



# **INSTINCT**

## **INERTIA SOUND SYSTEMS**

**Operation Manual**

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Inertia Sound Systems

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# 1 INTRODUCTION

Instinct is not just another distortion, dynamics processing, or tone shaping audio engine. It is a sonic monster that can create new worlds from the sound you feed it with, varying from smooth analog warmth or dynamics processing to total destruction, aggressiveness and alienation.

Instinct is an ideal tool for mixing, by bringing forward underlying transients or adding "body" to weak sounds, but it can also be used for creative sound design. Its ambition is to be the producer's and sound designer's tool of choice when it comes to dynamics distortion and tone shaping.

Instinct is available in Audio Unit (AU) and VST Instrument format, available for Windows, macOS and Linux (experimental).

Instinct can deliver results that vary from smooth saturation or mild dynamics processing, to extremely distorted and noisy breathing sounds, with wide dynamics and a very rich frequency spectrum.

The plug-in features

- **High quality resampling** with band limited sinc interpolation. Operating at 4x or 8x oversampling for pristine sound.
- **A wide response transient shaper "SCULPT"** with controls over time response, character, creating modulation signals at audio rate that can modulate circuit parameters, achieving unique dynamics and distortion shaping.
- **High quality, Transistor and Tube models**, that can be tweaked and modulated in depth.
- **High quality, zero delay feedback, analog modeled, resonant drive and tone filters**, with internal saturation, and self oscillation.
- **Morph** across different transistor models, or internal tube model parameters, with optional modulation.
- **Two different "Puncher" transistor models** to choose and morph with.
- **Control over bias**, with optional modulation.
- **Versatile signal flow**, with one or two drive circuits in series.
- **External Sidechain.**
- **Automated Parameters**
- **An intuitive and portable preset system**
- **A Help Display** that explains the function of every parameter when the mouse is over it.

## 1.1 Supported OSs, DAWs & Plugin Formats

Instinct runs on the following Os's and is available in the following formats

- Windows : Windows 10 x64 - VST / VST3 64bit - Ableton Live, Bitwig, Reaper
- macOS : 10.12 - 10.15 AU / VST / VST3 64bit. - Ableton Live, Bitwig, Reaper, Logic Pro X.
- Linux : UBUNTU 20.04 VST / VST3 64bit. - Bitwig, Reaper.

## 1.2 Demo Restrictions

The plug-in demo is fully functional, but it cannot save or restore its state or save any presets. Furthermore the plugin will stop being active after 10 minutes of use. In order to continue trying, the plugin should be reloaded.

### 1.3 Instinct License

When you are purchasing Instinct, you can install it to up to 3 different machines. If you need to install it to more, you need to contact Inertia Sound Systems at <https://www.inertiasoundsystems.com>, to purchase further licenses.

### 1.4 Installation

- **Windows** Double click Instinct installer and follow the instructions. VST3 will be installed into **C:\ProgramFiles\Common Files\VST3** by default.

You can choose to install the VST2 version of plugin in your custom plugin folder or use the default location **C:\ProgramFiles\Common Files\VST2**.

The preset folder can be found into **C:\Users\your user name\Documents\Inertia Sound Systems\Plugin Presets\Instinct**.

The manual can be found into **C:\Users\your user name\Documents\Inertia Sound Systems\Manuals\Instinct**.

- **macOS** Double click Instinct.pkg and follow the instructions.

The Audio Unit plugin will be installed into **/Library/Audio/Plug-Ins/Components**, the VST into **/Library/Audio/Plug-Ins/VST**.

and the VST3 into **/Library/Audio/Plug-Ins/VST3** by default.

The presets folder can be found into **/Users/Shared/Inertia Sound Systems / Plugin Presets /Instinct**.

The manual is located in **/Users/Shared/Inertia Sound Systems / Plugin Presets/ Instinct**.

- **Linux** Uncompress the **Instinct\_1.0.1.tar.xz**. Open a terminal, navigate to the Instinct\_1.0.1 folder and run the "install.sh" script.

The VST and VST3 plugins will be installed in the .vst and .vst3 folders respectively, under your home directory by default. The presets will be installed under the **" /config/Inertia Sound Systems/Plugin Presets/Instinct"** directory. The manual will be installed into **" /Documents/Inertia Sound Systems/manuals/Instinct"** folder.

### 1.5 Registration

The first time and before you authorize, the plugin is loaded in try out mode (figure 1).

To authorize you can either press the "Learn How" Button at the bottom of the plugin or the gear icon at the upper right side. This will take you to the registration view (figure 2)

You can authorize the plug-in by following steps 1 and 2. When the plugin is authorized you can get back to the main view by clicking the gear icon at the upper right side.



