



# smart:EQ 2

manual



| The Intelligent Equalizer

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# welcome to smart:EQ 2

**smart:EQ 2 is a unique equalizer that opens up a whole new world of audio mixing possibilities. The plug-in combines musical sounding filters with state-of-the-art AI technology based on decades of mixing and mastering experience.**

smart:EQ 2 analyzes your audio material and generates a custom filter curve to create a natural sounding tonal balance. Add clarity to your mixes, more punch to single tracks or carve out the harsh parts of your vocal recordings – in seconds and with unprecedented precision. Experience a mixing workflow much faster than ever before.

The self-learning smart:filter generates a detailed filter curve tailored to the specific audio material. The intuitive control interface allows to easily adjust the results of the AI analysis to your needs and personal mixing style. smart:EQ 2 includes new profiles for content-aware audio processing. Additional M/S processing options allow you to better control the sonic space of your tracks. smart:EQ 2 now also contains a pre and post analyzer and a tilt option for each of the seven linear phase filter bands.

**Get started with smart:EQ 2 and enjoy your new workflow!**

# install

## Minimum requirements Windows



<b>CPU</b>	Intel Core Duo, i5
<b>RAM</b>	2GB
<b>Operating systems</b>	Windows 7 (32/64 bit) Windows 10 (32/64 bit) Mac OSX 10.7+



You will need admin privileges to successfully install the plug-in.

## Windows

To start the installation process, extract the downloaded zip-file **sonible\_smartEQ2\_win.zip** on your hard disk and run the installation file **smartEQ2\_installer.exe**.

The installer will now guide you through the necessary steps to install smart:EQ 2 on your computer.

During installation, you can select which version(s) of smart:EQ 2 should be 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 version of the plug-in will automatically be installed to the default folders for the respective format.

### Default folders:

**VST3** (on a 64 bit operating system):

..\Program Files\Common Files\VST3\  
..\Program Files(x86)\Common Files\VST3\

**AAX** (on a 64 bit operating system)

..\Program Files\Common Files\Avid\Audio\Plug-Ins  
..\Program Files(x86)\Common Files\Avid\Audio\Plug-Ins

## Mac OSX



To start the installation process, please open the disk image **sonible\_smartEQ2\_osx.dmg**. This will mount the image and open a finder window showing the content of the installation package.

To install smart:EQ 2 on your system, please run the installation file **smartEQ2\_installer.mpkg**.

The installer will now guide you through the necessary steps to install smart:EQ 2 on your computer. smart:EQ 2 will automatically be installed at the default locations for audio plug-ins.

### Default folders:

#### Audio Unit

/Library/Audio/Plug-Ins/Components/smartEQ2.component

#### VST

/Library/Audio/Plug-Ins/VST/smartEQ2.vst

If you need to change the location of the plug-in, please drag the corresponding file(s) manually to the designated folder after the installation has finished.



Please note that smart:EQ 2 requires the **PACE iLok License Manager**. Please download the software from **www.ilok.com** and install into your system. You don't need to have an iLok or an iLok account. This application allows us to ensure the integrity of our products for a better user experience.

# authorization

## Licensing system

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

### Machine-based

Each license key allows you to install smart:EQ 2 on two computers with unique system IDs. These system IDs are computed 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 2 under her/his account.

If a system-ID changes (e.g. replacement of the hard disk), please contact us and ask for instructions to re-activate the license.

### iLok

If you want to use your iLok, please contact us and provide the purchased license key and your iLok account name.



Please double-check your spelling!

We will deduct one activation from your license pool which will reside in your iLok account from that moment on.

You can move it to different iLoks or computers the way you're used to via the iLok License Manager.

**Contact us:** [support@sonible.com](mailto:support@sonible.com)

## Unlocking

If you purchased a license for smart:EQ 2 online, you receive your license key via email.

### Machine-based unlocking

When opening smart:EQ 2 for the first time, a notification window will be displayed asking you to unlock smart:EQ 2 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 automatically be registered - enjoy!

If you didn't receive the email within minutes please check your junk folder first before getting in contact with our support.

