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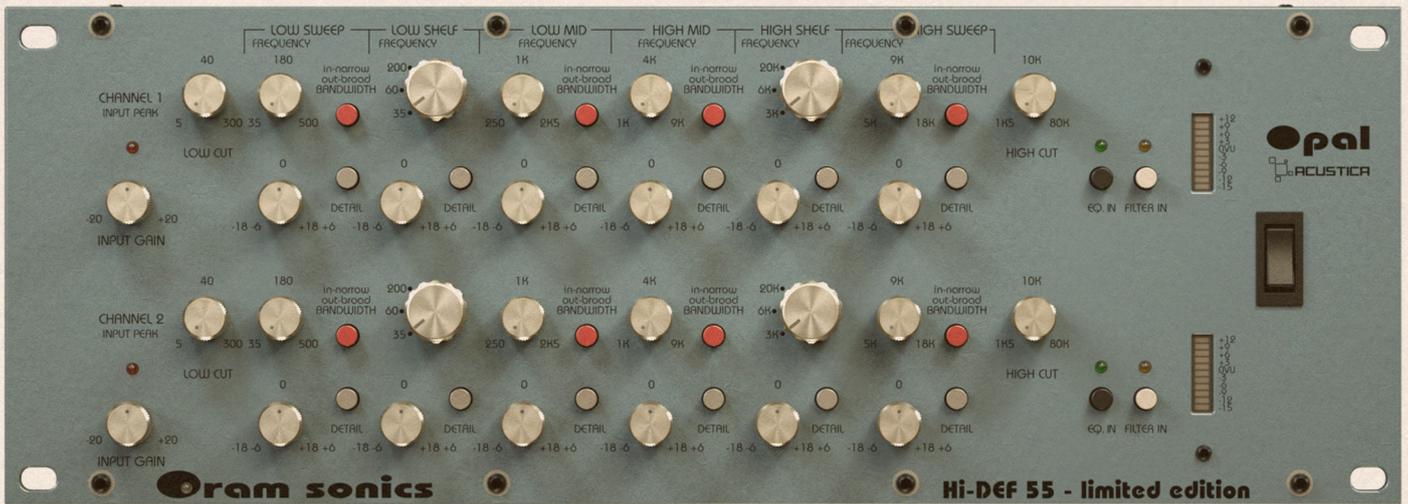
# INTRODUCTION

Opal is a VST/AAX/AU plug-in collection that fully recreates the exquisite Oram Sonics Hi-Def 55 EQ. Faithfully sampled to replicate what is possibly the most advanced system designed by John Oram.

Opal incorporates all the magic that Oram Sonics has provided over the years, giving you more flexibility than ever before, both at the mastering stage as well as during mixing.

The Opal collection includes two plugins. One is the standard version of the Hi-Def 55, as originally designed by John Oram. The second one provides extended functionality by adding a Preamp input trim, Mid/Side, Pan, and Spread controls, as well as independent channel output control.

Standard Version



Extended Version



## ABOUT JOHN ORAM

John Oram is a legendary name in the electronic musical industry, whose designs have been nominated for 23 Technical Excellence & Creativity awards, winning some along the way, and whose creative talent as a musician, producer, touring drummer, mixing and technical engineer brought him to work with some of the most important bands and manufacturers from the early '60s onward, including the Beatles, the Rolling Stones, Vox and Trident Audio.

As part of the Vox team he was the designer of the Wah-Wah, The Fuzz Box and Continental Organ, leading to the circuitry design for VOX AC50 and Super Beatle amplifiers.

John Oram joined Trident Audio Developments in 1972, where he worked as designer for 14 years and created some of the industry's most famous classic desks such as the Trident Series 80/80B/80C consoles.

Under his brands, Oram Professional Audio and Oram Consultancy, he was responsible for world-class film rooms and equipment for many Oscar-winning productions such as Avatar, Pirates of the Caribbean, King Kong, The Lord of the Rings, Jurassic Park, Pearl Harbor, Titanic, and more.

In 2008 John was nominated for a Technical Grammy Award. Al Schmitt, legendary recording producer and engineer has this to say: "John is one of the best design engineers in the business. A big part of my sound on records I attribute to John".



# SYSTEM REQUIREMENTS

Modern computers are powerful enough to run many plugins at once. However, our technology requires more resources than algorithm-based software, so we recommend optimizing your system to work with high CPU loads and low audio latency.