Figure 1: Instinct, try out mode

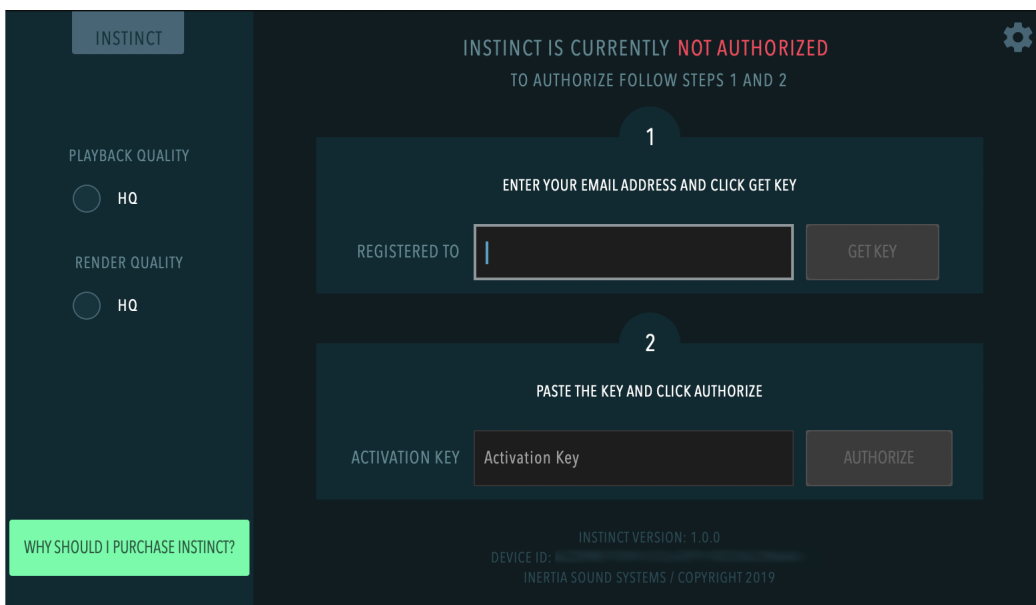


Figure 2: Instinct, registration view

## 2 PLUGIN SETTINGS

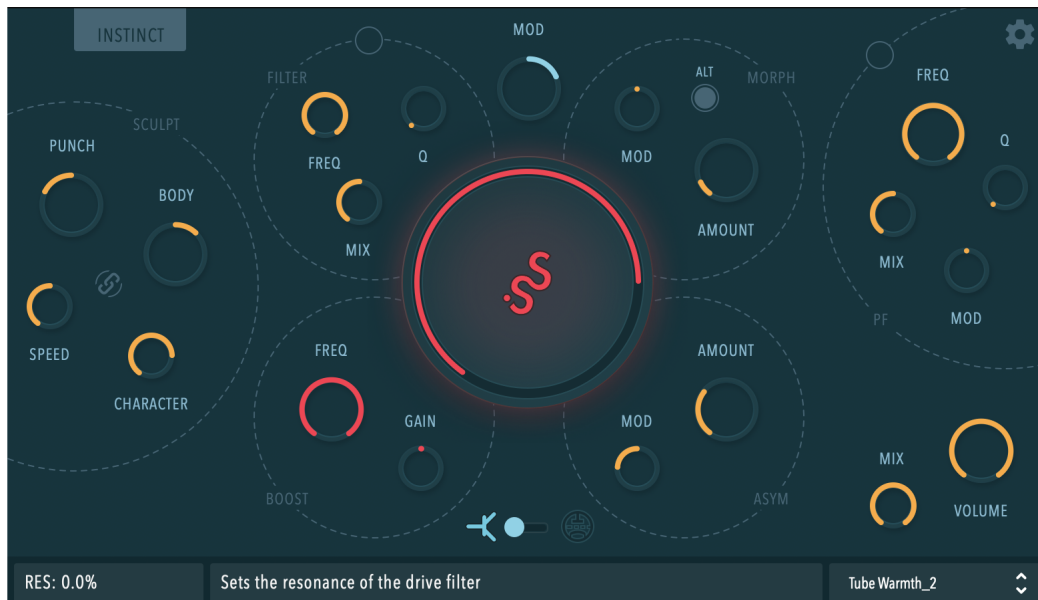
In case you want to review your authorization credentials or change the playback and the render quality of the plugin, you can click at the gear at the upper right side of the display. This will bring up the registration view of the plugin. To get back to the main screen click the gear icon again.