## Trial version

To run smart:EQ 2 in demo-mode, simply click "try" and you can use smart:EQ 2 a couple of days without any limitations. (Please refer to our website to find out more about the current demo period of smart:EQ 2)

When the demo period is over, you need to purchase a full license to continue to use the plug-in.

your trial has expired

Please enter a license key to continue using smartEQ+

**your license key here**

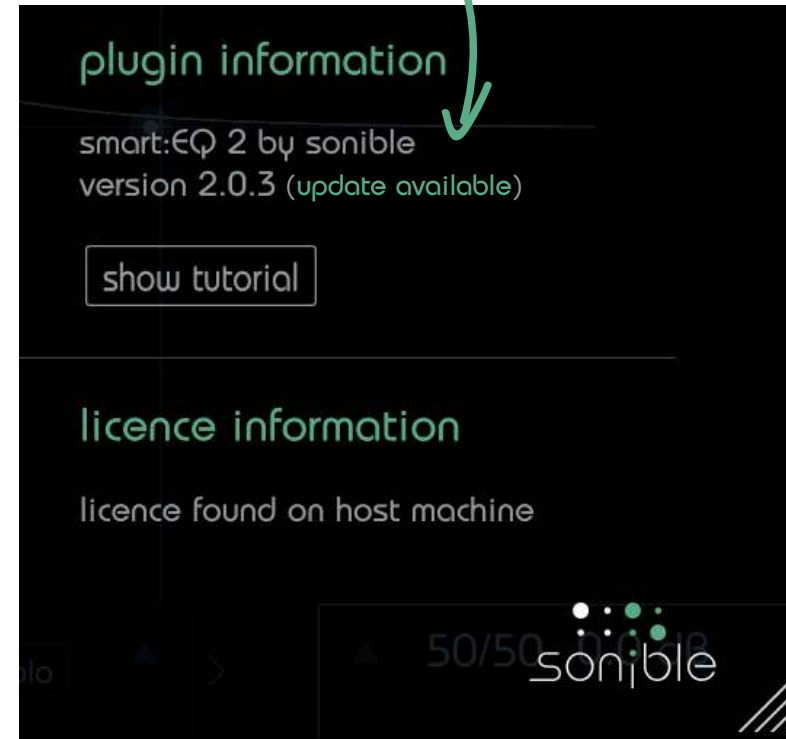
cancel
register

# updates

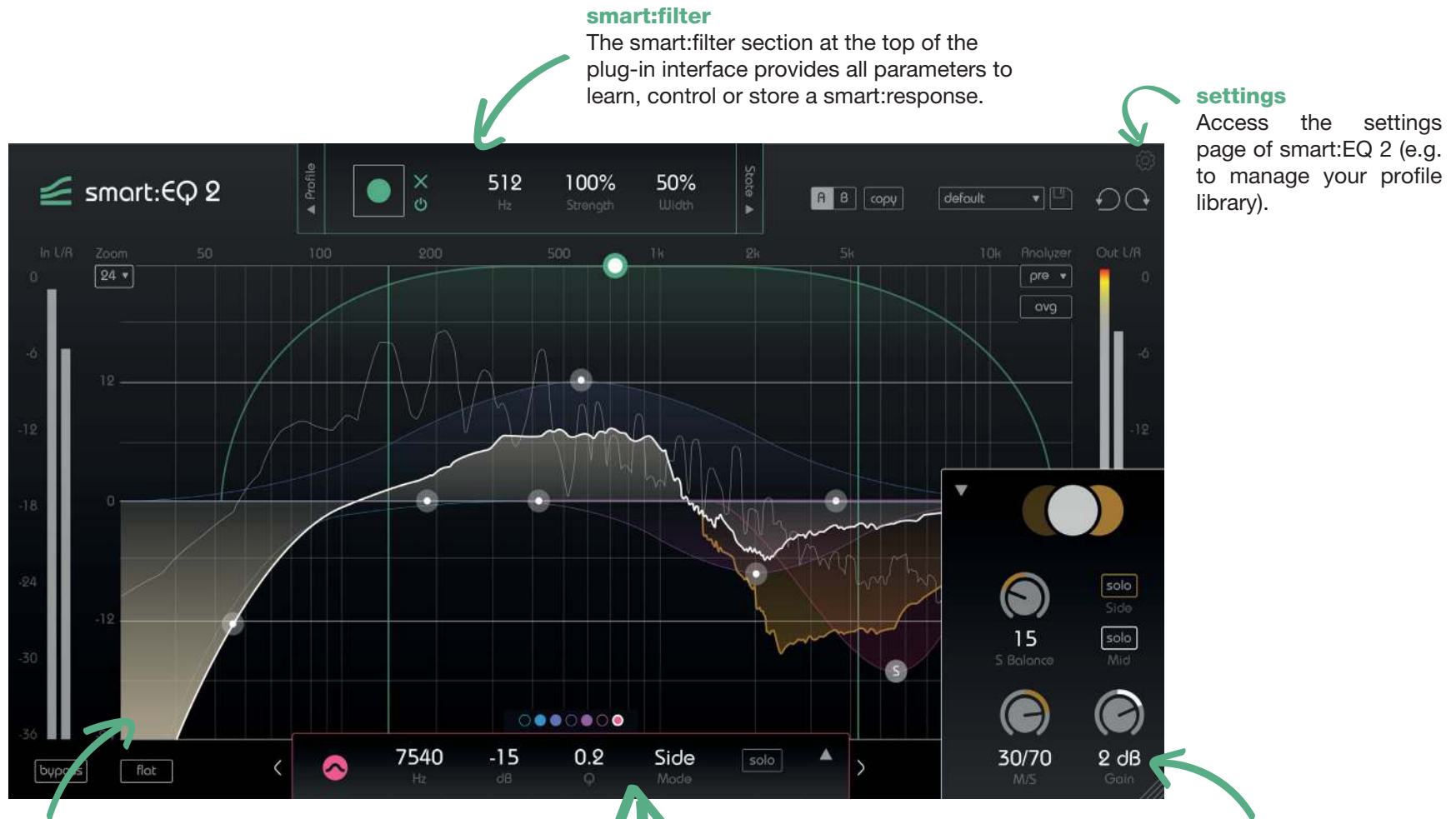
If a new release of the plug-in is available you'll get a notification on the settings page of the plug-in (see screenshot). By clicking on the green label you'll be forwarded to a website where you can download the latest version of smart:EQ 2.

