smart:comp 2
manual

The spectro-dynamic compressor

Contents

Welcome to smart:comp 2

smart:comp 2 combines a multi-dimensional compression approach with a wide range of sound-shaping options; this unique compressor uses intelligent processing and automatic parametrization to deliver precise and transparent results without compromising the integrity of the input signal.

smart:comp 2 is an exceptionally versatile go-to compressor: AI-powered algorithms and profiles for single tracks, busses and entire mixes drive the processing that will find well-balanced dynamics for any input signal. With sound-shaping options such as the Free-form Transfer Function and the Attack and Release Shaper, it has never been easier to achieve distinctive sounds.

The compressor's revolutionary spectral processing ensures a dynamic balance at all times with up to 2000 bands constantly working to enhance transparency and also drives smart:comp 2's remarkable ducking abilities. smart:comp 2 is also packed with features, such as mid/side processing and input level riding, that make compression workflows hassle-free. To ensure that users are able to keep track of each parameter's impact on the signal, smart:comp 2 is equipped with real-time monitoring elements, including: Instant Impact Prediction, compression mapping and an RMS level histogram.

Get started with smart:comp 2 and have fun unleashing your creativity!

Install

System requirements

CPU	Intel Core i5 Apple M1
RAM	4GB
Operating systems	Windows 10+ (64 bit) Mac OS 10.12+
Graphics	OpenGL Version 3.2+

⚠ You will need admin privileges to successfully install the smart:comp 2 plug-in.

Windows

To start the installation process, extract the downloaded zip-file **sonible_smartcomp2_win_x.x.x.zip** onto your hard disk and run the installer.

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

During installation, you can select which version(s) of smart:comp 2 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_smartcomp2_osx_x.x.x.dmg**. This will mount the image and open a finder window showing the content of the installation package.

To install smart:comp 2 on your system, run the installation file **smartcomp2.pkg**.

The installer will now guide you through the necessary steps to install smart:comp 2 on your computer. smart:comp 2 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 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:comp 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:comp 2 under their account.

In case a system-ID is 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, just 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:comp 2 online, you receive your license key via email.

Machine-based unlocking
When opening smart:comp 2 for the first time, a notification window will be displayed asking you to unlock smart:comp 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 then be automatically registered – enjoy!

If you don't receive the email within minutes please check your junk folder first before contacting our support (**support@sonible.com**).
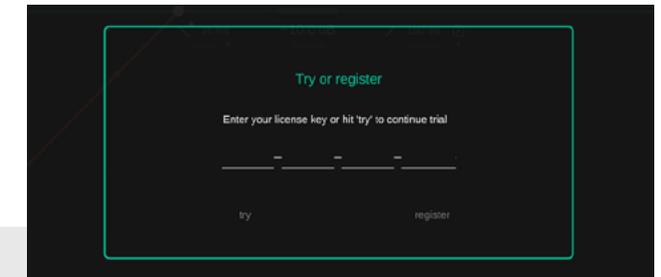
Trial version

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

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

Internet connection requirements
sonible plug-ins only needs an internet connection during the trial period and for initial license activation. During the trial period, the plug-in needs to go online every time it is used. Once the license of your plug-in has successfully been activated, an internet connection is no longer needed.

User interface

Learning section
Initiate the learning process and select a profile for your track.

States
Use up to 8 different states to easily compare settings or prepare multiple versions of your track.

Metering section
Monitor levels and compression. Control the in- and output gain as well as a mix parameter. Activate input riding and the soft-clip limiter.

Time-domain compression
Control all parameters for the time-domain compression.

Compression Grid
See a visual representation of the compression settings and monitor the in- and output level-histograms.

Spectral Compression
Monitor and control spectral compression.

Sound-shaping Tools
Choose a compression style, control Spectral Compression and give your track the right color.

Sidechain filter
You can pre-filter the sidechain signal to make the compressor more sensitive or insensitive to specific frequency regions. Expand the EQ widget for full control.
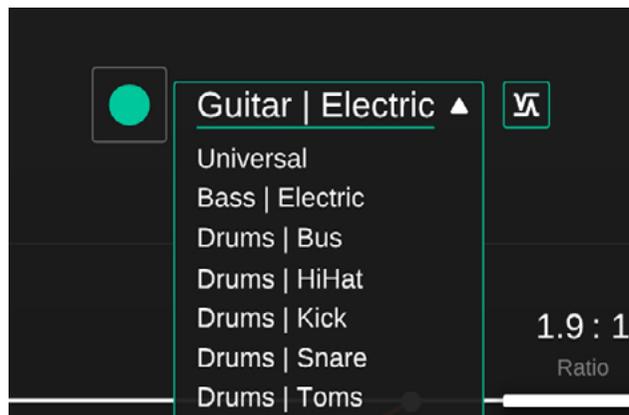
Learning

smart:comp 2 is equipped with a unique learning feature that finds the right parameters for well-balanced compression results.

During the learning process, smart:comp 2 analyzes the incoming audio signal and automatically computes compressor parameters that lead to a well-balanced and transparent compression.
A wide range of instrument, bus and mix profiles allow you to prime the plug-in for different signal types.