## 3 PARAMETERS & OPERATION

### 3.1 Overview

Instinct features the following sections:

- **Sculpt**, The transient shaper module, with controls for punch, body, character, and speed.
- **Boost**, A pre - boost filter with controls for frequency and gain.



**Figure 3:** Inertia Sound Systems Instinct

- **Filter**, A saturating resonant zero delay feedback VA lowpass filter with controls for frequency, Q, and mix.
- **Drive**, With controls for gain, gain modulation amount, drive model (transistor / tube).
- **Morph**, With controls for morph amount (for internal drive parameters) and morph modulation amount.
- **Bias / Asym**, With controls for bias amount, and bias modulation amount.
- **Post Filter**, With controls for cutoff frequency, Q, cutoff modulation amount and mix.
- **Amplifier**, With controls for mix, and output volume.

## 3.2 Concept & Signal Flow

The concept behind instinct, is to have the ability to control tone, drive and drive circuit parameters dynamically, based on a modulation signal that is created by the shaping - sculpting of the intensity envelope of the "SCULPT" section input. This is what makes Instinct's engine alive and pumping. As denoted in figure's 4 legend, the blue buses carry the modulation signal to the modules that can use it. By adding it to the drive circuit's gain parameter a drive / transient shaper effect is produced. The shaped modulation signal can also alter other parameters, such as bias, transistor's circuit shapers, tube's circuit internal voltages, or post filter's cutoff frequency.

## 3.3 Sections & Parameters

### 3.3.1 SCULPT

- **PUNCH** : Increases or decreases the intensity of the transients' attack.
- **BODY** : Increases or decreases the intensity of the transients' release.
- **SPEED** : Adjusts the speed of the underlying envelope followers.
- **CHARACTER** : Adjusts the non linear behavior of the underlying envelope followers. Lower values correspond to a more linear behavior, whereas higher values tend to expand the detected envelope.