To install the latest version of smart:EQ 2, simply follow the installation instructions given in this manual. A reactivation of the plug-in is not necessary.

update notice  
click to update



# user interface



**smart:filter**

The smart:filter section at the top of the plug-in interface provides all parameters to learn, control or store a smart:response.

**settings**

Access the settings page of smart:EQ 2 (e.g. to manage your profile library).

**interactive equalizer**

Use this section to interactively control all filter curves. The filter parameters (center frequency, quality and gain) can be adjusted freely by dragging the handles.

**EQ parameters**

The settings of a selected filter are displayed in the expandable EQ parameter section.

**M/S and output gain**

The output section provides control parameters for Mid/Side processing and a global gain control.

# Interactive Equalizer

## Precision Mode

To zoom the y-axis (gain values), select the appropriate range (24dB, 12dB, 6dB) inside the drop-down on the upper left.

Be aware that this doesn't affect the signal processing in any way - it's only a visual setting for easier handling.

## A/B Switch

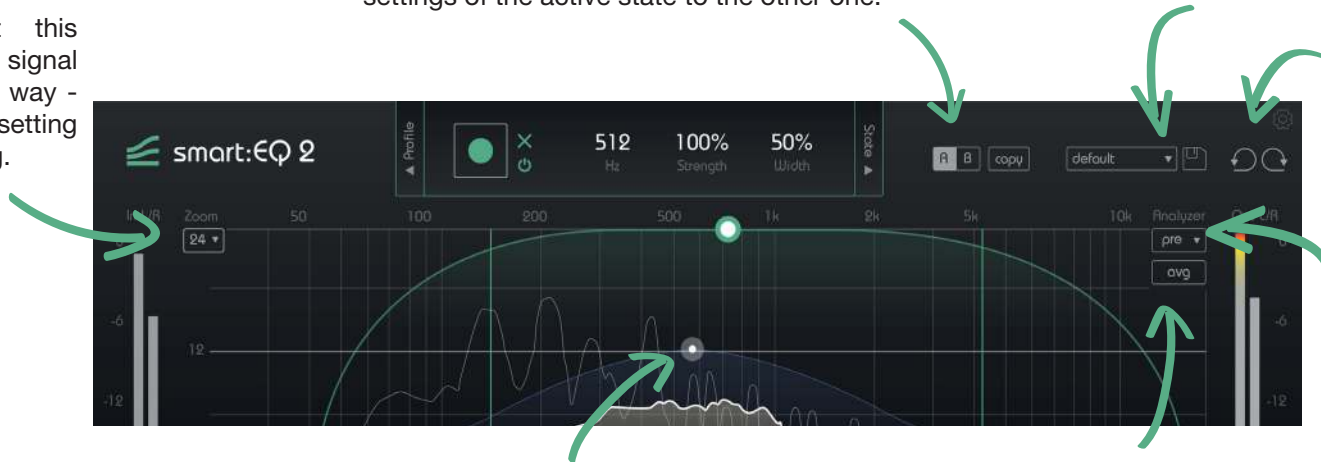
By clicking on the A/B-button, you can switch between two different states of the plug-in. The "copy"-button will copy the parameter settings of the active state to the other one.

