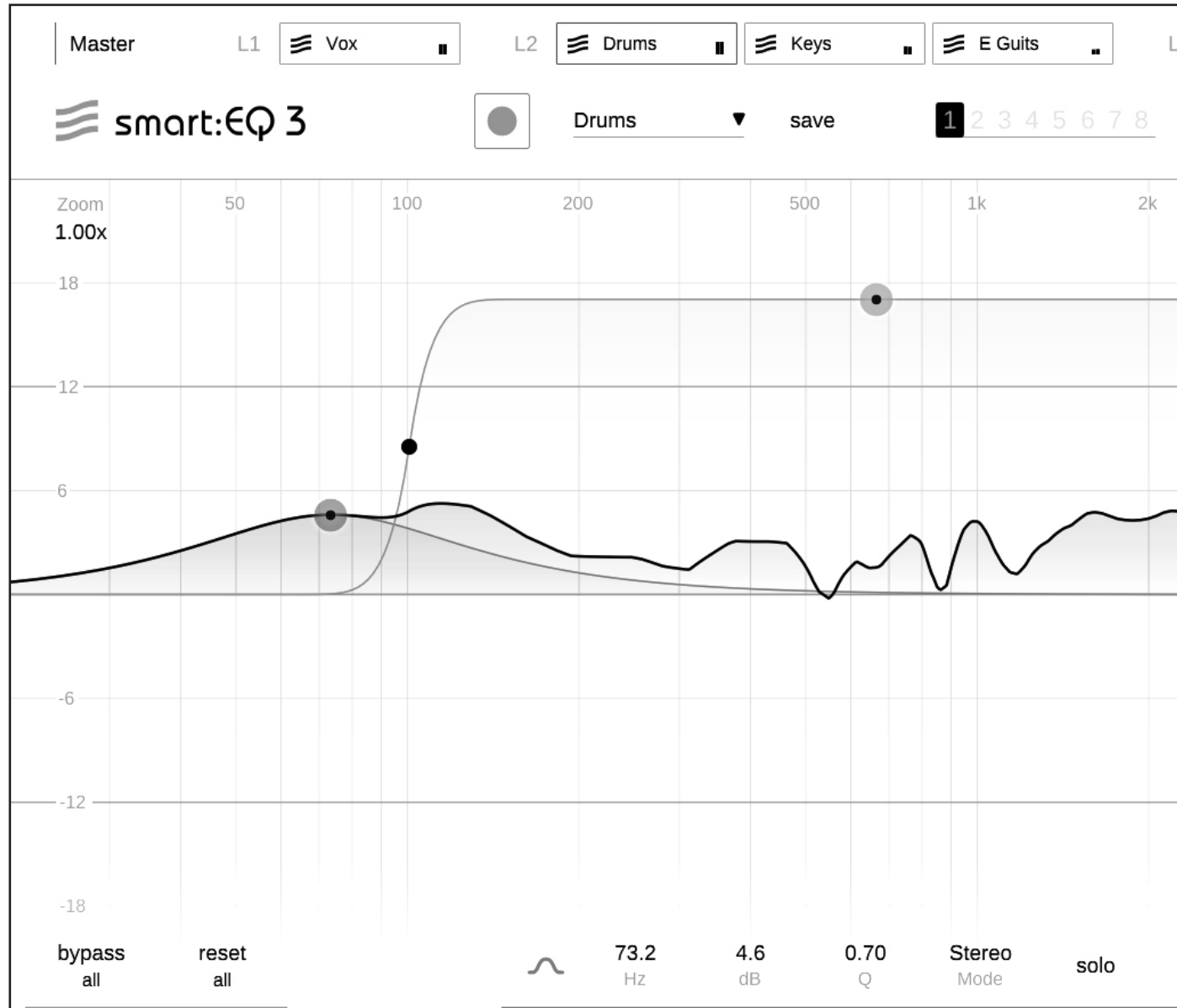


# smart:EQ3 manual

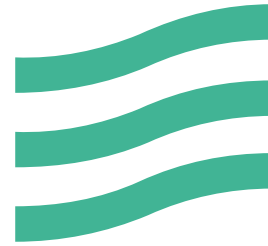
The intelligent equalizer



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# Welcome to smart:EQ 3

smart:EQ 3 is an A.I.-powered EQ that creates a spectral balance in single audio tracks and assists users in establishing transparent arrangements of multiple channels with intelligent cross-channel processing.

It only takes a single click for smart:EQ 3 to analyze any given audio track and correct spectral deficiencies, such as disturbing resonances, unwanted notches or an overall spectral imbalance. The computed smart:filter can be adapted to the user's needs and leads to a clean, detailed sound – the ideal basis for further creative steps.

smart:EQ 3 also offers a group view with intelligent cross-channel processing that corrects cluttered and clashing frequency regions within a group of up to six channels. Multiple audio tracks can be arranged by the user in a sonic hierarchy of three layers. Each track is then analyzed to detect and fix masking effects. smart:EQ 3's A.I.-powered algorithms utilize spectral mixing techniques that ensure each track gets its assigned space within an overall transparent arrangement.

Get started with smart:EQ 3 and enjoy a whole new world of EQing possibilities!

# Install

## System requirements

<b>CPU</b>	Intel Core i5
<b>RAM</b>	4GB
<b>Operating systems</b>	Windows 10 (64 bit)  Mac OSX 10.12 or higher



You will need admin privileges to successfully install the smart:EQ 3 plug-in.



Please note that smart:EQ 3 requires the **PACE iLok License Manager**. Download the software from **www.ilok.com** and install it on your system. You don't need an iLok or an iLok account. This application allows us to ensure the integrity of our products for a better user experience.

## Windows

To start the installation process, extract the downloaded zip-file **sonible\_smarteq3\_1.0.0.zip** onto your hard disk and run the installer.

The installer will now guide you through the necessary steps to install smart:EQ 3 on your computer.

During installation, you can select which version(s) of smart:EQ 3 you want installed. You can also select custom installation folders for the VST version or simply use the default folder suggested by the installer.

The VST3 and AAX versions of the plug-in will be automatically installed in their respective default folders.

### Default folders:

#### VST3

`C:\Program Files\Common Files\VST3\`

#### VST

`C:\Program Files\Common Files\VST\`

#### AAX

`C:\Program Files\Common Files\Avid\Audio\Plug-Ins`

## Mac OSX

To start the installation process, please open the disk image **sonible\_smarteq3\_mac\_1.0.0.dmg**. This will mount the image and open a finder window showing the content of the installation package.

To install smart:EQ 3 on your system, run the installation file **smarteq3.pkg**.

The installer will now guide you through the necessary steps to install smart:EQ 3 on your computer. smart:EQ 3 will automatically be installed in the default locations for audio plug-ins.

### Default folders:

#### Audio Unit

`/Library/Audio/Plug-Ins/Components/`

#### VST

`/Library/Audio/Plug-Ins/VST/`

#### VST3

`/Library/Audio/Plug-Ins/VST3/`

#### AAX

`/Library/Application Support/Avid/Audio/Plug-Ins/`

# Authorization

## Licensing system

You can select between two licensing systems: machine-based or iLok (USB dongle).