	PC Windows		Apple macOS	
	MINIMUM	RECOMMENDED	MINIMUM	RECOMMENDED
<b>OPERATING SYSTEM</b>	Windows 10 64 bits	Windows 10 64 bits	macOS 10.9	macOS 10.14
<b>CPU</b>	Intel i5 Broadwell 3.1 GHz*	Intel i9 Coffee Lake 3.5 GHz*	Intel i5 Broadwell 3.1 GHz*	Intel i9 Coffee Lake 3.5 GHz*
<b>RAM</b>	4 GB of RAM <sup>(1)</sup>	64 GB of RAM <sup>(1)</sup>	4 GB of RAM <sup>(1)</sup>	64 GB of RAM <sup>(1)</sup>
<b>SSD</b>	500 MB	500 MB	500 MB	500 MB
<b>SCREEN RESOLUTION</b>	FHD (1920x1080)	UHD (3840x2160)	FHD (1920x1080)	UHD (3840x2160)
<b>PLUG-IN FORMAT</b>	VST & AAX <sup>(2)</sup>	VST & AAX <sup>(2)</sup>	VST, AAX & AU <sup>(2)</sup>	VST, AAX & AU <sup>(2)</sup>
<b>AQUARIUS</b>	Mandatory	Mandatory	Mandatory	Mandatory
<b>INTERNET CONNECTION</b>	Mandatory	Mandatory	Mandatory	Mandatory

All technical specifications of Acustica Audio products provided are intended to be estimates or approximations. Due to numerous variables, no guarantees of compatibility or performance can be made. The end-user is solely responsible for, prior to purchase, ensuring that the end-user's devices are compatible and meet the system requirements for Acustica Audio products.

\* AMD or Intel Xeon CPUs are not recommendable and the CPU speed is more important than the number of CPU cores.

<sup>(1)</sup> In order to run more plug-ins instances it is always necessary to increase the amount of RAM.

<sup>(2)</sup> 64-bits supported only.

## PRODUCT DOWNLOAD AND AUTHORIZATION

When you purchase a product from our web shop, the registration is au-tomatic. Your newly purchased product can be downloaded via Aquari-us, our dedicated free app for macOS and Windows. For more information please visit our website.

Make sure Aquarius is always updated to the latest version available. If you experience any issues during the authorization of your products un-install the plugin(s) and then re-install them using the latest version of Aquarius.

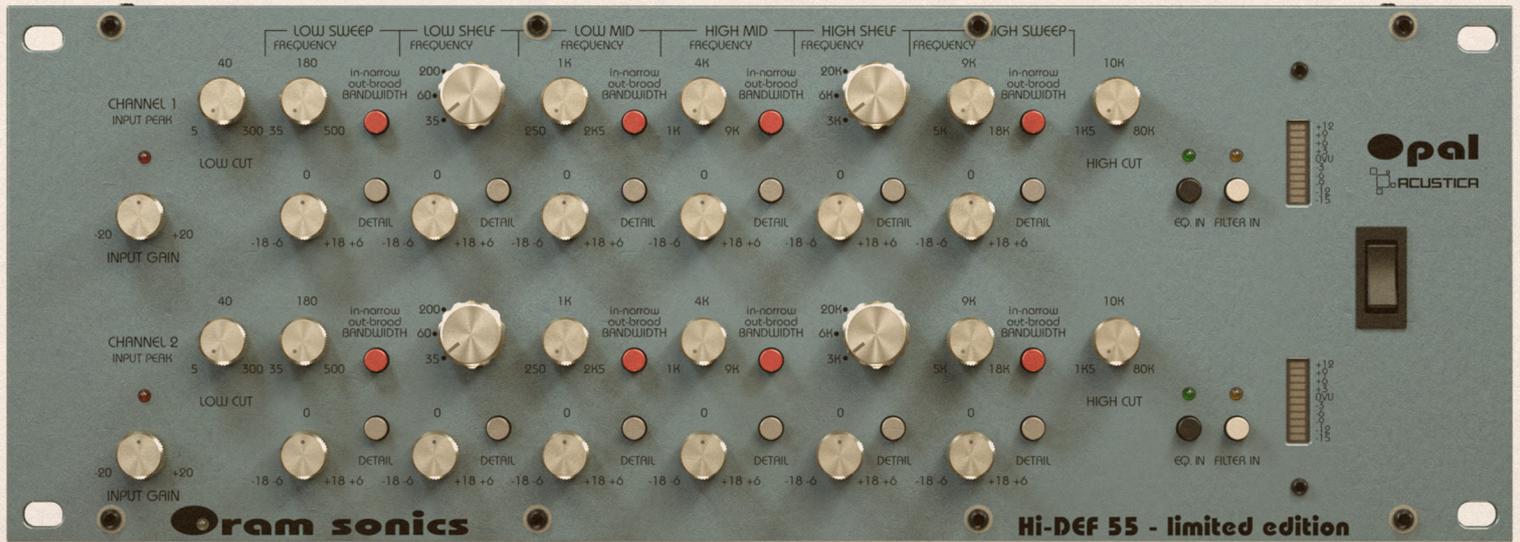
## WHAT IS A "ZL" PLUGIN?