## Presets

To save a preset (all parameter values), click the floppy disk icon.\* To load a saved preset, choose the respective preset name from the dropdown.

## Undo / Redo

With these arrows you can perform an undo or redo action.



## Interactive Thumb

You can simply drag and drop the thumbs related to each filter and immediately see (and hear) the resulting curve.

## Special Shortcuts:

- change quality → alt+drag or mouse-wheel (up/down)
- lock frequency → shift+drag
- reset filter band → double-click
- solo band → cmd+click (mac) | ctrl+click (win)
- add to group → right-click

## Spectral Averaging

When "avg" is enabled the analyzer will compute the average spectrum over the whole observation period.

## Analyzer Mode

The drop-down can be used to set the mode for the real-time analyzer (*pre*, *post*, *pre & post*, *off*).

\* If you want to delete a preset or change its name, go to the preset folder with your local file explorer. You can also easily share your presets among different workstations. All presets are saved with the file extension ".spr" to the following folders:

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

Windows: My Documents\Presets\sonible\smartEQlive



# Filter Parameters

The filter parameter section shows all settings of the currently selected filter.

## Selecting a Filter

There are multiple ways to select a filter:

- click on the thumb in the equalizer display
- click on the respective color in filter selector
- click the small arrows left and right to the filter section to step through all filters

When a filter is selected, the filter curve inside the interactive equalizer display is highlighted with the color of the related filter selector.

## Changing Filter Parameters

All filter parameters can be changed by dragging the respective value up and down with your mouse. In addition, a click on the label will allow you to edit the value with your keyboard.

A double-click on a label resets the respective parameter to its default value.

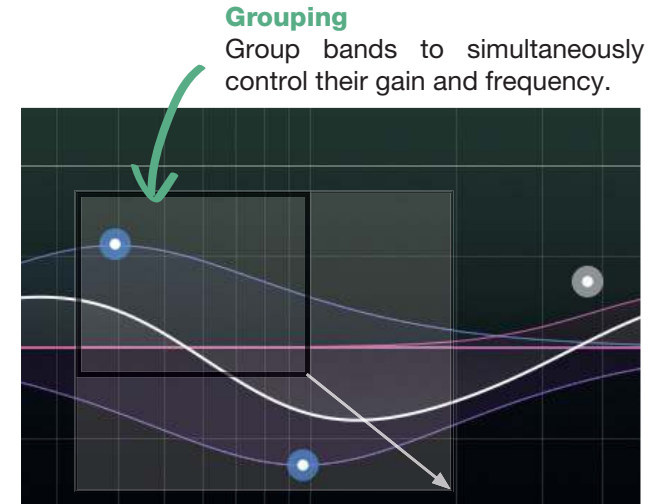
## Solo on Touch

On the settings page (see page 15) you can enable the option "solo on touch". If enabled, the plug-in will automatically solo a filter if the thumb of the filter is moved (during frequency or gain changes).

## Grouping of Bands

You can easily control the gain and frequency of multiple bands simultaneously by creating groups. To do so, keep the mouse button pressed and draw a rectangle around the thumbs of all bands you want to add to a group. Alternatively, you can also sequentially right-click the thumbs of all bands you want to group.

Once grouped, you can change the gain and frequency of all grouped bands simultaneously or you can scale the sum response of all bands using the "scale" slider in the EQ parameter section.



## Filter Selector

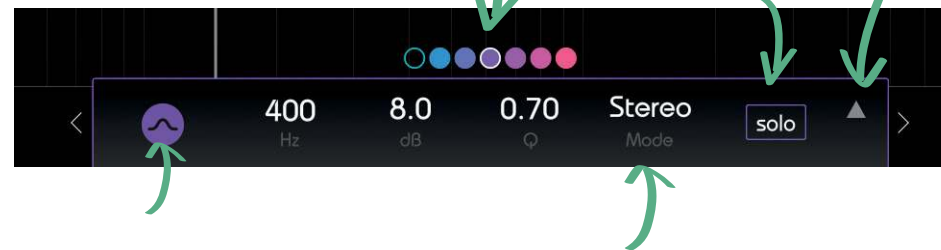
Click to select a filter (the respective filter will hover inside the equalizer display) Once a filter is selected, you can enable/disable the filter with another click.

## Solo

Listen to the frequency range of your currently selected filter.

## Expand

Expand view to show extended control interface.



## Filter Type

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

## Processing Mode

Select the processing mode of the filter (Stereo, Mid or Side).

