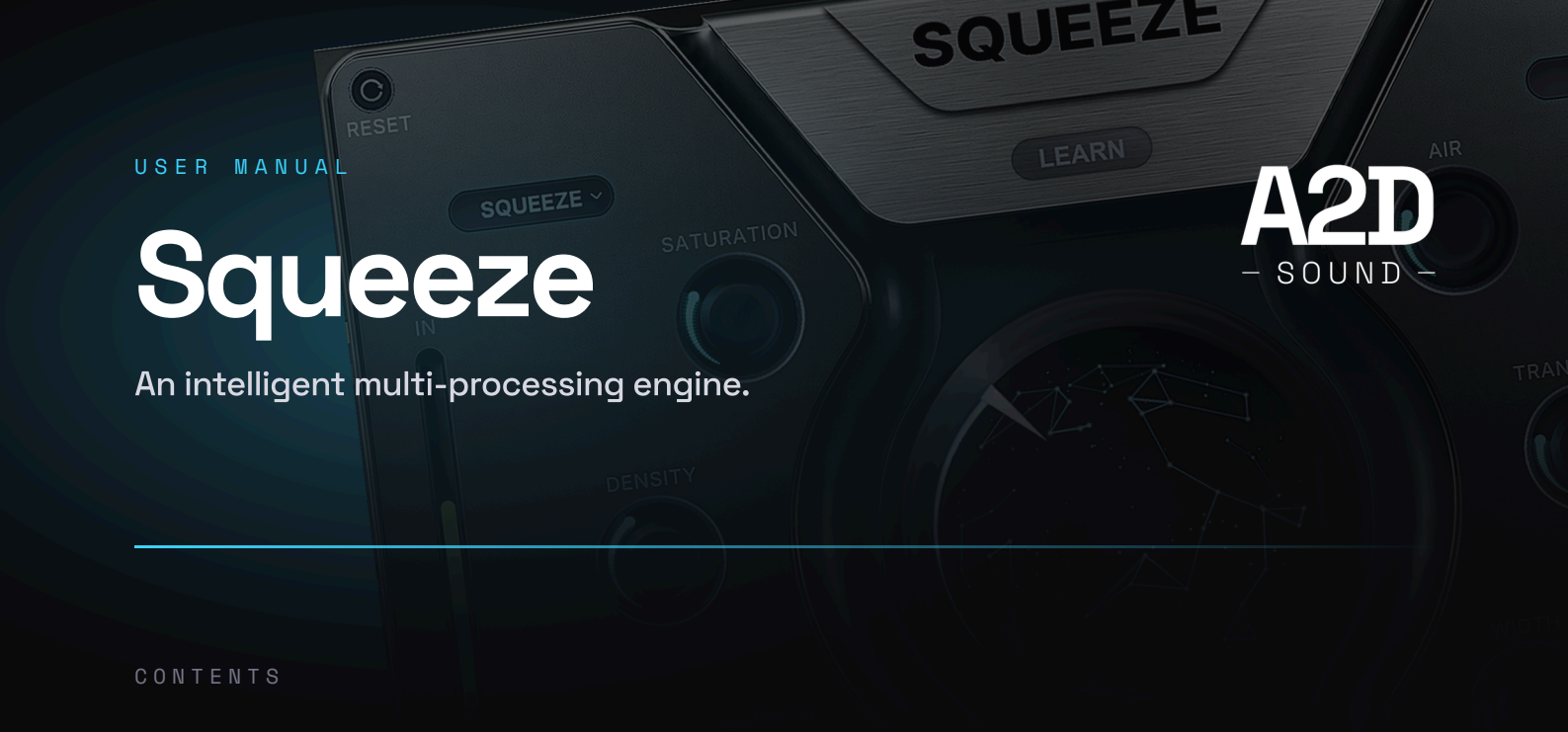

USER MANUAL

Squeeze

An intelligent multi-processing engine.

A2D — SOUND —

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CHAPTER 01

Introduction

Squeeze is a multi-processing engine. It performs saturation, compression, additive EQ, transient shaping, stereo width processing, clipping and limiting within a single processing structure.

The plugin configures itself from two inputs. The first is the source type you select, which tells the engine what kind of material it is processing. The second is a measurement of your audio, taken when you press Learn. Together these determine the internal configuration and the positions of the front panel controls.