1. Select a profile

A profile calibrates the processing of smart:comp 2 to a specific sound source. You can always start the learning process with the "Universal" profile and switch to a more specific profile later.
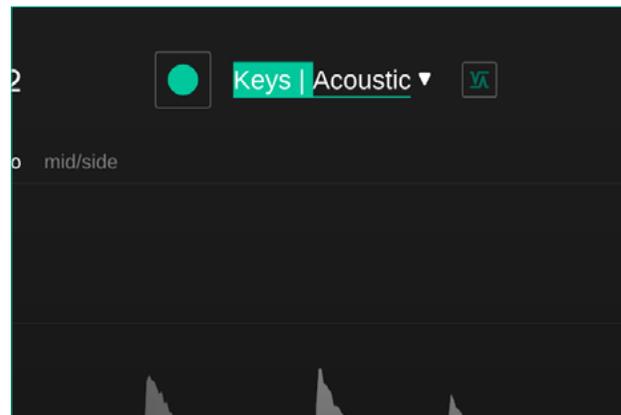
2. Start the audio playback & initiate learning

smart:comp 2 needs incoming audio material for the learning process. While learning, a progress bar inside the profile dropdown indicates the progression of the process.

It is recommended to let smart:comp 2 learn from relatively loud sections of your track (e.g. the refrain). This gives the plug-in a good idea of the most critical dynamic section of the track.
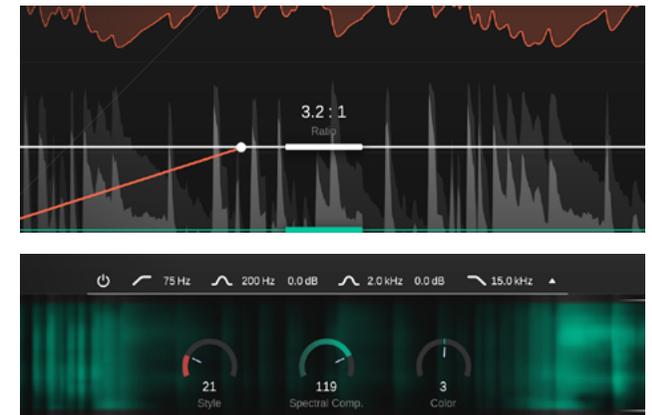
3. Done!

When the learning process is finished, smart:comp 2 will automatically set compression parameters - ratio and threshold as well as attack and release.

Additionally, the Spectral Compression, Color control and input riding will be activated.
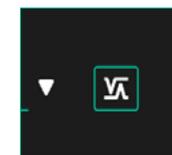
smart state
After making manual changes, return to smart:comp 2's recommended settings by pressing this button.

Compression parameters

1 Threshold

Threshold defines the level of the input signal at which the compression effect is engaged. It must be set below the maximum level of the input signal.

2 Ratio

Ratio determines how much compression is applied to any signal that goes over the threshold.
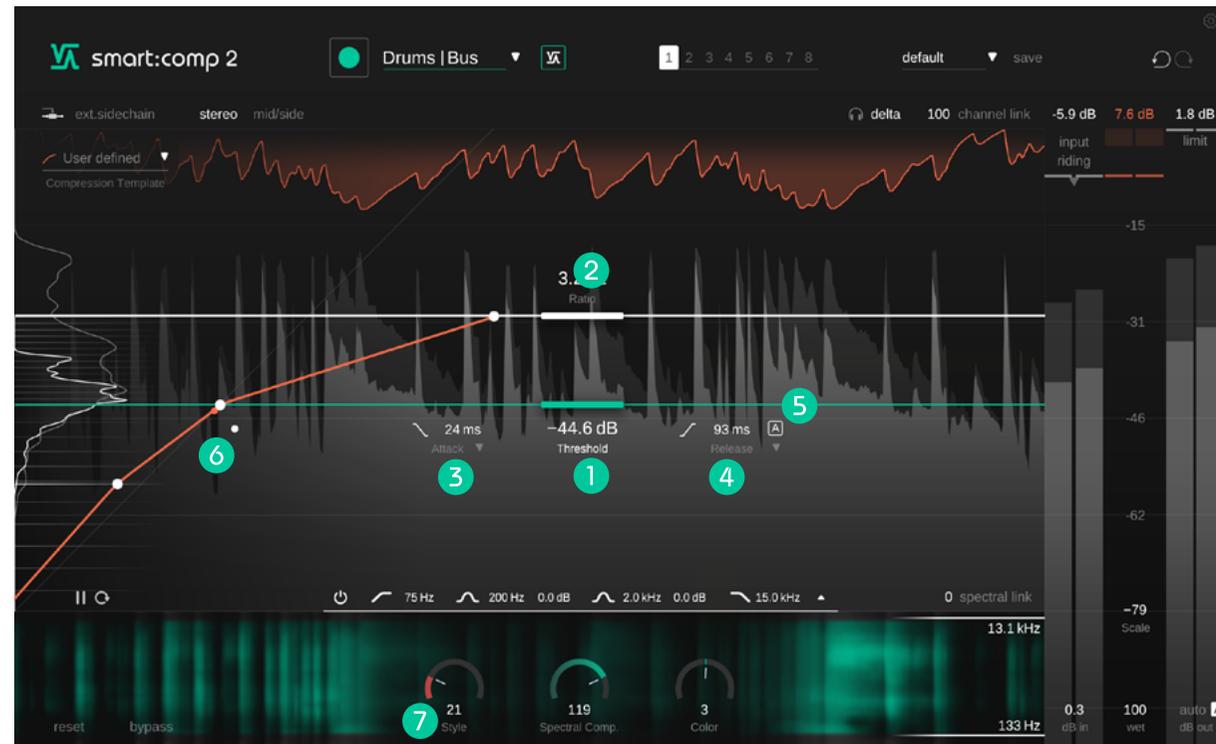
3 Attack

Attack defines the time it takes for the signal to become fully compressed after exceeding the threshold level.

4 Release

Release defines the time it takes for the signal to recover from its compressed state to its original non-compressed state.

5 Auto Release

If auto release is enabled, the release time adapts itself to the characteristics of the input signal. This adaptive release time ensures a smooth limiting process even when you go for more extreme gain settings.

