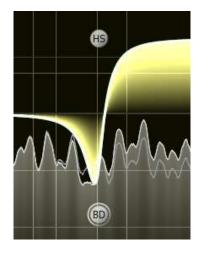
Sets the automation channel of the selected filter. Use the chosen automation channel for the Filterizor parameters in your DAW. In your DAW ten parameter sets are available. To use these parameters for automation you have to assign an automation channel to a filter in the Filterizor UI.

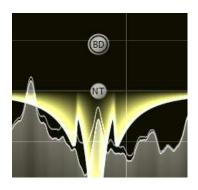
#### Hint.

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You can use more than one filter for the same automation channel resulting in combined filter changes with just one parameter, e.g. it's easy to create such a custom creative filter resonance or dip because the frequency of both filters changes with the automated channel:







#### Filter locked

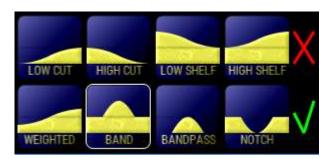
Locks and protects the selected filter against unwanted changes and automation.

#### Filter enabled

Enables/disables the selected filter.

## Filter type

Sets the type (e.g. high cut) of the selected filter.



## **Filter frequency**

Sets and shows the frequency of the selected filter.

## Filter gain

Sets and shows the gain of the selected filter (if available).

#### Filter order

Sets the filter order (steepness) of the selected filter.

## Filter quality/width

Sets and shows the quality=width of the selected filter (if available).

## Filter ripple

Sets the ripple of the selected filter (if available).

## Filter channel

Sets to which audio channel (first=left/mid, second=right/side or both) the filter is applied.

#### Filter model

Sets the model (e.g. Butterworth) of the selected filter.

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The following models are available:

- Butterworth (british): a good compromise between filter steepness and phase shift
- Chebyshev I (russian): higher filter steepness with moderate phase shift and pass band ripple
- Chebyshev II (russian): the same as Chebyshev I but with stop band ripple
- Bessel (german): minimum phase shift at the cost of lower filter steepness
- Legendre (french): moderate phase shift and high filter steepness at the cost of filter complexity

## Filter mode

Choose between:

- zero latency (with phase shift, no latency compensation necessary)
- linear phase (with latency (delay) just for the current signal but no latency compensation)
- zero phase (with latency for your whole DAW session and latency compensation).

For the phase modes the options are:

- Low: at a latency of 3072 samples and good filter resolutions at the higher frequency bands.
- Med: at a latency of 5120 samples and good filter resolutions at the middle and higher frequency bands.
- High: at a latency of 9216 samples and good filter resolutions at all frequency bands including the bass band.



#### MIDI on/off

Enables/disables the built-in MIDI input handling.

#### MIDI clear all

Clears all MIDI to filter parameter mappings of the current instance.

#### MIDI learn

Learns a MIDI control to filter parameter mapping. Touch and change a frequency, gain or Q knob or value in the filter popup before.

#### MIDI clear

Clears a MIDI control to filter parameter mapping. Touch your MIDI control afterwards and the related mapping will be deleted.

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# **Channels panel**



## Send channel

Choose the channel where to send the output signal to. Use an other instance of Filterizor to receive and compare this sent signal.

## **Receive channel**

Choose the channel from where to receive a sent signal and compare it with the incoming signal. Use an other instance of Filterizor to send a signal. Channels with '\*' are used channels.

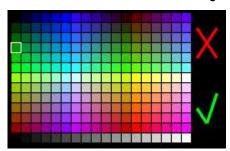
## **Channel name**

Name of the channel. Freely type in a channel name.

**Hint**: Sent channel names are automatically propagated to receiving instances as long as you don't use a custom channel name in the receiving instance (the name has to be blank in the receiving channel)..

## Signal color

Choose the color of the incoming signal spectrum with the mouse button.



Left mouse button click and drag mouse to choose a color. Double click left mouse button or choose the green check to accept the color. Right mouse button click or choose the red cross to decline the color.

**Hint**: Sent channel colors are automatically propagated to receiving instances as long as you don't use a custom channel color in the receiving instance (the color has to be black in the receiving channel).

## Side chain color

Choose the color of the side chained signal spectrum with the mouse button.