Note: As soon as a filter is in Mid or Side mode, the sum curve inside the interactive 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).

# M/S and output

smart:EQ 2 offers full support for M/S processing. Each filter can either be used in Stereo, Mid or Side mode (see section filter parameters on the previous page).

Besides, the output section offers unique tools to control 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 are set to stereo mode.

## M/S Balance

The M/S Balance slider allows 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 pushes all ambient components) or to "tighten up" a mix (e.g. more Mid signal pushes the correlated/direct components).

## Side Pan

The Side Pan controller allows to pan the Side signal to the left or right stereo channel. That way, the ambient components of a stereo track (Side signal) can be panned without affecting the stable center (Mid signal).

## M/S input or output

On the settings page (see page 15) you can define the input and output format of the plug-in:

- enable M/S format on input

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

- enable M/S format on output

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

## Bypass

Enable to bypass all processing of smart:EQ 2. This internal bypass may be helpful when the bypass function offered by your host leads to glitches or sync-problems with other tracks.

## Flat

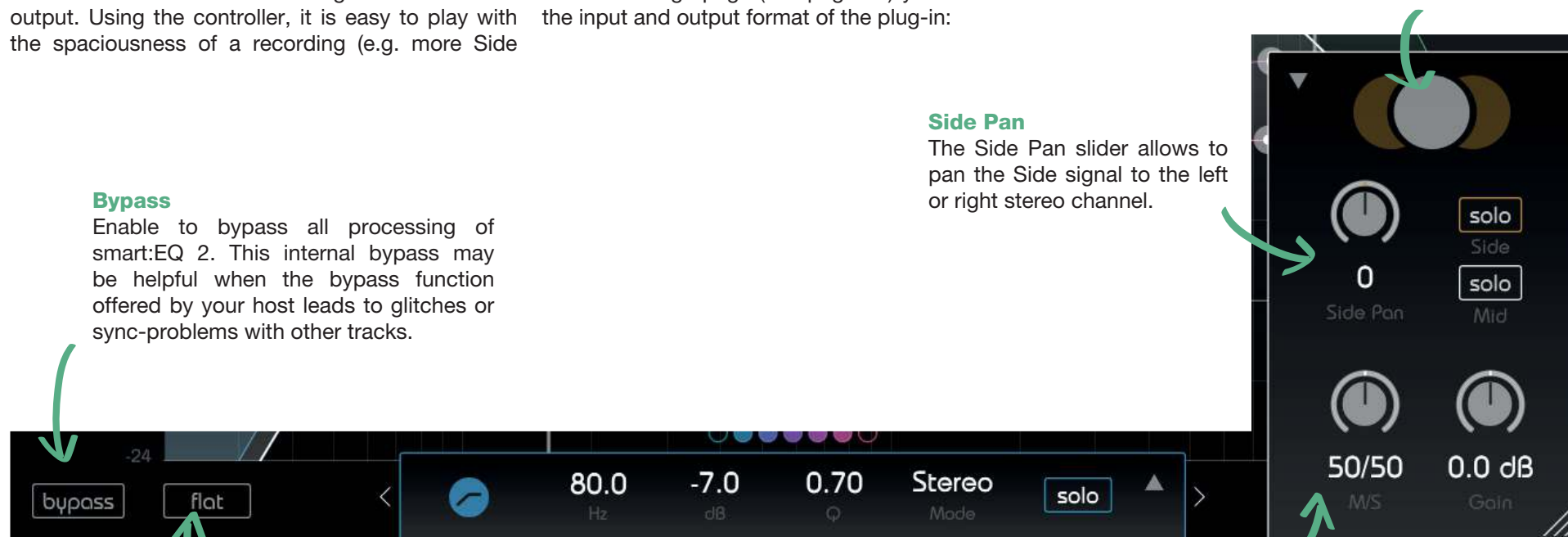
The flat button resets all filter gains to 0 dB. All other filter parameters are retained.

## Side Pan

The Side Pan slider allows to pan the Side signal to the left or right stereo channel.

## M/S Indicator

The Indicator shows the current M/S weighting.



## M/S Balance

Select the relation of Mid and Side signal in the output signal.

# smart:filter

The heart of smart:EQ 2 is its smart:filter section. The smart:filter learns which areas of the frequency spectrum need attention and automatically suggests a filter curve (the *smart:response*) to compensate for possible spectral imbalances.

The smart:filter can be enabled by pushing the on/off icon next to the record button. When activated, an additional green curve will appear inside the equalizer interface.