6 Knee

Depending on the knee shape, smart:comp 2 commences gain reduction, after the signal has exceeded the threshold level, either gradually (soft knee) or rather abruptly (hard knee). The softer the knee, the slower the compression approaches the defined ratio as the signal level increases.

7 Style

The Style parameter determines the character of the compressor between "clean", a transparent, subtle sound, and "dirty", a tight, warm and punchy sound.

Attack and Release Shaper

For quick changes of the attack and release times, move the little attack and release icons (below the threshold) up and down. For detailed fine-tuning you can configure both visually in the Attack and Release Shaper which is especially great for sound design and for sculpting transients. Access it by clicking on the small arrows of the attack or release label.
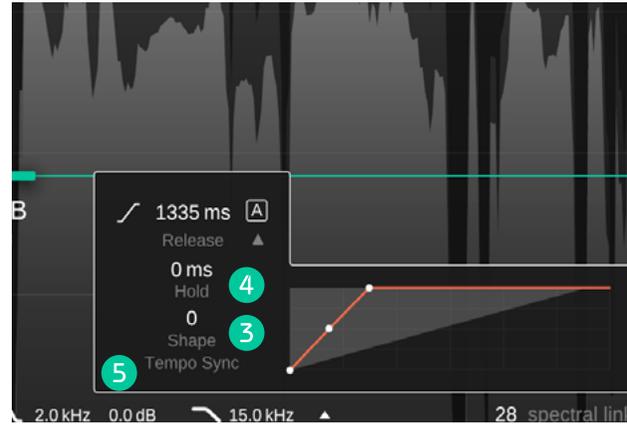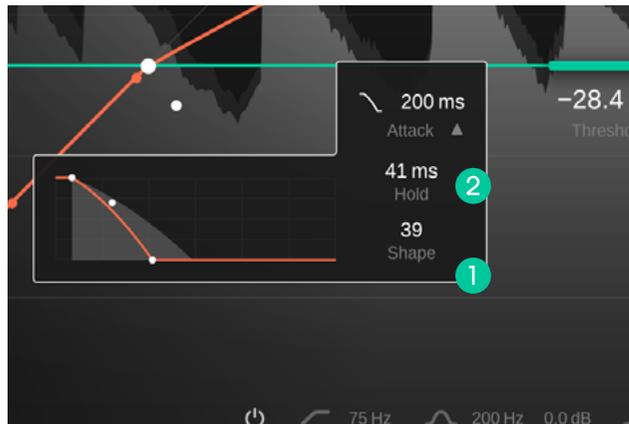
1 Attack shape
The attack shape defines how fast the signal will reach maximum compression during the attack time after exceeding the threshold level.

2 Attack hold
The attack hold defines the amount of time the compressor waits until the compression kicks in once the signal goes above the threshold.

3 Release shape
The release shape defines how fast the signal recovers from its compressed state during the release time.

4 Release hold
The release hold defines the amount of time the compressor waits until the signal starts to recover from its compressed state after falling below the threshold.

5 Tempo Sync
smart.comp 2 can sync your release time to the currently selected tempo inside your DAW.

Spectral Compression

By continuously analyzing the input signal across more than 2000 bands, smart:comp 2 acts like an intelligent, ultra-high-resolution multiband compressor that dynamically smoothes out tonal imbalances. It only applies compression where it's really needed and therefore ensures a consistent tonal as well as dynamic balance at all times. Spectral Compression aims to give a track the best possible definition and maximum transparency.

Spectral Compression will only be activated after smart:comp 2 learned from your signal.
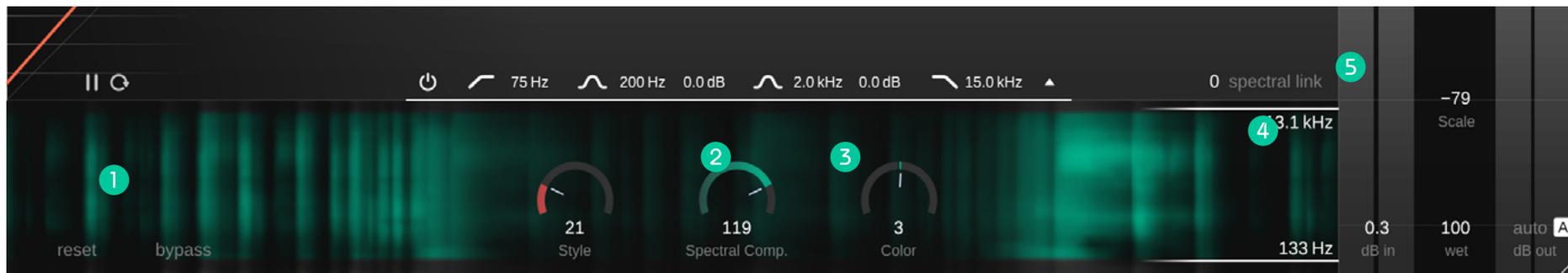
1 Spectral Compression Display

See where smart:comp 2 is applying Spectral Compression in a spectrogram-like display. The more opaque an area is, the more compression has been applied.

2 Spectral Comp. control

Control the intensity of Spectral Compression. When set to 0, smart:comp 2 will act as an ordinary broadband compressor.

3 Color control

Change the sound – darker or brighter – of the Spectral Compression.

4 Frequency range

Control the frequency range where Spectral Compression is applied.

5 Spectral Link

Choose what happens to your signal outside of a chosen frequency range for Spectral compression. When set to 100, no compression will be applied. When set to 0, full broadband compression will be applied.

This setting will only have an impact when you set a limited frequency range.