By creating a user account on [www.sonible.com](http://www.sonible.com) and registering your products – if they are not already visible in your Dashboard – you can manage your plug-in activations.

### Machine-based

Each license key allows you to install smart:EQ 3 on two computers with unique system IDs. These system IDs are registered during license activation.

The same license can be used by multiple users, but each user has to individually unlock the full version of smart:EQ 3 under their account.

In the case of a system-ID being changed (e.g. replacement of the hard drive), you can revoke/activate the plug-in next to the respective system-ID in the Dashboard of your sonible user account.

### iLok

If you want to transfer one activation to your iLok, first make sure the plug-in is registered in your sonible user account. Click on the button "transfer to iLok" next to the plug-in in your Dashboard and follow the instructions.

Note: 1st gen iLok dongles and the iLok Cloud are currently not supported.

## Unlocking

If you purchased a license for smart:EQ 3 online, you will receive your license key via email.

### Machine-based unlocking

When opening smart:EQ 3 for the first time, a notification window will be displayed asking you to unlock smart:EQ 3 with a valid license key.

Please make sure that your computer is connected to the internet before starting the registration process.

Enter your license key and click "register." The plug-in will now communicate with our server to check if the license is valid. If it is – enjoy!

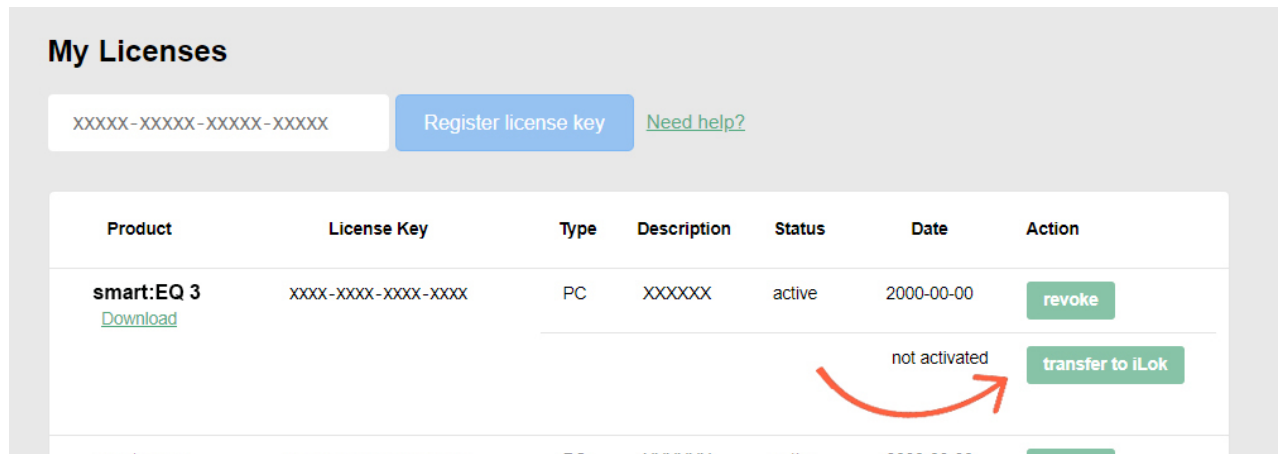
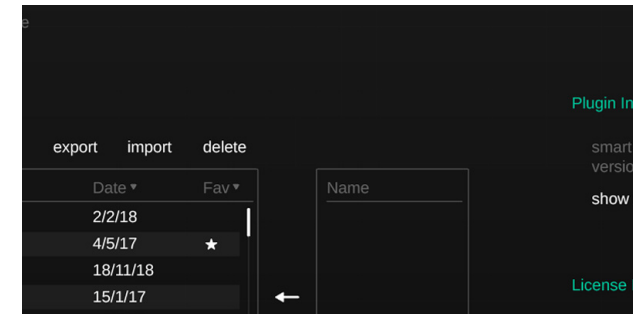
### iLok

If you transferred your license to an iLok, simply attach the iLok to your computer. The plug-in will then be automatically registered – enjoy!

## Trial version

To run smart:EQ 3 in demo-mode, simply click "try" and you will then be able to use smart:EQ 3 for a couple of days without any limitations. (Please refer to our website to find out more about the current demo period of smart:EQ 3)

When the demo period expires, you will need to purchase a full license in order to continue using the plug-in.



# User Interface

## Group info

Switch to group view or rename your group.

## Learning section

Initiate the learning process, select profiles and save custom profiles.

## States

Use up to 8 different states to store parameter settings for different sections of your audio material.



## Analyzer

Enable an analyzer for the current signal and other signals of a group.

## Bypass & reset

Selectively bypass the processing and reset parameters.

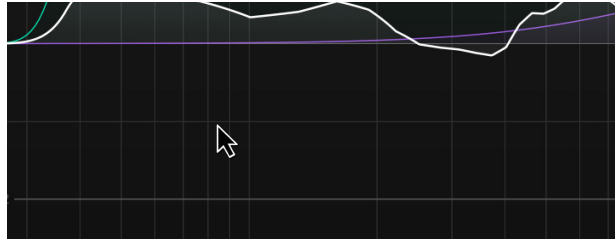
## Filter parameters

Monitor and control the parameters of the currently selected filter.

## Output section

Control global M/S settings and output gain.

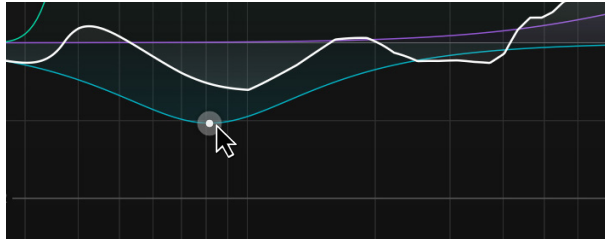
# Working with standard filters



## Add or remove a filter

To add a new filter at a specific position, simply double-click anywhere in the equalizer display.

To delete a filter, double-click on the filter thumb or use the trash can in the filter widget.



## Control filter parameters

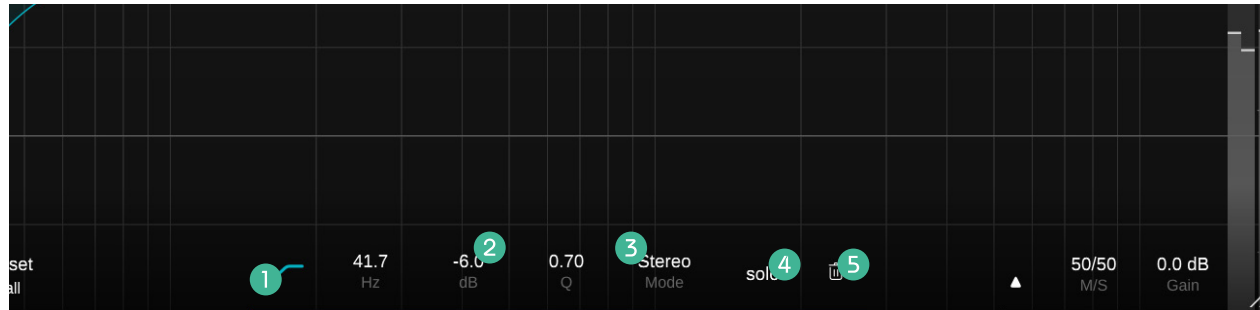
horizontal or vertical drag	change frequency or gain
change quality	alt + drag or mouse wheel
lock frequency	shift + drag
solo band	cmd + drag (mac) ctrl + drag (win)
delete filter	double click
open filter widget	right-click thumb



## Filter widget

Right-click a filter thumb to show the filter widget. The widget allows you to change the filter type and to solo or delete a standard filter. For a detailed list of controllable parameters, refer to the next section.