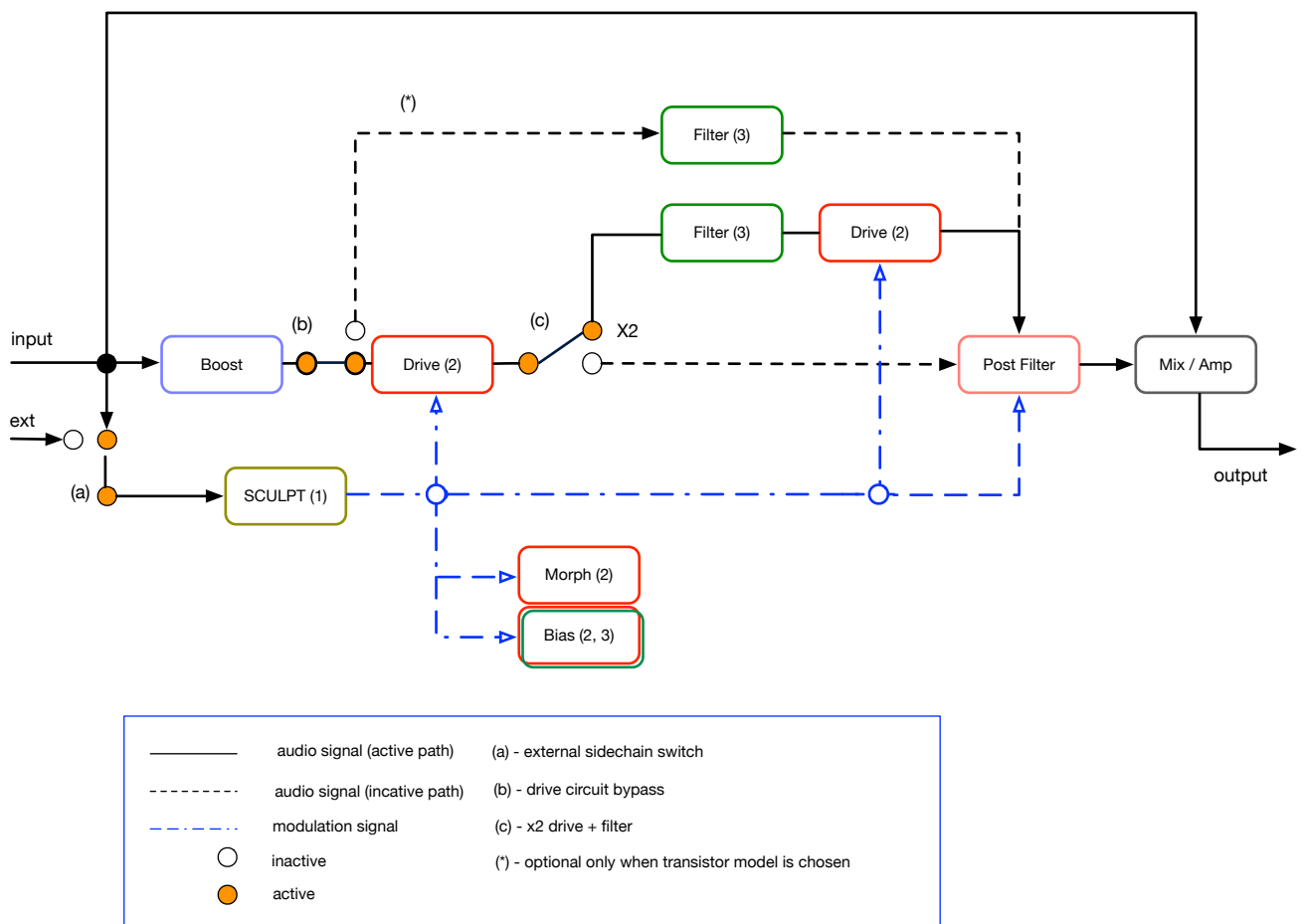


Figure 4: Signal Flow

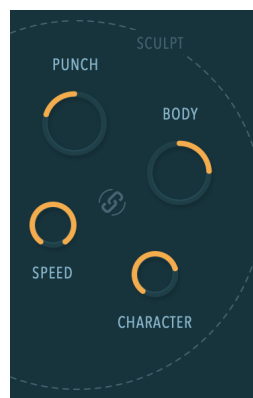


Figure 5: Sculpt

- **EXT. SIDECCHAIN** : When active, the SCULPT module operates on the sidechain signal, that depends on the routing chosen in the DAW.

### 3.3.2 BOOST

The Boost section increases or decreases the gain around the center frequency set by the **FREQ** parameter.

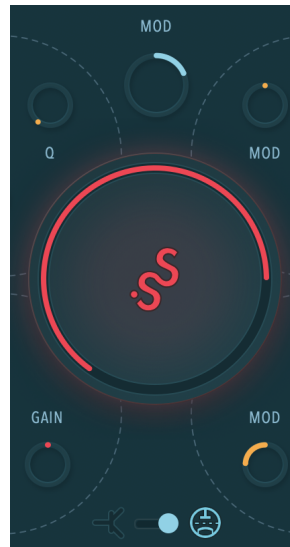
- **FREQ** : Sets the center boost frequency.
- **GAIN** : Sets the gain of the center frequency.





**Figure 6: Boost**

### 3.3.3 DRIVE



**Figure 7: Drive**

- **GAIN** : Sets the gain of the selected drive circuit selected by the MODEL parameter. Furthermore with Command + Click (mac) or Control + Click (Windows) the user can change the signal path by enabling the drive filter and the 2nd drive circuit.. ( see (c) in figure 4).
- **MODEL** : Selects the tube or transistor circuit models.
- **MOD** : Sets the modulation amount of the drive circuit's gain.

### 3.3.4 FILTER

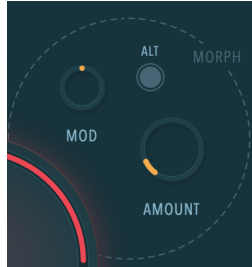


**Figure 8: Filter**

- **FREQ** : Sets the cutoff frequency of the filter.
- **Q** : Sets the resonance amount of the filter.

- **MIX** : Sets the mix amount of the filter.
- **FILTER ONLY** : When the transistor model is chosen from the drive circuit section, if FILTER ONLY is enabled the drive circuit is bypassed and the saturation is taking place in the filter's guts creating a different flavor (see (\*) in figure's 4 legend).

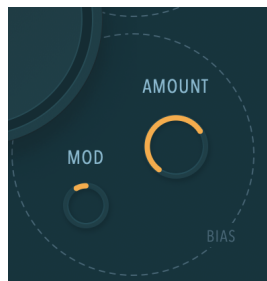
### 3.3.5 MORPH



**Figure 9:** Morph

- **AMOUNT** : Sets the morph amount.
- **MOD** : Sets the morph amount modulation.
- **ALT** : Available only when the transistor model is chosen, selects the type of transistor model morphing. When inactive the result resembles a frequency modulation sound for high morph amounts. When active a more classic puncher morphing is applied.