Spectral Ducking

In external sidechain mode, the gain reduction is controlled by an external signal that is routed to the sidechain input of the plug-in – a technique called ducking.

smart:comp 2's Spectral Compression technology takes the regular broadband ducking approach one step further by only making space in your main signal where spectral clashes occur. Spectral Ducking allows for smooth merging of two signals, avoiding the pumping you might introduce with regular broadband ducking.
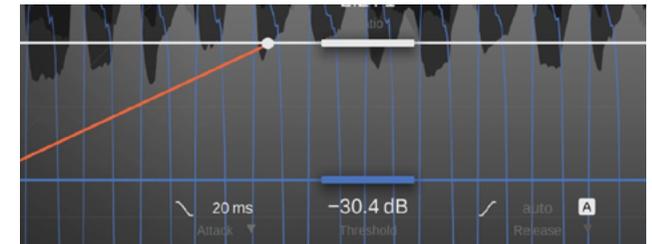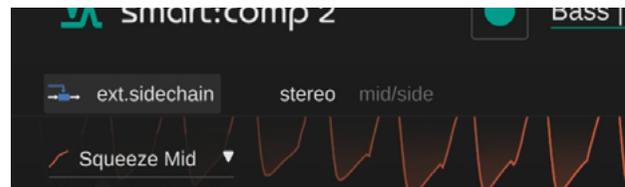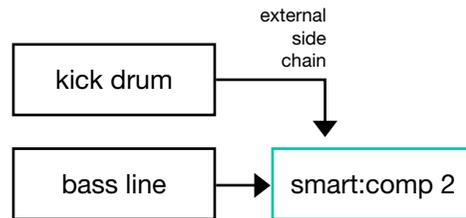
In your DAW, route the signal you want to create space for as an external sidechain to smart:comp 2.

Activate ext. sidechain in smart:comp 2. Some elements of the interface will turn blue.

The external sidechain that is now triggering the compression will be shown in the display of the time-domain compression.
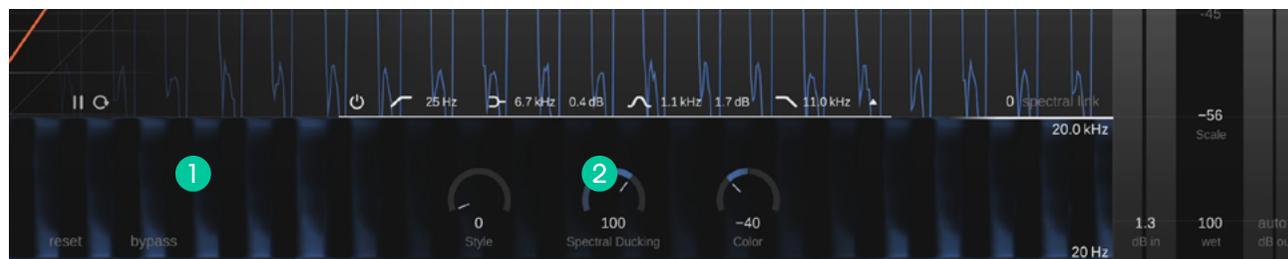

1 **Spectral Ducking display**

See where Spectral Ducking is making space for your sidechain signal. The more opaque an area is, the more ducking has been applied.

2 **Spectral Ducking control**

Control the intensity of the Spectral Ducking. When set to 0, smart:comp 2 will apply regular broadband ducking.

Free-form Transfer Function and Level Histogram

smart:comp 2 lets you freely modify the compression transfer function and provides templates to achieve complex compression goals (e.g. boost of low level content while keeping the mid-level untouched) and for sound design (in more extreme settings).
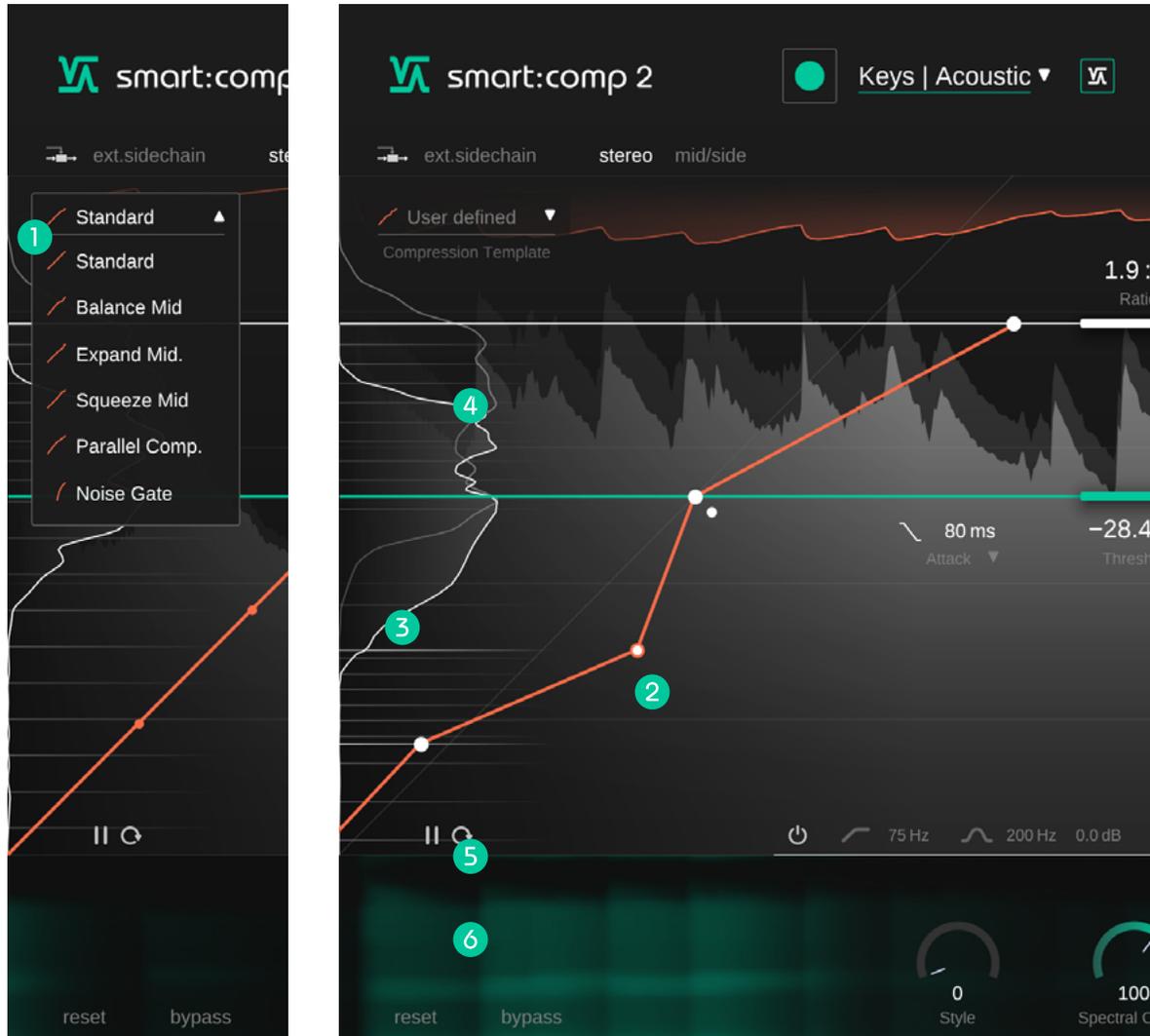
1   Explore the possibilities with a library of templates.