# Filter parameter section and widget



## 1 Filter type

Click to enable/disable a standard filter. Right-Click to select another filter type.

## 2 Filter parameters

Monitor and modify all standard filter parameters. The parameters can be changed by holding down your mouse button and dragging the value up and down or by entering a value. A double-click resets the parameter to its default value.

## 3 Processing mode

Select the processing mode of the filter: Stereo, Mid or Side. As soon as a filter is set to Mid or Side mode, the sum curve inside the equalizer display will be split into two curves (a yellow one indicating the current sum curve for the side signal and a white one for the mid signal).

## 4 Solo

Listen to the frequency range of your currently selected filter.

NOTE: You can enable the option “solo on touch” in the settings menu (page 23). If enabled, the plug-in will automatically solo a filter when moving the respective thumb.

## 5 Trash can

Delete a filter by clicking the trash can icon.

## 6 Filter Number

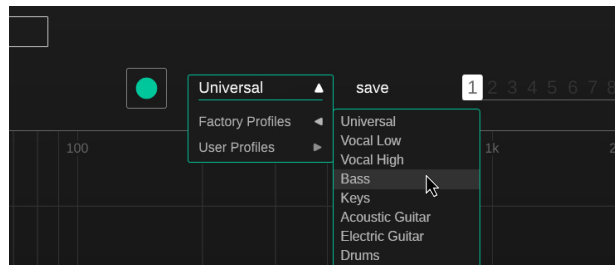
Displays the filter band number for automation in your DAW.



# The smart:filter

At the heart of smart:EQ 3 is its smart:filter. The smart:filter learns which areas of the frequency spectrum need attention by analyzing your input signal. It automatically suggests a filter curve to compensate for possible spectral imbalances.

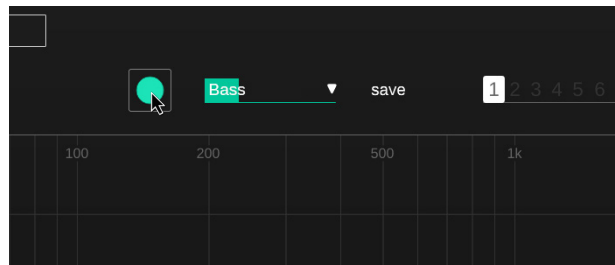
When activated, an additional green curve will appear inside the equalizer display. It looks similar to a standard filter, but is in fact the weighting curve for the computed smart:filter.



## Step 1

Select a Profile

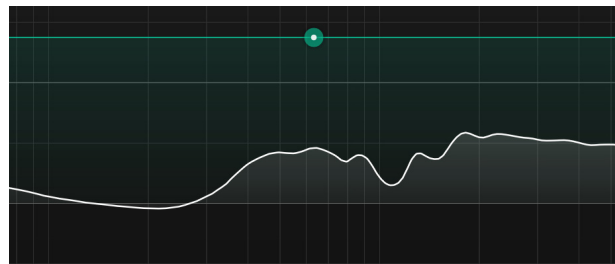
A profile calibrates the processing of smart:EQ 3 to a specific sound source. You can always start the learning process with the “Universal” profile and switch to a more specific profile later. Please refer to the section “Working with Profiles” (page 11) for more information.



## Step 2

Start the audio playback & initiate learning

smart:EQ 3 needs an incoming audio signal for the learning process. Once the playback has started, click the green record button. The pulsating record icon and a progress bar inside the profile dropdown indicate that smart:EQ 3 is actively learning from your signal.



## Step 3

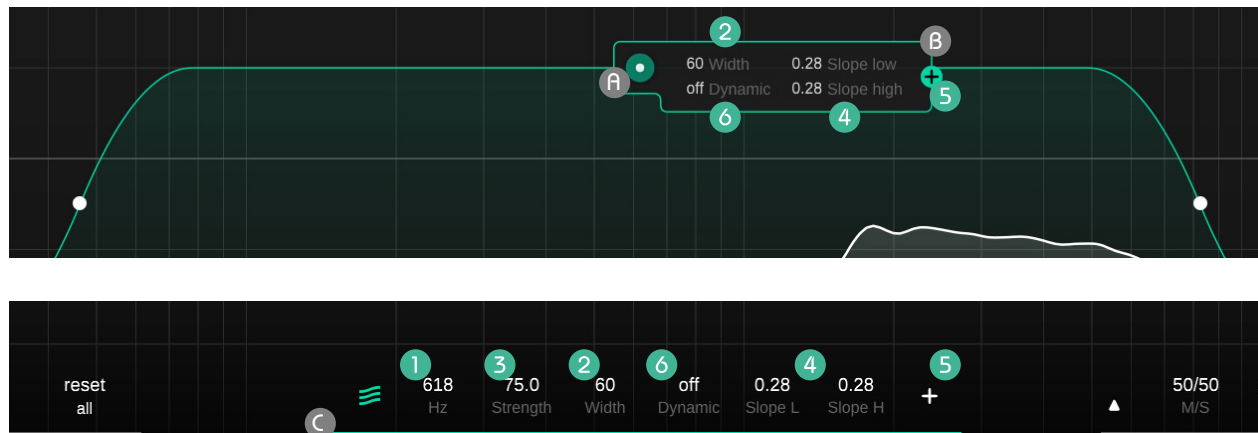
Done!

Once the learning process is finished, smart:EQ 3 applies the corrective smart:filter. Its impact can be controlled via the green weighting curve.

# Controlling the smart:filter

You can use the green weighting curve to control the impact of a computed smart:filter in different frequency regions. Additionally, you can set the filter to dynamic mode for continuous adaption.

The shape and position of the green weighting curve is controlled using the interactive thumbs **A**, the smart:filter widget **B** (expandable by a right-click on the thumb) or the parameter section **C**.



## 1 Center Frequency

Move the green thumb left or right to select the frequency region where the smart:filter should be applied. Alternatively, set a specific value in the parameter section.

## 2 Width

Hover over the green thumb and move the mouse-wheel to change the overall width of the curve. You can also extend the width of the curve by horizontally moving the small white thumbs on the left and right side of the curve, or by setting a value in the parameter section or widget of the smart:filter.

## 3 Impact level

Move the green thumb up or down to increase or decrease the impact of the smart:filter. Alternatively, set a specific value in the parameter section.

## 4 Slope

Hover over the small white thumbs left and right of the curve and use your mouse-wheel to change the respective slope. Alternatively, set the Low and High Slope in the parameter section or widget of the smart:filter.