Squeeze doesn't only react to the source, it recalculates backward and forward along the signal flow, so every stage accounts for what the others are doing.

The result is an ideal, phase-coherent processing chain on the backend, which is still fully adjustable on the front. It squeezes every sound's full potential, while still giving you full control and decision-making.

Every parameter remains adjustable after the configuration is built. Nothing is locked, and no control reverts to a derived value once you have moved it.

Squeeze contains no machine learning model, performs no inference and makes no network connections. The analysis is a measurement algorithm with a fixed rule set. The same audio produces the same configuration on every run, and no audio leaves your machine.

Squeeze is an enhancement processor. It does not perform corrective work. Resonance removal, noise reduction and repair of a poorly balanced mix are outside what the engine does.

CHAPTER 02

Installation and activation

Installation

Squeeze is delivered as a direct download. Your licence key and download links are sent by email after purchase.

Run the installer and select the format your DAW uses: VST3, Audio Units or AAX. If your host does not detect the plugin automatically, rescan your plugin folders. Some hosts require a restart before newly installed plugins appear.

Activation

Open Squeeze in your DAW and enter the licence key from your confirmation email. Activation is performed inside the plugin on first launch.

One licence covers three activations on machines you own. A licence cannot be transferred to another A2D Sound account.

Managing activations

Each activation is tied to a machine. Activations are managed from your account at a2dsound.com. To move Squeeze to a new computer, deactivate the machine you no longer use from your account, then activate the new one from inside the plugin.

Deactivation is performed remotely, so a machine that has been sold, replaced or has failed does not need to be running.

Trial

A seven day trial is available. The trial is the complete plugin with all features enabled, so what you hear during the trial is what you get after purchase.

CHAPTER 03

Getting started

Configuring Squeeze on a source takes four steps.

1. **Select the source type**
   Tell Squeeze what it is processing. This sets the starting configuration before any measurement is taken. See chapter 5.

2. **Select the tone**
   Subtle, Warm or Aggressive. This shapes the character of the processing. See chapter 6.

3. **Start playback**
   Audio must reach the plugin input before it can be measured.

4. **Press Learn**
   Squeeze measures the signal, builds the configuration, and sets the front panel controls. Learn ends the measurement by itself once it has enough information. See chapter 7.

Once Learn has run, the configuration is complete and the plugin is processing. All controls are then available for adjustment.

Choosing the passage to measure

Learn measures whatever is playing at the time. Use a section that represents the material: a full chorus rather than an intro, a busy bar rather than a fill. A measurement taken over an unrepresentative passage produces a configuration built for that passage.

Learn can be run again at any time over a different section.

After Learn

The front panel controls move to the positions the configuration derived. From this point they behave as ordinary controls. Adjusting one does not trigger a new measurement, and the engine does not return a control to its derived position.

Changing the tone after Learn is the exception. Because each tone is a different configuration of the whole engine, Learn must be run again for the new tone to take effect. See chapter 6.

CHAPTER 04

The interface

Layout

The Source selector sits at the top left of the panel and the Tone selector sits at the top right. The main Squeeze knob and the centre meter occupy the middle, with the module controls arranged around them: Saturation, Density, Warmth, Air, Transients and Width. Output, Gain Match, Max Loudness and Dry/Wet handle level and blend.

The panel overview on the following page numbers each control and states what it does.