2   Freely change any thumb on the Free-form Transfer Function to customize the level mapping.

3   **Level Histogram**
The RMS level histogram shows the distribution of levels in the input signal incl. input gain (light grey) and the compressed output signal excl. output gain (white). As you change your compression settings, these curves will update in real time.

4   **Compression Grid**
The compression grid is a visual representation of the level mapping currently set for the transfer function. It provides an intuitive overview of which levels are being compressed or expanded.

5   **Pause/Reset**
Resets or pauses the level measurements for the histogram. Use this feature if you're applying any major changes to your signal chain feeding into smart:comp 2.
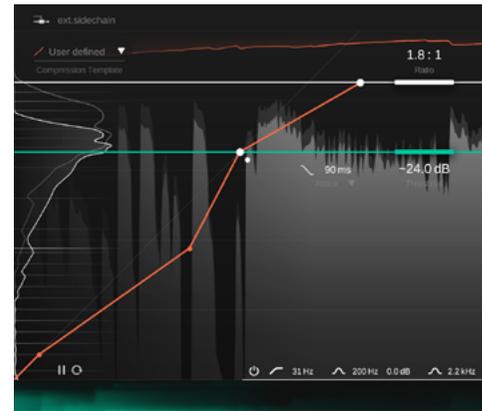
Free-form Transfer Function examples

No Compression

In this setting, any given input level will be mapped to the same output level. This setting results in the signal being completely unchanged.

Note that the grid lines are all spaced equally.


Expand Mid

Here we've chosen the 'Expand Mid' Template, changing how smart:comp 2 handles levels below the set threshold.

The loudest signal parts are being compressed (just as before), signals between the threshold and the second thumb are expanded and signals below the lower threshold are compressed again.

This mapping is also indicated by the spacings of the Compression Grid.
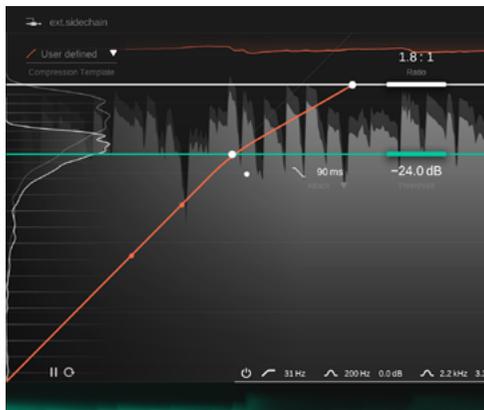

Regular downward compression

This is the transfer function for regular downward compression.