## 5 Add a second weighting curve

You can add a second weighting curve if you want to use different settings for the smart:filter in different frequency regions. Click the plus icon in the smart:filter widget or the filter parameter section to split the current curve.

The second weighting curve can be removed by clicking the trash can icon that will now be in place of the plus icon.

## 6 Dynamic Adaption

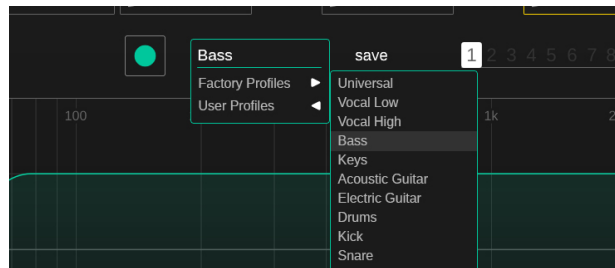
smart:EQ 3 provides the option to dynamically adapt the computed smart:filter to the incoming audio signal over the entire length of the track. You can control the amount of dynamic adaption in either the filter widget or the parameter section.

When dynamic adaption is enabled, smart:EQ 3 analyzes your audio signal continuously and modifies the smart:filter accordingly. This helps to maintain maximum consistency when working with heterogeneous audio content.

# Working with Profiles

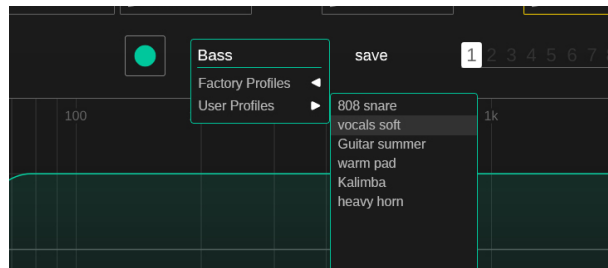
A profile primes the learning process of smart:EQ 3 for a certain sound source. Different profiles ensure a more focused processing of the plug-in as per the nature of the input signal.

smart:EQ 3 is equipped with a list of well-designed profiles for common source signals. You can also generate your own custom profiles based on any factory profile, which you can even share with friends.



## Factory Profiles

A factory profile is the perfect starting point to prime the processing of smart:EQ 3 for a specific source signal.



## Custom Profiles

If a smart:filter, computed according to a certain profile, does not perfectly suit your personal taste, you can easily generate custom profiles and use them for future learning processes.

### Step 1

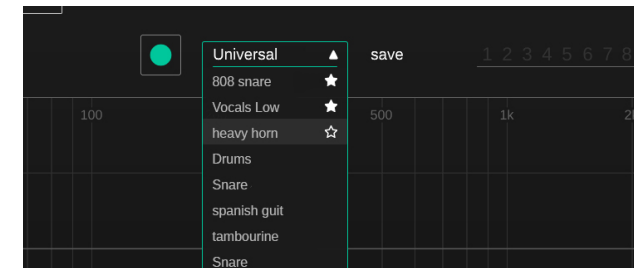
Learn a smart:filter based on any profile.

### Step 2

Adapt the sound with standard filters to match your personal taste.

### Step 3

Click on “save” next to the profile drop-down and enter a name for the new profile.

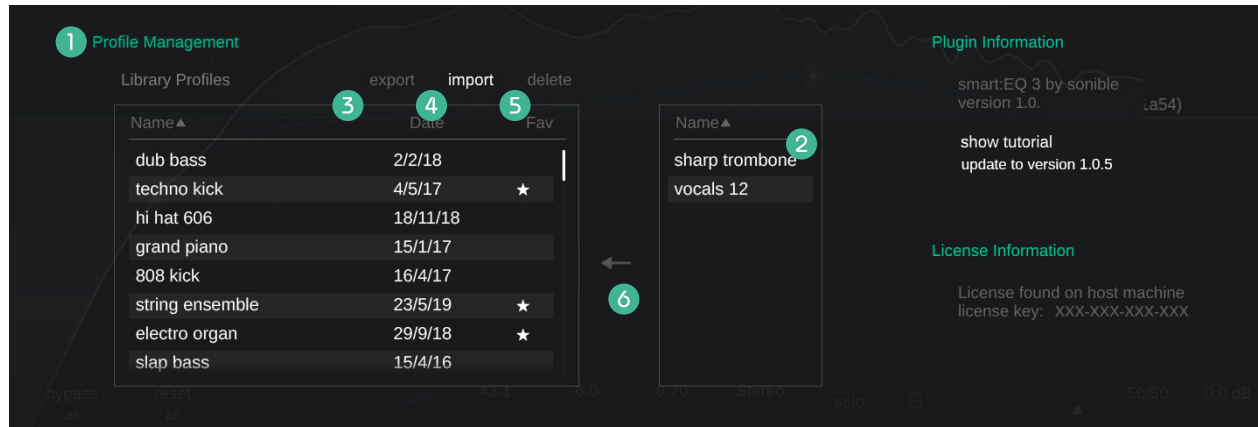


## Recently used Profiles and favorites

To speed up your workflow, the 10 most recently used profiles will be displayed inside the profiles drop-down. In addition, you can mark up to 5 profiles as favorites. You just need to hover over the name of the profile in the recently used profiles list and click on the grayed-out star behind the profile name.

# Profile management

Once you have created a custom profile, it's easy to use it in different sessions or share it with friends. You can manage all your custom profiles on the settings page of smart:EQ 3 (see page 23).



## 1 Profile Library

A list of all profiles on your system. You can sort them by name or date.

## 2 Unsaved Profiles

A list of all profiles that are currently used in your session, but are NOT part of your local library.

## 3 Exporting Profiles

To share a custom profile with someone, please select the profile (in your Profile Library) and click the „export“ button. You can now choose a filename and a location for the profile. The file extension of the profile will be “.spf”.

## 4 Importing Profiles

If someone has shared a profile with you, you can easily import their profile into your local library. Click the “import” button and browse for the profile. After validating the profile name, the profile will be stored to your local library.

## 5 Deleting Profiles

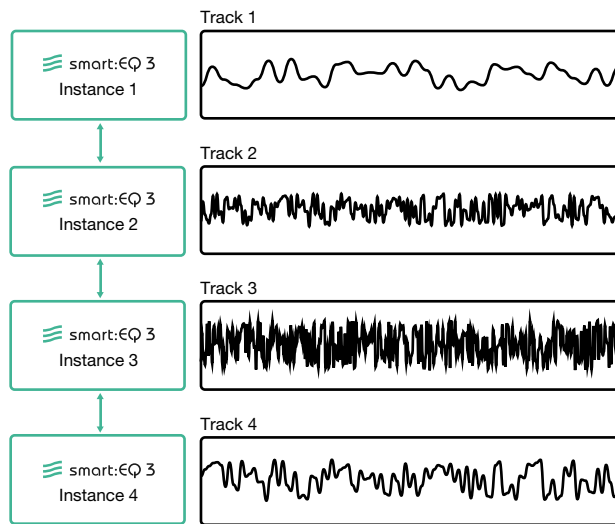
If you want to remove a profile from your local library, select the profile and click the “delete” button. Please be careful, as the deletion of a profile cannot be undone.