Acustica plugins come in two versions: ZL (zero latency) and a regular version. While the ZL version does not introduce any latency to your system, the standard version does. This buffer varies in size for each plugin and helps reduce the CPU and system load of your computer significantly.

For this reason we recommend that you use a ZL instance when tracking. Basically both plug-in instances are identical but the current Acqua engine can work either with or without an audio buffer. The idea behind a ZL instance is to give you the option to run an Acqua Effect with minimal latency, which is useful for tracking or direct monitoring.

# OPAL HI-DEF 55 LIMITED EDITION



The Hi-Def 55 represents the latest design technology from John Oram in audio equalisation. Two equalisers in a 3U package for independent dual-mono or stereo applications featuring EQ flexibility not available in conventional designs.

## Featuring:

- Eight bands of overlapping adjustment per channel
- Unique combining of shelf and bell response curves
- Bandwidth parameter adjustment on two mid sweeps
- Detail function controlling level adjustment with precision
  - Separate equaliser and filter bypasses per channel
  - Input peak led for optimum equaliser drive level
    - Ten led output level meter
  - Precision toroidal based power supply
- Ultra low noise and high musicality with original:

 **oram sonics**

- Balanced inputs and outputs



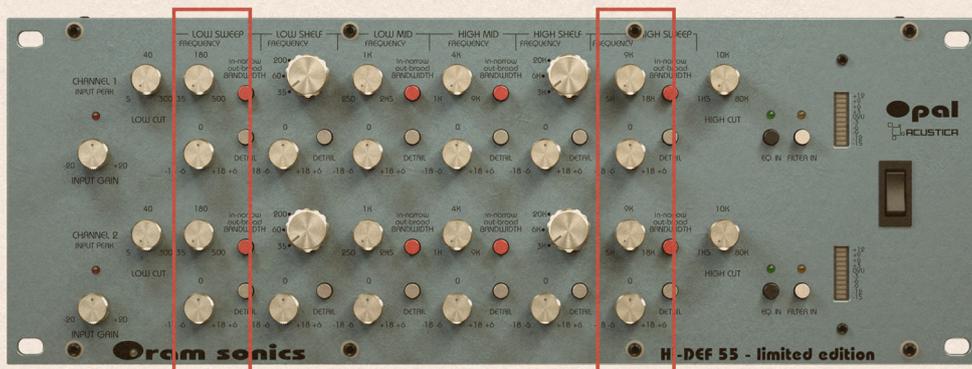
## INPUT GAIN, PEAK LED & LOW CUT

Channel 1 and Channel 2 are identical, all upper controls relate to Ch 1 and all lower controls to Ch 2.

The **INPUT GAIN** control provides level adjustment of 20 dB either side of unity gain (central position).

The **INPUT PEAK** led indicates the signal level after the input amplifier and peaks at +10 dBu allowing safe equalisation head-room within the following stages.

The **LOW CUT** control sweeps a steep low frequency cut from outside the audio band at 5 Hz to within at 300 Hz perfect for the removal of sub-sonics, rumble and microphone popping and for "tightening" kick drums and effects.

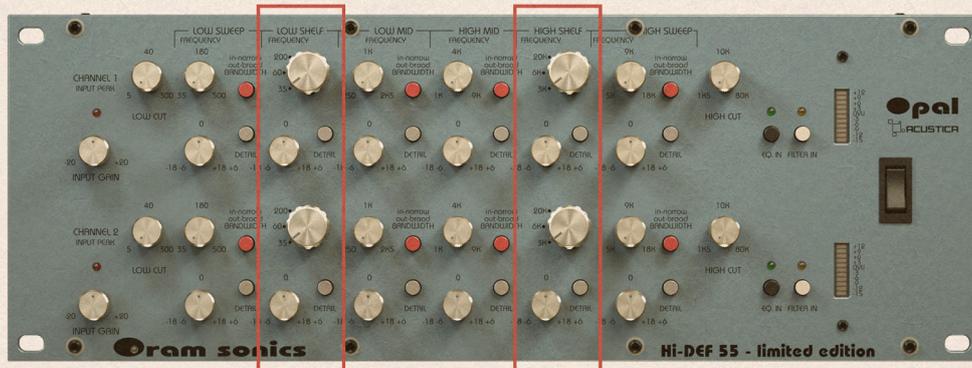


## LOW SWEEP & HIGH SWEEP

These stages control a bell-shaped response at both ends of the audio spectrum.