The grid lines are closer together above the threshold, indicating that the signal will be compressed in this area. Below the threshold, the signal remains unchanged.
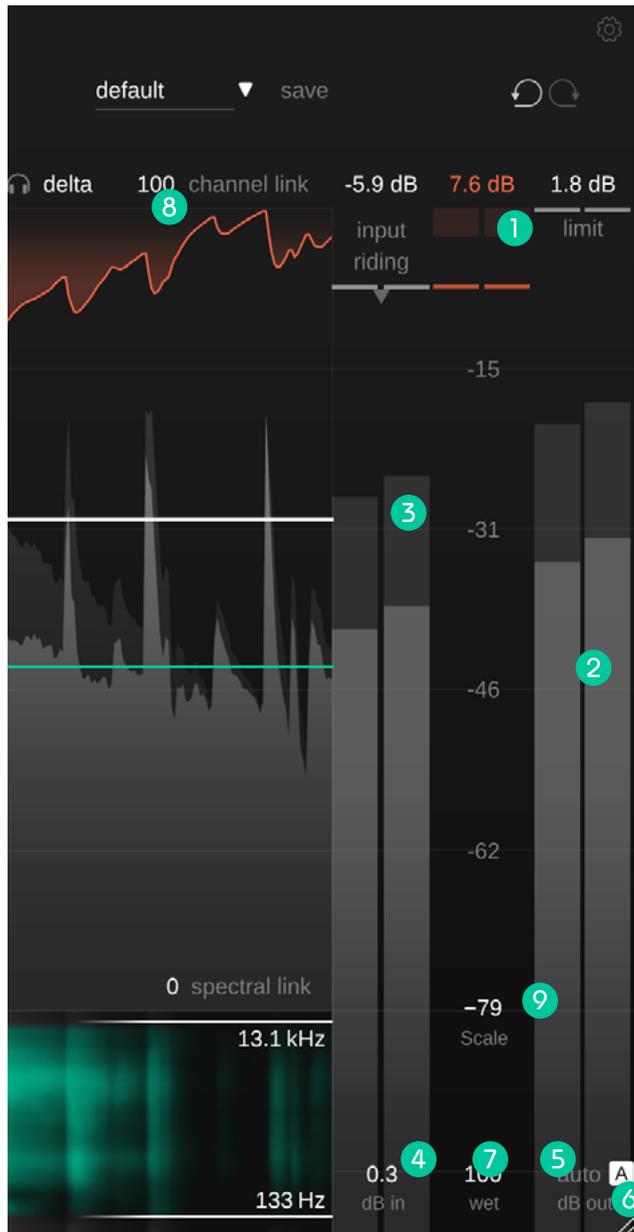
Due to the release time, levels below the threshold will also be changed while the compressor is returning to zero-gain reduction after a peak.
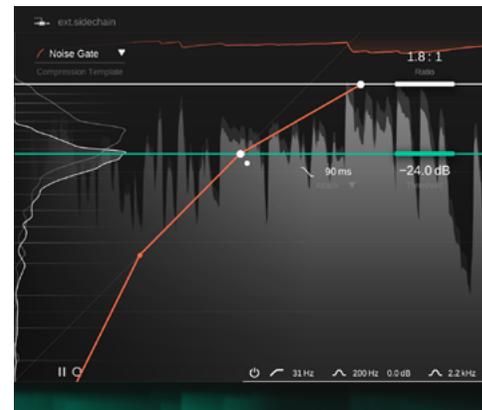
Noise Gate

In this example, we've chosen the 'Noise Gate' Template. This adds a gate-like functionality, as very quiet signal parts are now being mapped to an output level of zero.

Metering and gain controls

1 **Gain reduction meter with readout**
The gain reduction meter displays the real-time negative gain applied by the compressor. The GR value (= gain reduction) above the meter shows the current maximum gain reduction for all channels.

2 **Output meter with readout**
The output meter shows the peak (background) and RMS value (foreground) for the output signal. The peak value shows the maximum observed peak value for all channels.

3 **Input meter with readout**
The input meter shows the peak and RMS values for the gained input signal. If input riding is activated (see next page), the applied gain offset is indicated by a green bar inside the meter.

4 **In Gain**
Set the input gain to reach a proper input level.

5 **Out Gain (Make-up gain)**
Set the output gain (make-up gain) to adjust the average overall level so that the signal fits your mix.

6 **Auto Gain**
Auto gain automatically sets the output gain (make-up gain) to compensate for the level reduction caused by compression. After finishing the learning process, the auto gain becomes a smart auto gain that ensures a good matching of input and output RMS levels.

7 **Wet**
Control the ratio of wet signal to dry signal. At 100% you'll only hear the wet (compressed) signal.

8 **Channel link**
Channel link controls the amount of linking between channels when working on stereo or multichannel signals. When set to 100, the maximum gain reduction value computed for any channel will be applied to all channels. By reducing the value, all channels will gradually be processed independently.
Unlinking channels can help if, for example, the left and right channel of a stereo signal carry signals with different characteristics. Be careful though, as processing channels individually may modify the stereo image due to the destruction of binaural cues.

9 **Scale**
Control the display range of the signal history, the meters and the Free-form Transfer Function between 24dB and 96dB.
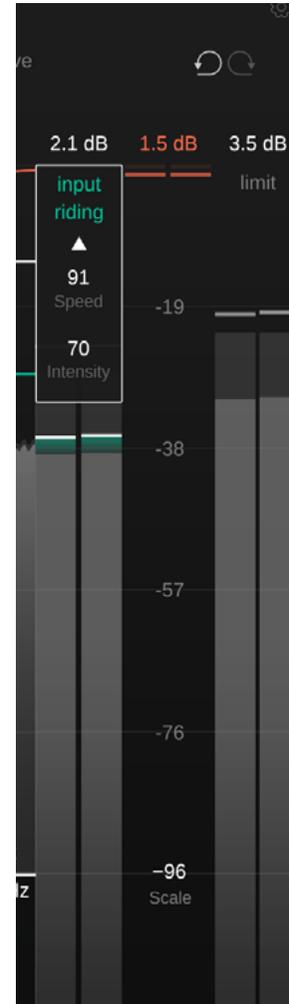
Input riding

smart:comp 2's input riding makes sure that the level of the gained input signal remains within a certain range by adding a dynamic negative or positive offset to the input gain. Input riding allows to balance out level differences in different sections of the signal (e.g. loud or quiet sections). That way, the level of the processed signal will remain more or less constant.
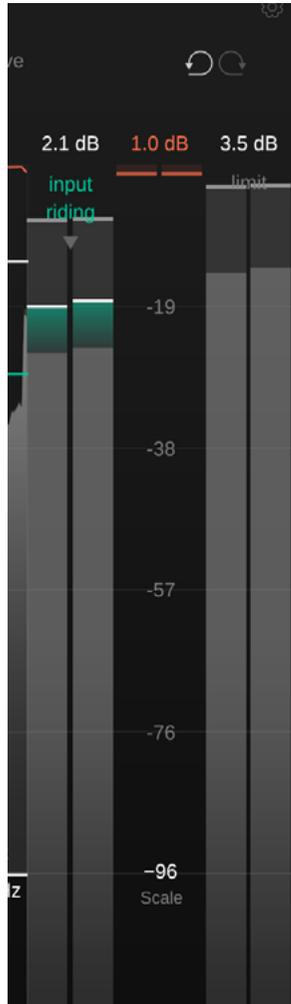
Activate input riding by clicking on the label.
You can see the influence the input riding has on your signal as a green bar inside the input meter.