## 6 Transfer Profile

Transfer an unsaved custom profile (only available during the current session) to your local library.

# Working with groups

One of smart:EQ 3's main features is the group view that allows you to easily create a hierarchical arrangement of up to 6 tracks using intelligent cross-channel processing.



## How Does it work?

Multiple instances of smart:EQ 3 loaded into different channels are able to communicate and share data among each other. By connecting these multiple instances, spectrally balanced groups of up to 6 tracks or busses can be created.

When a group is created, smart:EQ 3 combines the spectral information from all tracks added to the group in order to detect and amend masking effects. Using spectral mixing techniques, the grouped tracks can be arranged in a hierarchy of three layers and each track gets its assigned space within a transparent arrangement. This way, smart:EQ 3 helps to avoid cluttered and clashing frequency regions when computing new smart:filters.

# Group View

## 1 Global Learning (page 18)

Start learning process for all instances of the group.

## 2 Group Impact

Control the impact level of the cross-channel processing. The higher the value, the more impact the cross-channel processing will have on the computed smart:filters of all group members.

## 3 On / Off

Disable cross-channel processing.

## 4 Bypass all

Bypasses all instances inside your group for easy A/B listening.

## 5 Dissolve group

Remove all instances from the group. You will immediately return to the EQ view of your current track.

## 6 Close Group View

Return to EQ view.



## 7 Layer Containers (page 17)

Add group instances to different layers (L1, L2, L3) to create a sonic hierarchy.

## 8 Track Info Box (page 18)

Drag tracks between layer containers to determine their place in the arrangement. Use the track info box to monitor every instance.

## 9 Free instances

List of all channels equipped with smart:EQ 3 that have not yet been added to any group. Drag an instance into a layer container to add it to your current group.

## 10 Instances assigned to groups (page 16)

List of all existing groups and group members. Drag an instance into a layer container to move it to your current group.

# Create your first group

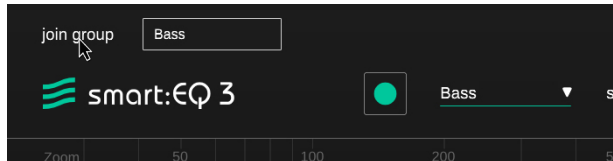


## Step 1

Load an instance of smart:EQ 3 onto every channel (up to 6) you want to add to your group.

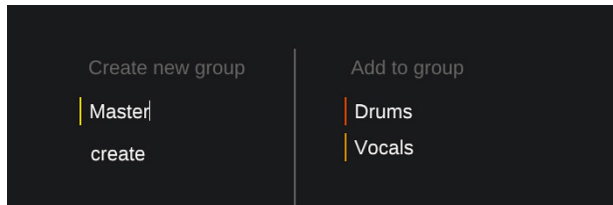
## Step 2

Open the GUI of one of the instances you just created.



## Step 3

Click "Join Group" to open the group creation window.



## Step 4

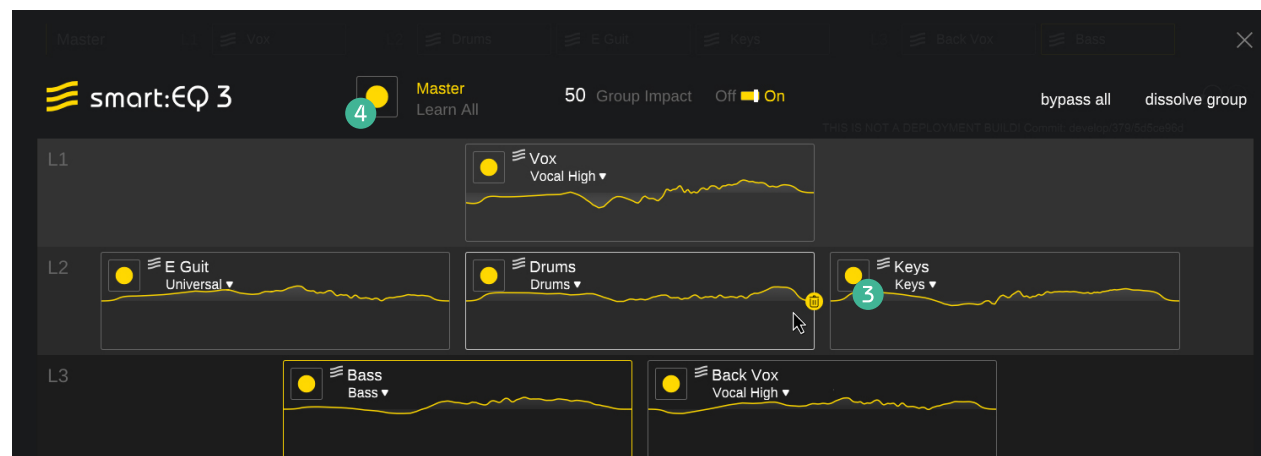
Enter a suitable name for your new group and click "create".

In the following sections you will learn how to add other instances to this group and how to arrange them in three hierarchical layers.

# Add instances to group



To add tracks to a group, simply drag and drop new instances into the desired layer containers. You can either add instances that have not yet been added to any group **1** or you can move instances from existing groups to your current group. **2** Since every instance can only be part of one group, this action will remove the instance from its original group.



## Activating Cross-Channel Processing

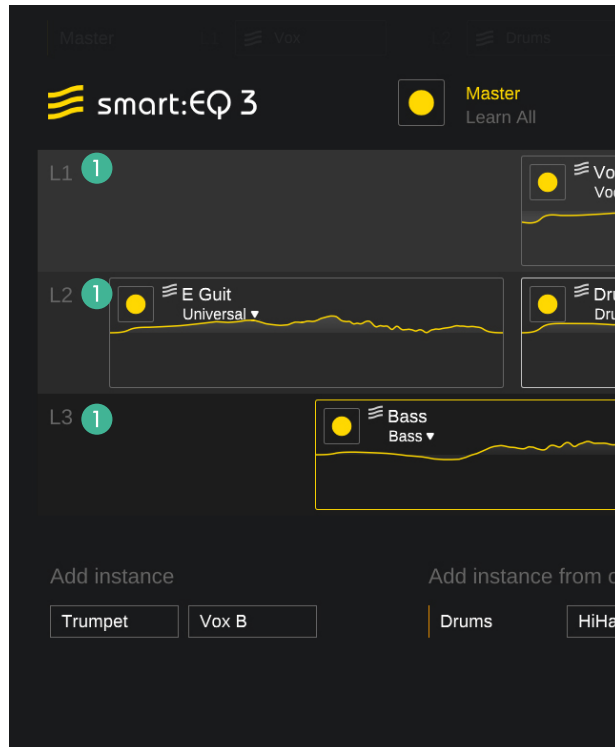
All instances inside a group need to be learned for the cross-channel processing to work. Learn instances with the small record button **3** inside the track info box.

Adding a learned instance to your group will instantly update it's processing to ensure spectral balance.

Relearn all instances inside your group at once with the big 'Learn all' record button **4**.