## **Receive color**

Choose the color of the received signal spectrum with the mouse button.

## S (solo signal)

Turns solo on for this signal and turns off all signals that are not solo (the outgoing signal isn't modified).

## H (hide signal)

Hides this signal.

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## **Tools panel**



## **FFT window function**

Choose from 7 different FFT window function.

**Hint**: Please visit the excellent articles about window functions at wikipedia if you don't know what window functions are or to evaluate which window function is good for your needs.

## **FFT size**

Adjust the window size of the FFT function between 128 and 65536. Higher values are more detailed but need more CPU time.

#### FFT average

Controls the average time of the FFT/spectrum analyzer.

## Tilt / slope

Spectrum weightning from -6 to +6 dB for a better visualization.

## **Nyquist mode**

The spectrum analyzer high frequency will be set up to nyquist frequency = half sample rate.

#### **Correlation Meter**



Turns the correlation meter on/off. The red zone means that something in the signal is out of phase and should be corrected to avoid phase cancellations. The blue zone means that the L/R channels are in phase with a frequency boost. The middle means that no problems are detected.

#### RMS meter

Shows/hides the RMS meter and gain control.

#### RMS top dB

Sets the top dB position of the RMS meter and gain control.

## RMS dB size

Sets the dB size of the RMS meter and gain control.

## **Transition time**

Adjusts the transition time when fading between filter changes, handle with care.

## **Transition hold**

Adjusts the minimum transition hold time after fading to a new filter change, handle with care.

## Gain protection on/off

Turns the gain protection on/off to protect your ears and speakers.

## Swap L/R switch

Swaps the left and right input channel.

## **Gain protection level**

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Applies a gain protection to the outgoing signal at this dB level.

## Phase switch

Switches the phase of the outgoing signal.

## Mono mode

Mixes the outgoing signal to mono.

#### Mute

Mutes the outgoing audio signal.

#### Pan

Adjusts the L/R panning for the outgoing audio signal.

## **Gfx Panel**



## Filled spectrum

Fills the main spectrum with a solid pattern considering blending type and amount (in 2D mode).

## Shift

Shifts the signal (send) by the chosen amount of dB to the top or to the bottom.

## Filled external spectrums

Fills the external spectrum (side chain and receives) with a solid pattern considering blending type and amount (in 2D mode).

#### **External shift**

Shifts the externals signals (side chain and receives) by the choosen amount to the top or to the bottom.

## Alias (antialias)

Applies an antialias Filter to the drawing of the spectrum display (in 2D mode).

## **Smooth (smoothing factor)**

Smoothes the spectrum display by applying a smoothing algorithm for better visualization. The signal itself isn't modified.

## Blend (blending)

This is the amount of spectrum display blending for better visualization, adjust it to your needs (2D mode only).

## Blend type

Choose from 5 different types of graphical blending types (2D) or triangle fill type (3D) to optimize the visualization.

## Grid at the back

Turns the grid at the back on/off (or the first grid in 2D mode).

## Grid at the bottom

Turns the grid at the bottom on/off (or the second grid in 2D mode).

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## Signal pre

Shows/hides the input signal before the filter processing.

#### Info

Shows/hides the filter info box when hovering over the filter circles or selecting a filter and shows/hides the channel control.

## **Contour Z position**

Turns a near Z-coordinate mode on/off for spectrum contours in 3D mode. Contours of spectrums far away shine through nearer spectrums.

## **Perspective**

Turns the perspective correction on/off in 3D mode.



## **Channel gap**

Sets the Z-coordinate gap between multiple spectrums in the 3D mode.

## **Gfx spreading**

Sets the horizontal display spreading (width) in 3D mode.

#### Bar width

Sets the bar width of the filled spectrums in the 3D mode (minimum = solid light, maximum = solid dark).

#### Contour

Sets the spectrum contour intensity in the 3D mode.

## **Emissive light factor**

Sets the model emissive light factor in 3D mode.

## **Ambient light factor**

Sets the model ambient light factor in 3D mode.

## **Diffuse light factor**

Sets the lights diffuse factor shining on the model in 3D mode.

## Specular light factor

Sets the lights specular factor reflecting from the model in 3D mode.