You have to let smart:comp 2 learn your signal to activate input riding.

Click the arrow to expand the input riding widget and access additional control options.

Speed controls how quickly the gain adapts to changing input levels.

Intensity controls the maximum offset input riding will apply to the signal.

Sidechain EQ

The sidechain EQ allows you to pre-filter the compressor's sidechain signal (= the signal the compressor uses for computing the gain reduction). That way, it's easy to exaggerate (or reduce) the impact of certain frequency ranges on the compression.

1. Expand the sidechain EQ widget by clicking on the small arrow.

2. Enable/disable the sidechain EQ.

3. Set a high- or low pass filter.

4. Change gain and frequency of a filter by clicking and dragging; change its Q factor by scrolling and reset the filter by double clicking.

5. Change the filter type between bell, shelf and inactive.

6. Click labels to type in precise values.

7. Listen to the filtered sidechain signal.

Mid/side processing

smart:comp 2 fully supports mid/side processing, allowing different compression settings for the respective signals.

1 Change between stereo and mid/side mode.

2 Set individual threshold, ratio, attack and release parameters for each signal. Change between mid and side by clicking the respective label or the ratio thumb of the inactive transfer function.

3 In mid/side mode, the meters will show the level of the mid and side signal as well as the mid and side gain reduction and gain reduction history.

**4** Set an individual input and output gain for the mid and side signal.

Surround processing

smart:comp 2 supports surround signal (5.1). You can apply the same processing settings to all channels or set distinct settings for the center and the side+rear channels.
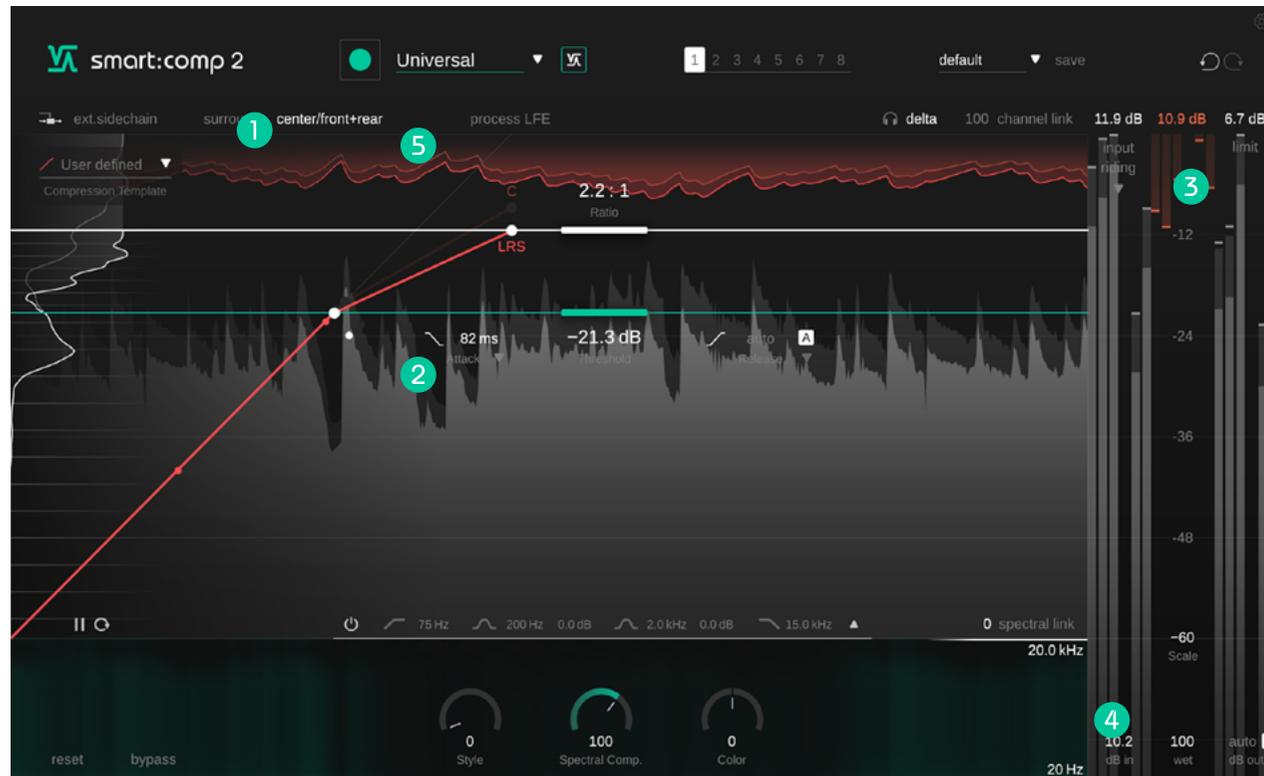
1   Change between surround and center/side+rear mode

2   Set individual threshold, ratio, attack and release parameters for center and side+rear channels. Change between center and LSR (left, side + rear, right) signals by clicking the respective label or the ratio thumb of the inactive transfer function.