# Create a hierarchy with layers



The three layers (L1, L2, L3) ① allow you to define different mixing priorities for the tracks of your group. The higher the priority of a layer, the more space a track added to this layer will have inside the spectrum. For example, smart:EQ 3 will make sure that tracks added to layer 1 (L1) are not masked by tracks added to layers with a lower priority (L2 or L3) when computing the smart:filter for each track.

## L1: Lead

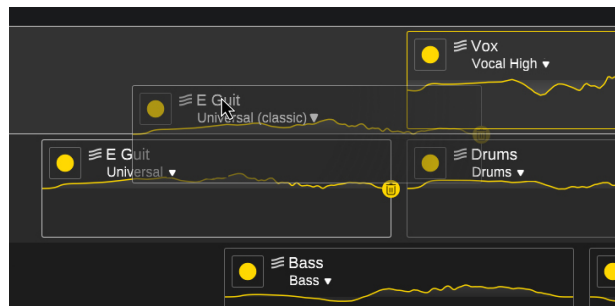
Layer 1 has the highest priority. Hence, smart:EQ 3 will keep them in the limelight when it computes the smart:filter for each track. You will typically use this layer for lead vocals or lead instruments that should not be masked by accompanying signals.

## L2: Support

Tracks in L2 will blend well with all other tracks and may take the lead when there are no spectral clashes with leading tracks present. You will typically use this layer for accompanying instruments and drums.

## L3: Background

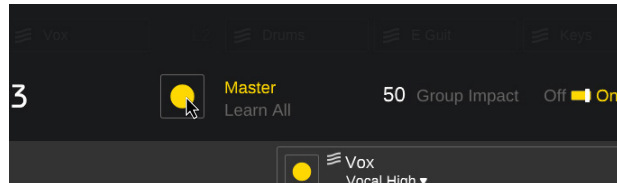
L3 should contain tracks that are supposed to be heard in the background. Such tracks build a solid foundation but don't stick out in the mix. You will typically use this layer for backing vocals or backing instruments and synth layers.



## Switching layers

To change the hierarchy of tracks, simply drag and drop the respective track info box into the desired layer container. This will immediately update the smart:filters of all group members incorporating the new hierarchy into their spectral structure.

# Learning



## Learn all group members

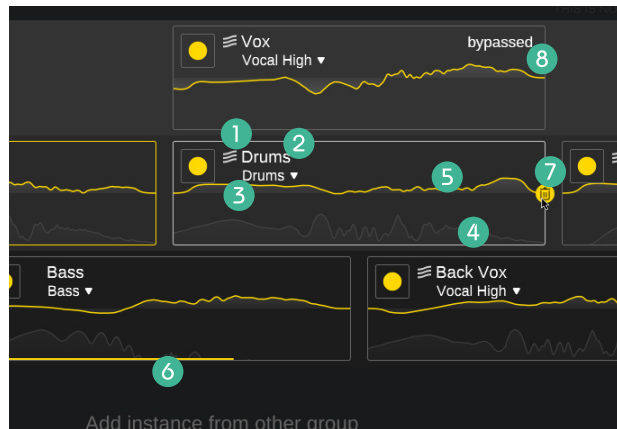
You can (re)learn all instances of a group at once using the master learning button. Since smart:EQ 3 needs audio input during learning, the time needed to finish the learning process may differ between instances depending on the audio content of the respective track.



## Learn a single group member

Using the small recording button inside each track info box, you can start a new learning process for the respective instance. The progress of the learning process is indicated by a progress bar at the bottom of the track info box.

# Track Info Box



## 1 smart:EQ 3 logo

The logo indicates that smart:EQ 3 already learned a smart:filter for this track.

## 2 Track name

Double-click on the track name to change it.

## 3 Profile Dropdown

View and change the selected instance for each profile

## 4 Analyzer

Current output spectrum.

## 5 Filter curve

EQ sum curve applied to the track.

## 6 Progress bar

The progress bar indicates the progress of a currently active learning process.

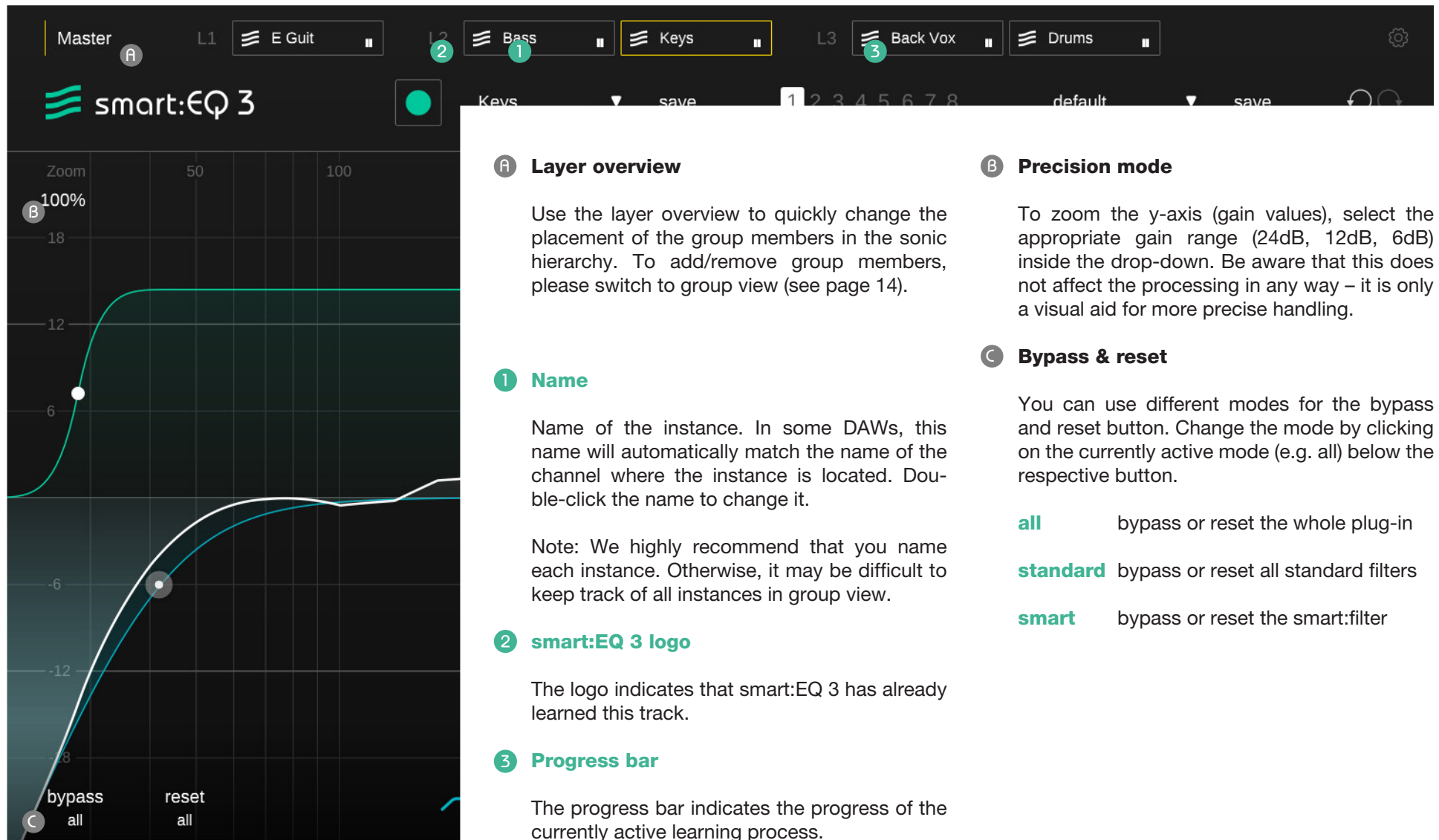
## 7 Trash can

Remove the track from the current group. Only visible on hover.