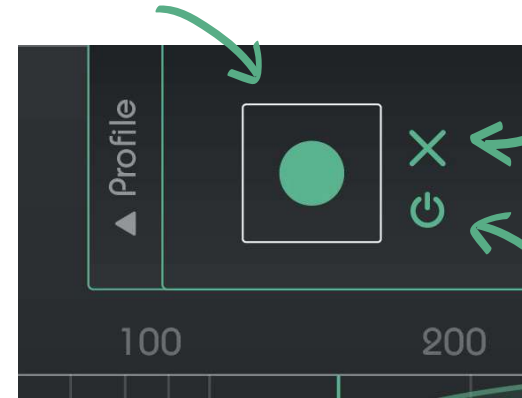
This curve looks similar to a conventional filter, but is in fact the weighting curve for the calculated smart:response. Once a smart:response has been learned, you can interact with the weighting curve as with any normal filter curve.

## learn

Click the record button to start or stop learning. While learning, a pause symbol will be displayed instead of the record button.

## reset

Reset the current filter curve (smart:response) to learn from scratch.



## on/off

Enable or disable the smart:filter.

## Learning a smart:response

To use the smart:filter, the plug-in has to learn the *smart:response* by performing the following steps:

### 1. select a profile (optional)

A profile primes the learning process of the smart:filter towards particular sound sources. Please note that you can always start with the "Standard" profile (selected per default) and switch to more specific profiles later. Still, the right profile will typically speed up and enhance the learning process.

Please refer to Section "Profiles" on page 13 for more information.

### 2. enable the smart:filter

Click the on/off symbol right to the green record button to enable the smart:filter (on startup the filter will be enabled per default).

### 3. start the audio playback

The filter needs incoming audio material for the learning process.

### 4. start learning

Click the green record button. Now, a pulsating pause icon indicates that the smart:filter is actively learning.

The smart:filter will stop learning as soon as a certain spectral balance has been reached (the pause button stops blinking and turns back to a record icon).

- To continue learning, repeat steps 2 and 3.
- To restart learning from scratch, click the reset button "x" and repeat steps 2 and 3.

### 5. adapt the computed smart:response

You can control the impact of a computed smart:response by modifying the green weighting curve. Please refer to Section "smart:response" on the next page for more details.

# smart:response

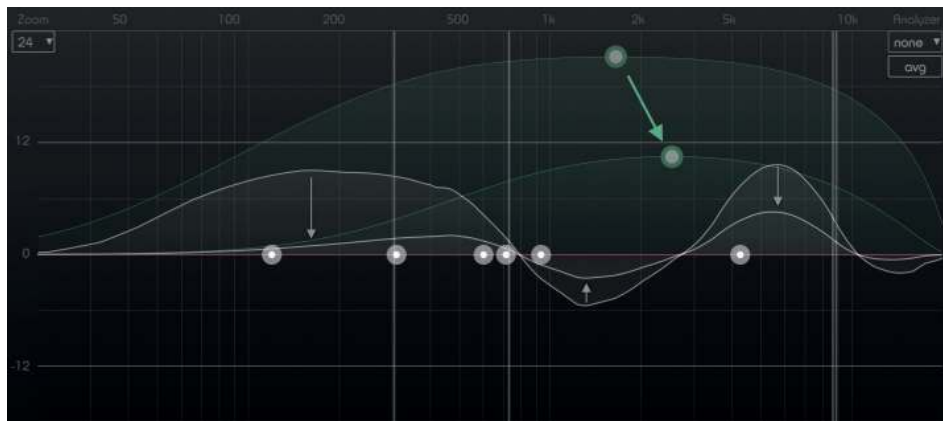
You can easily control the impact of a computed smart:response by changing the gain, center frequency and range of its weighting curve.

You can interact with a computed smart:response as with any other filter of the equalizer. The weight of the bell-shaped smart:response weighting curve corresponds to the gain of a classical filter and the width corresponds to its quality.

You can change the parameters of the weighting curve by dragging the values inside the numeric field or by moving the thumb within the equalizer interface (ALT + drag for changing the width).

By pulling the weighting curve (green bell) up, you increase the impact of the compensation filter. By moving it left or right or by changing its width, you select the frequency region where the filter should be applied.

**Please remember:** The green curve is a weighting curve and NOT an EQ curve. This means that a positive *weight* may cause a negative *gain* in certain frequency regions, if the smart:filter computed a negative gain for the corresponding frequencies.