## **Ambient light color**

Sets the ambient light color in 3D mode.

## Light 1

Turns the first light on/off in 3D mode.

## Light 1 color

Choose the color of the first light in 3D mode.

## **Light 1 position**

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Sets the X, Y and Z coordinates of the first light in 3D mode. A small triangle will appear if the light is inside your view.

## Light 2

Turns the second light on/off in 3D mode.

## **Light 2 color**

Choose the color of the second light in 3D mode.

## **Light 2 position**

Sets the X, Y and Z coordinates of the second light in 3D mode. A small triangle will appear if the light is inside your view.



## **Main RGB**

Sets the red, green and blue color values of the main text elements.

## **Secondary RGB**

Sets the red, green and blue color values of control elements and the secondary background.

## **View RGB**

Sets the red, green and blue color values of the analyzation view elements.

## **Background RGB**

Sets the red, green and blue color values of the analyzation view background.

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# **Preset system**



Filterizor is delivered with many presets for a good starting point of your work. You have the options to save your own presets with the preset system or with the quick save preset function. The presets are system independent (Mac and Windows) and are stored at the following locations and can be freely copied/renamed (within the preset naming conventions):

For Windows: \Users\<youruser>\AppData\Roaming\SugarAudio\Filterizor\Presets

For Mac: ~/Library/Application Support/SugarAudio/Filterizor/Presets

## **Naming conventions for the presets**

1.character F = factory preset / U = user preset

2.character = slot from A to Z

3.character = preset of slot from A to Z

The extension "...slo" is a slot file (without presets, description only) and "...pre" is a preset file.

## **User / factory presets**

Switches between the user defined and developer delivered presets.

## **UI Lock**

Locks UI relevant settings and protects them against overwriting when loading presets.

#### Slots

These items are the 26 available slots from A to Z.

#### **Presets**

These items are the 26 available presets within the selected slot.

#### **Description boxes**

The text describes the slots and presets.



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## **Delete slot**

Deletes the current slot with all of its presets.

#### Load preset

Loads the selected preset.

#### Save preset

Saves and overwrites the current preset to the selected slot and preset.

## **Delete Preset**

Deletes the selected preset.

## About (default) presets

Filterizor has a factory and custom preset system. However, most of the modern DAWs have a built-in and plug-in independent preset system by themselves and in most cases you can also define a default preset with you favourite plug-in settings.

*Hint.* So please check the manual of your DAW software to save a default preset.

# Clearing the Mac audio units cache

Some circumstances can lead to the wrong AU plug-in validation by the AUval tool that Logic and GarageBand use for checks when the DAW starts. For example when the plugin type changes with an update from "no-MIDI-support" to "MIDI-support", the AU type changes also and the validation could fail. Unfortunately an update will not always automatically detected by the AUval tool. To clear the AUval cache (that is automatically rebuilt after a machine restart), please delete the following file(s) with administrator privileges in the Finder of your system disk drive:

in folders /Library/Caches/ and ~/Library/Caches (if files are present, the ~ is your user folder) file com.apple.Components2.LocalCache.AudioComponents file com.apple.audiounits.cache

Please reboot your machine after deleting the file(s).

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# Performance guide

Indeed Filterizor and the SA 3D engine are highly optimized and many hours have been spent in making it as quick as possible. But at a certain point you will maybe reach your system limits especially if you have an older system with little RAM or slower CPU. However here are some hints how you can reduce CPU and memory usage of the plug-in if you push your system to the limits.

- Use fewer filters & lower filter orders
- Don't use and delete unneeded instances of the plug-in
- Use the plug-in on buses instead of using it on every track
- Bypass unneeded instances by using the built-in Bypass button
- Use smaller plug-in window resolutions
- Reduce the usage of high FFT sizes, smoothing rates and blending types
- Reduce the usage of the 3D mode
- Turn one or both 3D lights off
- Deactivate the filled and antialias mode
- Use the average sum FFT mode
- Reduce the number of receives or hide them
- Use the sum view instead of L/R or M/S view
- Turn the correlation meter off when you don't need them
- Close the plug-in UI if you don't need it
- Buy better hardware :-) especially with better CPU and more RAM

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