## 8 Bypassed warning

Indicates that an either all bands or the smart\_filter are bypassed in an instance.

# Visual control & monitoring



The screenshot shows the smart:EQ 3 interface. At the top, there's a track overview with 'Master', 'L1 E Guit', 'L2 Bass', 'Keys', 'L3 Back Vox', and 'Drums'. The 'Keys' track is highlighted with a yellow box and a '1' callout. Below this is a frequency response graph with a zoomed-in section. The graph shows gain values on the y-axis (18, 12, 6, 0, -6, -12, -18) and frequency on the x-axis (Zoom, 50, 100). A green curve is shown, with a white dot at approximately 100 Hz and 6 dB gain, and a grey dot at approximately 100 Hz and -6 dB gain. A 'Zoom' control is at the top left of the graph, and a '100%' zoom level is indicated. At the bottom left of the graph, there are 'bypass all' and 'reset all' buttons. A 'smart:EQ 3' logo is visible in the top left of the graph area, with a green dot next to it. A '2' callout points to the logo. A '3' callout points to a progress bar at the bottom right of the graph area.

**A Layer overview**

Use the layer overview to quickly change the placement of the group members in the sonic hierarchy. To add/remove group members, please switch to group view (see page 14).

**B Precision mode**

To zoom the y-axis (gain values), select the appropriate gain range (24dB, 12dB, 6dB) inside the drop-down. Be aware that this does not affect the processing in any way – it is only a visual aid for more precise handling.

**C Bypass & reset**

You can use different modes for the bypass and reset button. Change the mode by clicking on the currently active mode (e.g. all) below the respective button.

**all** bypass or reset the whole plug-in

**standard** bypass or reset all standard filters

**smart** bypass or reset the smart:filter

**1 Name**

Name of the instance. In some DAWs, this name will automatically match the name of the channel where the instance is located. Double-click the name to change it.

Note: We highly recommend that you name each instance. Otherwise, it may be difficult to keep track of all instances in group view.

**2 smart:EQ 3 logo**

The logo indicates that smart:EQ 3 has already learned this track.

**3 Progress bar**

The progress bar indicates the progress of the currently active learning process.

# Analyzer

## 1 Analyzer

Click to enable/disable the spectral analyzer  
Right-click to open the analyzer widget

### Sources

If your currently selected instance of smart:EQ 3 is part of a group, you'll be able to display a color coded real-time spectrum for every member of your group. Toggle instances on/off by clicking their name.

## 2 Analyzer widget

Access the analyzer widget by right-clicking the analyzer on/off button.

### Mode

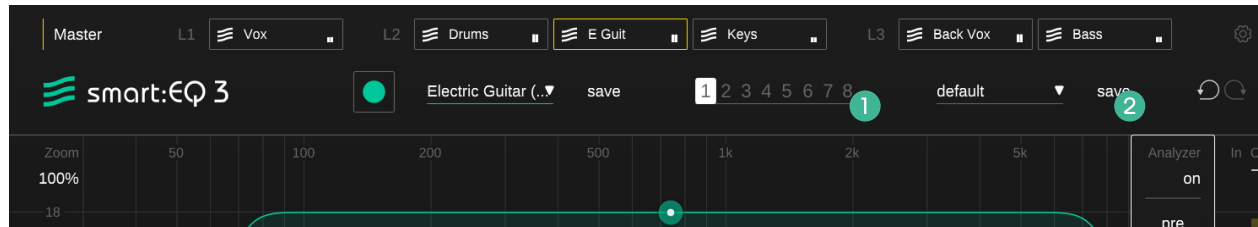
Switch the analyzer mode between “pre” (pre-filter), “post” (post-filter), “both” (pre & post) or “off”.

### Speed

Change the ballistics of the analyzer between “slow”, “medium”, “fast” or “avg” (average). When “avg” is enabled, the analyzer will compute the average spectrum over the entire observation period.



# States and Presets



## 1 States

You can use states to store multiple parameter settings. States allow for easy comparing between different settings (similar to the A/B feature of most plug-ins) or to store multiple smart:filters for different sections of your song.

### Working with states

1. Each state is initially empty (default parameters settings of smart:EQ 3).
2. Select a state by clicking the respective state button.
3. You can easily copy one state to another state via drag and drop. This may be useful if you want to compare different changes to a certain setting.
4. To clear a state, hover over the number and click the trash can icon that will appear below.

## 2 Presets

A preset saves all parameter settings and can be accessed from all plug-in instances.

- To save your parameter settings as a preset, click “save” next to the preset dropdown.
- To load a saved preset, choose the respective preset name from the dropdown.
- To delete a preset or change its name, go to the preset folder in your local file explorer.

You can easily share your presets among different workstations. All presets are saved with the file extension “.spr” in the following folders:

### Preset Folders

OSX:  
~/Library/Audio/Presets/sonible/smartEQ3

Windows:  
My Documents\Presets\sonible\smartEQ3

# M/S processing and output



smart:EQ 3 offers full M/S processing. Each filter can either be used in stereo, mid or side mode. Additionally, the output section offers unique tools for controlling the stereo image using the M/S balance and the side pan slider. Please note that these sliders can be used even if all filters have been set to stereo mode.

## 1 M/S Balance

The M/S balance slider allows you to freely adjust the relation of the mid and side signal in the stereo output. Using the controller, it is easy

to play with the spaciousness of a recording (e.g. more side signal typically boosts all ambient components) or to "tighten up" a mix (e.g. more mid signal boosts the correlated/direct components).