**LOW SWEEP** from 35 Hz to 500 Hz a switchable bandwidth. Level is controlled within 36 dB with switchable DETAIL giving +/- 6 dB for fine tuning.

**HIGH SWEEP** from 5 kHz to 18 kHz with switchable bandwidth. Level is controlled within 36 dB with switchable DETAIL giving +/- 6 dB for fine tuning

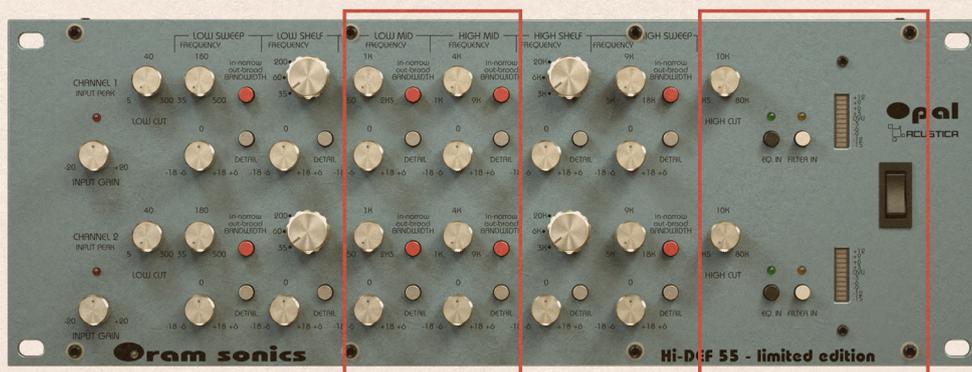


## LOW SHELF & HIGH SHELF

These stages control shelving responses at both ends of the audio spectrum.

**LOW SHELF** with switchable turnover points of 35 Hz, 60 Hz and 200 Hz. Level is controlled within 36 dB with switchable DETAIL giving +/- 6 dB for fine tuning.

**HIGH SHELF** with switchable turnover points of 3 kHz, 6 kHz and 20 kHz. Level is controlled with 36 dB with switchable DETAIL giving +/- 6 dB for fine tuning.



## LOW-MID & HIGH-MID SWEEP. HIGH CUT, EQ & FILTER BYPASSES, LEVEL METER AND LINE POWER SWITCH

These stages control bell-shaped responses in the middle of the audio spectrum.

**LOW-MID SWEEP** from 250 Hz to 2500 Hz with switchable bandwidth. Level is controlled within 36 dB with switchable DETAIL giving 6 dB for fine tuning.

**HIGH-MID SWEEP** from 1 kHz to 9 kHz with switchable bandwidth. Level is also controlled within 36 dB with switchable DETAIL also giving 6 dB for fine tuning.

The **HIGH CUT** control sweeps a steep high frequency cut from outside the audio band at 80 kHz to within 1500 Hz, perfect for: the removal of RFI, super-sonics, system hiss and noise optimising band limiting.

## NOTE

We would like to point out that we have tried our best to preserve the appearance of the original unit but it is possible that some frequencies shown on the GUI of the plugins do not correspond exactly to the actual value.

## EXTRA

As expected, the second plugin of this Opal collection has some extra controls:

-**Preamp input trim:** The preamp Input trim control allows you to increase and decrease the harmonic distortion of the preamp by adding 'coloration' to your source.

-**M/S:** this button allows you to enable the MID-SIDE configuration of the plug-in; when bypassed, the plug-in operates in LEFT-RIGHT mode (default). The input signal to the plug-in is split into channels, Left & Right and then summed back to Stereo at the output.

-**Pan:** to control the left/right signal level and affects the stereo image.

-**Spread control:** varies the balance between the Mid and Side signals (Mono, Normal, Wide).

-**Independent channel output control:** to control the output level of the EQ.



## **CONTENTS**

### **TECHNICAL SUPPORT**

Technical support is exclusively provided via our dedicated Freshdesk platform. Please consult our website to learn more.

### **TROUBLESHOOTING AND BUG REPORT**

Acustica Audio is constantly improving its products and adding new features. Ongoing issues, bugs and rare crashes can still be possible.

If you are experiencing issues with your product, please head over to our website and visit the dedicated knowledge base section. Many answers have already been answered and ready-to-use solutions can be found there.

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