3   When working with a surround signal, individual meters will be shown for all channels.

4   Set an individual input and output gain for the center and side+rear channels.

5   Include or exclude the LFE channel in the compression processing.

States and Presets
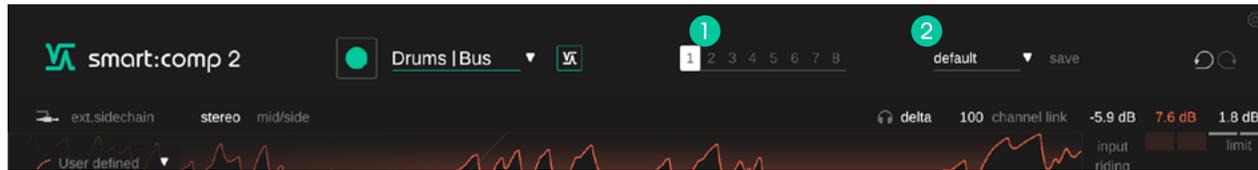
① States

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)

Working with states

1. Each state is initially empty (default parameters settings of smart:comp 2).

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 drop-down.
- 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/smartComp2
Windows: My Documents\Presets\sonible\smartComp2

Settings and Licensing
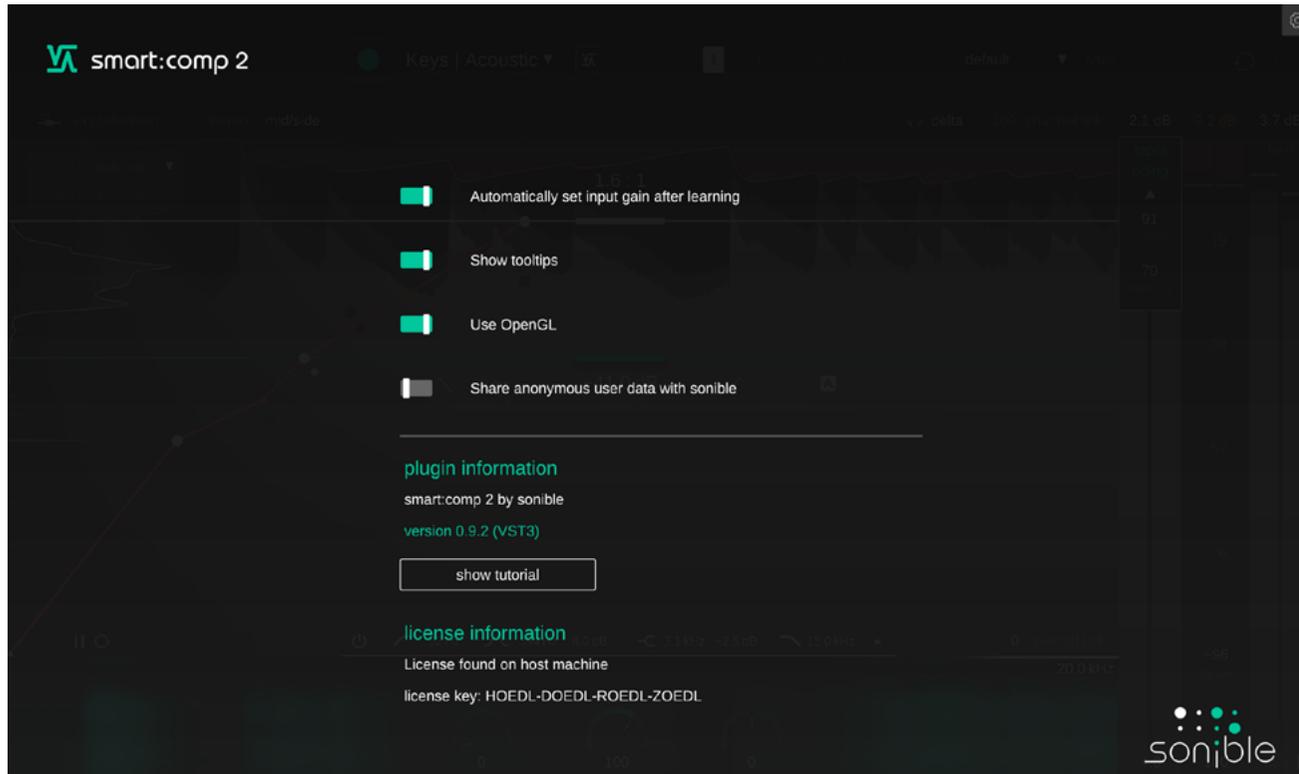
Use OpenGL

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

Share anonymous user data with sonible

Enable to share fully anonymous user data with sonible and help us improve smart:comp 2.

Plug-in Information

Here you can find the name and version of your plug-in. Start the welcome tour - a quick overview of the plug-in - features by click on "show tutorial".

License Information

This will display your license state and number (when not licensed via iLok)

Update notice

When a new version of the plug-in is available, you'll receive a notification here and it's also indicated by a little dot on the cogwheel in the main view of smart:comp 2. Click on the green text to download the latest version.

To visit the settings page, click the cogwheel in the upper right corner.

Automatically set Input Gain after Learning

Enable to automatically set an input when learning is completed. This option helps to automatically increase the level of quiet input signals to a proper working level around -6dBFS.

Enable Auto Gain After Learning

Automatically activates the auto gain (automatic output gain) after learning. Auto gain automatically sets an output gain to compensate for the level reduction caused by compression.

Show tooltips

Enable/Disable tooltips on hover.

smart:comp 2

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All specifications are subject to change without notice.

www.sonible.com

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