### 3.3.6 BIAS

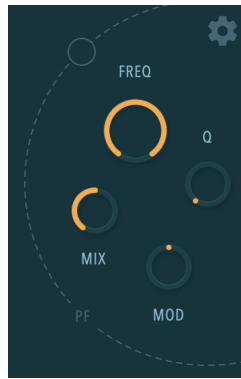


**Figure 10:** Bias

- **AMOUNT** : Sets the bias of the drive circuit.
- **MOD** : Sets the bias modulation amount.

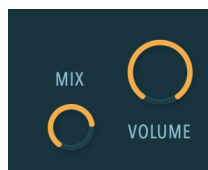
### 3.3.7 PF (Post Filter)

- **FREQ** : Sets the cutoff frequency of the filter.
- **Q** : Sets the resonance amount of the filter.
- **MOD** : Sets the modulation amount of the cutoff frequency.
- **MIX** : Sets the mix amount of the filter.
- **ON / OFF** : Activate or deactivate the post filter module.



**Figure 11: PF**

### 3.3.8 AMP



**Figure 12: Amp**

- **MIX** : Sets the overall mix amount (DRY / WET).
- **VOLUME**: Sets the overall volume of the plugin.

### 3.3.9 Preset Browser

Instinct comes with factory presets, and gives the user the ability to create custom ones. The presets are located into

- **Windows** *C:\Users\user\AppData\Roaming\Inertia Sound Systems\Plugin Presets\Instinct*
- **macOS** */Users/Shared/Inertia Sound Systems/Plugin Presets/Instinct*
- **Linux** */.config/Inertia Sound Systems/Plugin Presets/Instinct*

To access the presets click on the preset browser.

You can load a preset either by clicking the up / down arrows or by choosing a preset from the popup menu.

In the actions section can perform the following

- **Save Preset.** A new preset is saved in the user preset folder. When a new preset is saved the plug-in loads it immediately.
- **Init.** Initializes the plug-in. All parameters are set to their default values.

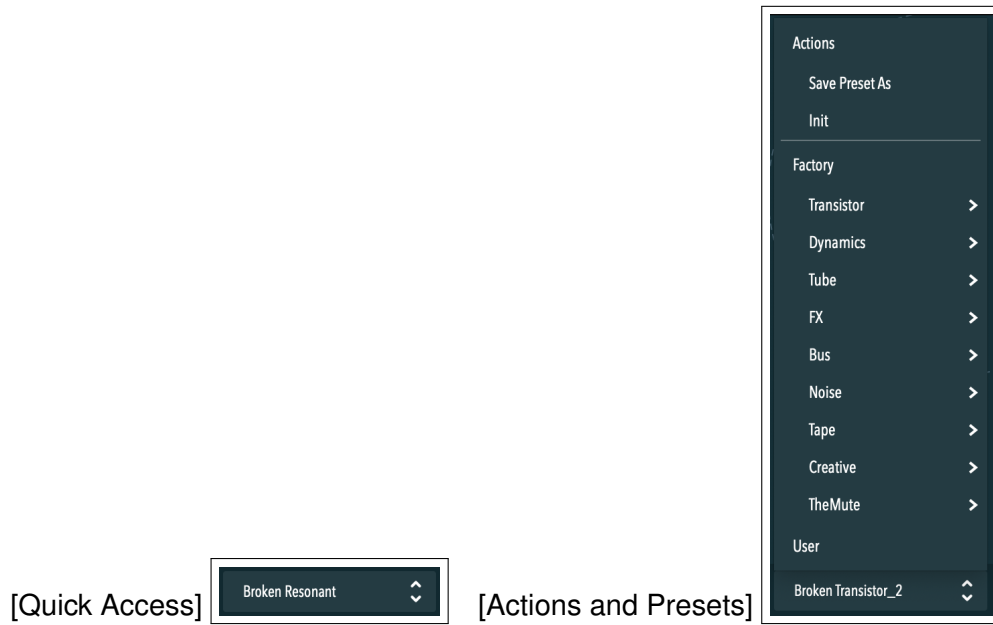
### 3.3.10 Displays

- **Parameter Display.** Shows the values of the tweaked parameters.
- **Help Display.** Shows a tooltip whenever the mouse is over a parameter.

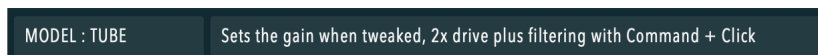
## 3.4 Default Values & Parameter Fine Tuning

Each knob of Instinct can be reset to its default value by double clicking or by pressing alt + click on it. Fine tuning parameter values is possible by holding down control (Windows) or command (macOS) while tweaking a knob with the mouse.

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**Figure 13:** Preset Browser



**Figure 14:** Parameter and Help Displays