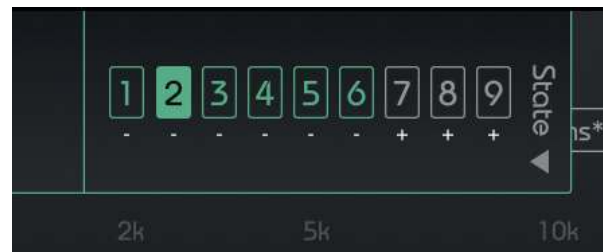


# States

You can use "States" to store multiple (different) smart:responses within one plug-in.

When working with heterogeneous audio material (e.g. dialogues or music with strongly varying segments), it may be necessary to train smart:EQ 2 on different sections of the material and store an individual smart:response for each section.

For example, you may want to train the plug-in on the verse and the chorus separately, to optimally cover the characteristics of each section.



With smart:EQ 2, storing (and switching between) multiple smart:responses for one track is easy:

1. Expand the "States" section by clicking the little arrow on the right side of the smart:filter section.
2. Let smart:EQ 2 learn a smart:response (see Section smart:filter on page 11 for more details).
3. Store the response to a state by clicking the little "+" symbol below the respective state indicator.
4. Go to the next section(s) (e.g. the chorus) and repeat steps 2 and 3 until you stored all the smart:responses you need.
5. You can now load each smart:response by clicking the corresponding number. To automatically switch between different smart:responses, use the automation of your DAW.

Note: To delete a state, click the "-" symbol below the respective state indicator.

# Profiles

A profile primes the learning process of smart:EQ 2 towards particular sound sources. Different profiles ensure the ideal and content aware adaptation of smart:EQ 2 to the characteristics of the input signal.

smart:EQ 2 is equipped with a list of well designed factory profiles for the most common instrument types. Besides, you can easily generate your own profiles based on factory profiles. You can even transfer custom profiles to other sessions or share them with friends.

## Factory Profiles

In close cooperation with international producers and sound engineers sonible has developed a list of factory profiles and tested them in various production environments.

A factory profile is a perfect starting point if you're working with a certain instrument or sound source:

1. To expand the "Profile" section, click the little arrow on the left side of the smart:filter section.
2. Open the drop-down and click on "Factory Profiles" in the drop-down list. This will show all available factory profiles.
3. Select the profile that best matches your audio material. If no profile matches your material (or if you want to apply smart:EQ 2 to a mix), you can use the "Standard" profile.
4. Once a profile is selected you can (re-)start the learning process.

**NOTE:** Switching profiles even works if a smart:response has already been learned.



## Custom Profiles

If a smart:response computed based on a certain profile does not perfectly fit to your needs, you can easily generate new custom profiles and use them for future learning processes.

Let's say you like the result of a certain profile, but you want more heights. No problem! Adjust the computed smart:response using classical filters. Once you are satisfied with the result, save the changes to a new profile.

Next time you are working with the same instrument, simply select your custom profile and smart:EQ 2 will optimize the result according to your modifications. **That way, smart:EQ 2 is able to adapt to your personal taste!**

1. Learn a smart:response based on any profile.
2. Adapt the resulting sound (filter curve) with classical filters to match your personal taste.
3. Expand the profile section and click the little "Store" symbol next to the profile drop-down.
4. Enter a name for the new profile and click save.

As you are not simply storing a preset, the sound will remain consistent even if the quality or character of the input signal changes.

This means that you can define the "target" of a sound and not all modifications (e.g. a preset of static filters) to reach this target.

Custom profiles can also be very handy if you are for example working on multiple tracks from the same band or artist. You only need to define the "target sound" once and then you can use smart:EQ 2 to quickly reach consistent results in every track.



The changes you made with the classical filters will be stored as a additional learning information in the custom profile.

## Recently Used Profiles and Favorites

To speed up your workflow, the ten most recently used profiles will be displayed above the "Factory Profiles" entry inside the profiles drop-down.

Besides, you can mark up to ten profiles as favorites. Favorites will be displayed above the most recently used profiles.

To mark a profile as a favorite, simply hover over the name of the profile in the recently used profiles list. Now a grayed-out star will occur behind the name of the profile. Click on the star - and your profile is marked as a favorite.

You can also manage your profiles on the settings page of smart:EQ 2 (see managing profiles on page 15).

# settings

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

## smoothing

The smoothing parameter allows to apply a continuous smoothing to the computed smart:response. Smoothing may be used to generate more gentle filter curves by removing bumps and small spikes that may occur in high frequency regions.

## real time analyzer settings

Define the display range and release time of the real time analyzer.