## 2 Side Pan

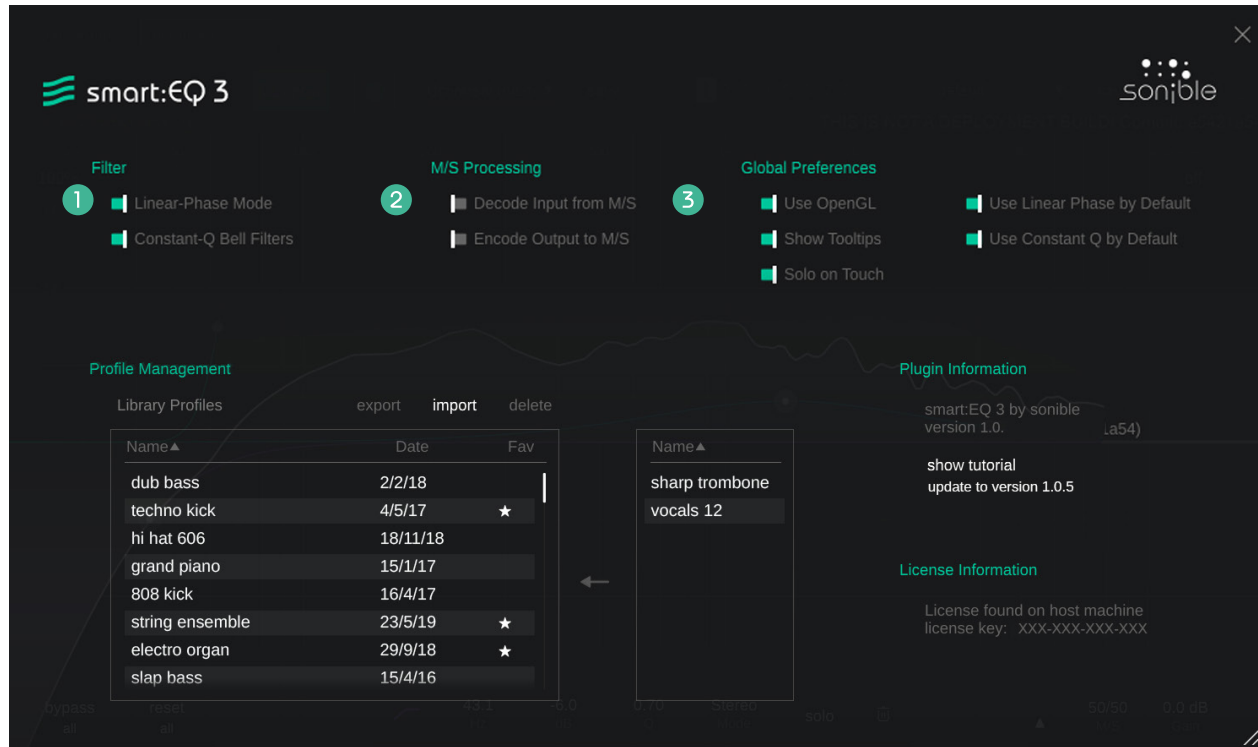
The side pan slider allows to pan the side signal to either the left or right stereo channel. This way, the ambient components of a stereo track (side signal) can be panned without affecting the stable center (mid signal).

You can click on the mid or side section to solo the respective signal component.

## M/S input or output

You can use smart:EQ 3 as an M/S encoder/decoder. On the settings page (see page 23) you can define the input and output format (M/S or stereo) of the plug-in.

# Settings



To visit the settings page, click the little cogwheel in the upper right corner of the plug-in.

## 1 Filter settings

### Constant-Q bell filters

Constant-Q bell filters will lead to steeper notches for negative gain values.

### Linear phase mode

Linear phase mode induces a processing latency but does not lead to any phase distortion. You may use this mode to avoid phase

problems when working with complex signals in postproduction.

## 2 M/S settings

### Receive M/S input

When enabled, the plug-in expects an M/S input signal (NOT a regular stereo track).

### Send M/S Output

When enabled, the plug-in will output an M/S signal (and NOT a regular stereo track).

## 3 Global Preferences

These settings will be applied to every new instance of smart:EQ 3 by default.

### Enable OpenGL

OpenGL might cause rendering issues on certain computer hardware. Use this option to disable OpenGL.

### Show Tooltips

Enable/Disable tooltips on hover.

### Solo on Touch

This setting will solo the filter band you're currently working on.

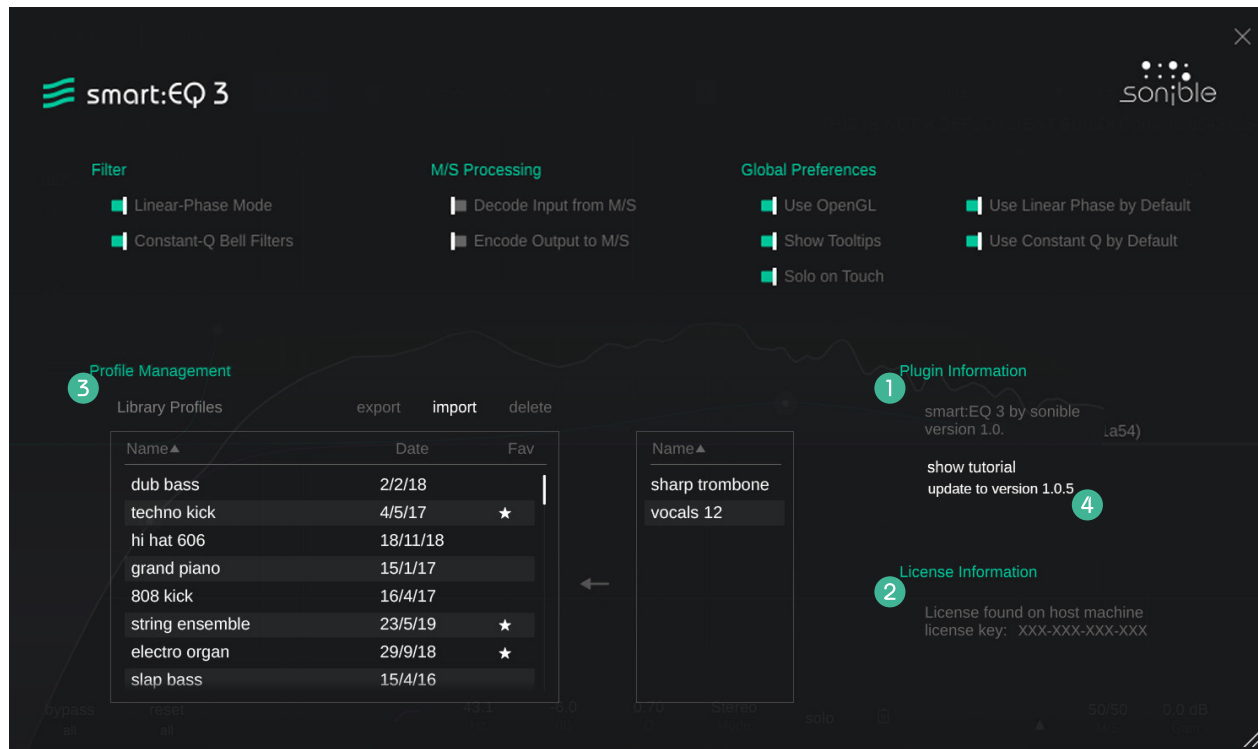
### Use Constant Q by default

Automatically enable the 'Constant-Q bell filters' for every new smart:EQ 3 instance.

### Use Linear Phase by default

Automatically enable the 'Use Linear Phase Mode' for every new smart:EQ 3 instance.

# Profile Management and Licensing



## 1 Plug-in information

Check the name and version of your plug-in and find the latest available update.

You can restart the welcome tour by clicking on "show tutorial".

## 2 License Information

Check your license state and number (if not licensed via iLok).

## 3 Profile Management

Manage your custom profiles. See page 12 for more details.

## 4 Update notice

When a new update of the plug-in is available, you'll receive a notification on the smart:EQ 3 settings page. Click on the blue label to download the latest version of the plug-in.





# smart:EQ 3

[www.sonible.com/smartEQ3](http://www.sonible.com/smartEQ3)

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