## behaviour

These settings will only be applied to the current instances of smart:EQ 2.

## exit settings

Quit the settings screen.

## global GUI settings

These settings will be applied to ALL instances of smart:EQ 2 (in all your projects).

## plug-in information

Here you can find the name and version of your plug-in. You can start the welcome tour by clicking on "show tutorial".

## license information

This will show your license state and number (if not licensed via iLok).





## Managing Profiles

Once you created a custom profile, it's easy to share it among sessions or send it to friends and partners. You can manage all custom profiles on the **settings page** of smart:EQ 2.

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

In the section **profile management** you will find two tables: library profiles and unsaved profiles

### Library profiles

Here you will find a list with all profiles on your system. You can sort profiles by name or date.

### Unsaved profiles

Here you will find all profiles that are currently used in your session, but are NOT part of your local library.

For example, if someone exchanged a project with you, all custom profiles used by the other person will be available inside the session. You can work with these (unsaved) custom profiles - but only within the respective project.

If you want to make an unsaved profile available in all your projects, select the profile and click the arrow symbol next to the unused profiles list.

### Exporting profiles

If you created a fantastic sounding profile (e.g. for electric guitars) and want to share this profile with someone else, simply select the profile (in your library profiles list) and click the "export" button.

You can now chose a filename and a location for the profile. The file extension of the profile will be \*.spf.

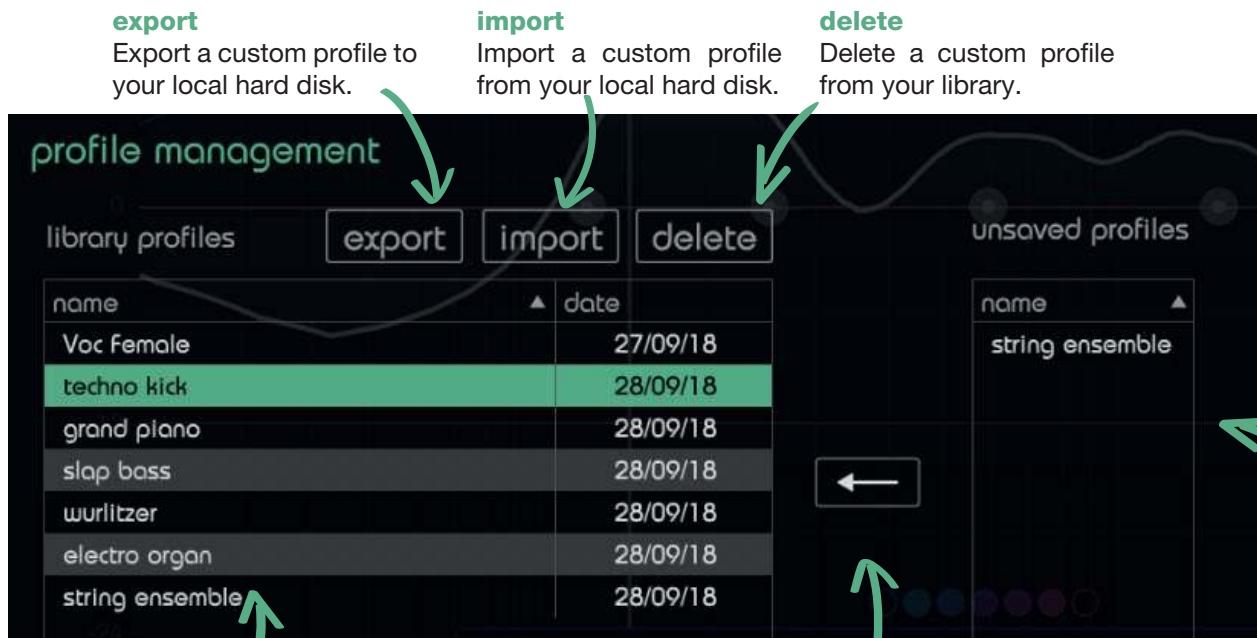
### Importing profiles

If someone shared a profile with you, you can easily import the profile into your local library. Click the "import" button and browse for the profile.

After validation of the profile name, the profile will be stored to your local library.

### 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 can't be undone.



#### export

Export a custom profile to your local hard disk.

#### import

Import a custom profile from your local hard disk.

#### delete

Delete a custom profile from your library.

#### library profiles

List of all profiles stored in your local library.

#### save profile

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

#### unsaved profiles

List of all custom profiles that are used in your local session, but are not part of your local library.



[www.sonible.com/smarteq2](http://www.sonible.com/smarteq2)

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