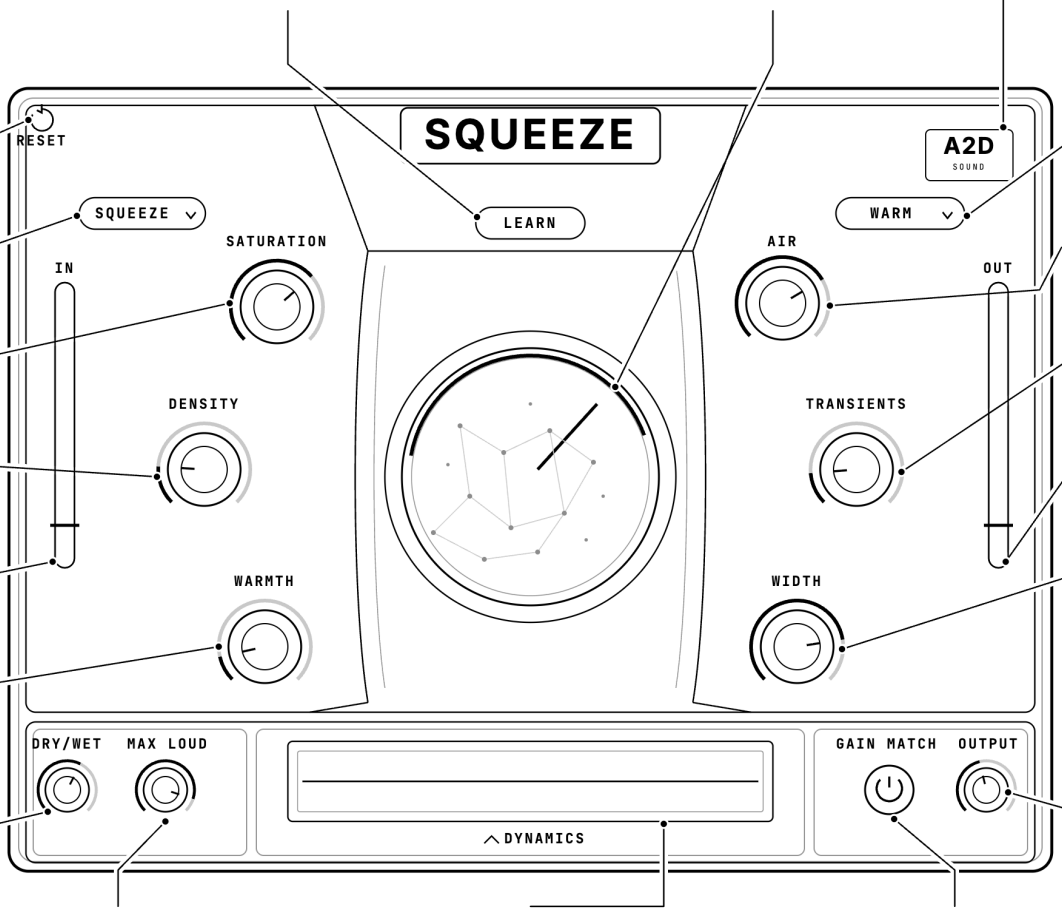
Adjusting controls

- Click and drag a knob vertically to change its value.
- Double-click a module knob to bypass that module. Double-click again to re-enable it.
- A toggle beneath the centre meter switches the dynamics section to manual mode, exposing Threshold, Ratio and Makeup Gain.

Module bypass

Bypassing a single module leaves the rest of the configuration running. This isolates that module's contribution to the processed signal, which is useful when checking what a given stage is doing to the material.

Panel overview



01 RESET
Resets measurements and adjustments.

02 SOURCE TYPE
Tells the engine what to expect.

03 LEARN
Measures audio, builds the processing chain.

04 TONE
Sets the tone of the process, clean, warm or aggressive.

05 IN
Input level meter.

06 OUT
Output level meter.

07 SATURATION
Adds harmonic content.

08 DENSITY
Multiband upward compressor.

09 WARMTH
Low shelf with dip bell.

10 AIR
Raises high-frequency content.

11 TRANSIENTS
Enhances attack over sustain.

12 WIDTH
Stereo widener, mono safe.

13 SQUEEZE KNOB
Drives the signal into a detail-preserving clipper.

14 DRY/WET
Parallel blend, whole engine.

15 MAX LOUDNESS
Raises the output cap.

16 DYNAMICS
Manual threshold, ratio, makeup.

17 GAIN MATCH
Matches perceived loudness.

18 OUTPUT
Sets plugin output level.

19 A2D LOGO
Opens the license management window.

CHAPTER 05

Source types

There are twenty-seven source types, covering individual instruments and busses. They are grouped into seven families under the Source selector.

DRUMS	Kick (Heavy Sub) · Kick (Punchy) · Kick (Acoustic) · Snare (Body) · Snare (Snap) · Clap · Tops
BASS	Bass (Sub) · Bass (Aggressive) · Bass (Electric)
VOCALS	Vocal (Female) · Vocal (Male) · Background Vocals · Podcast Vocal
GUITARS	Guitar (Acoustic) · Guitar (Electric Clean) · Guitar (Distortion)
KEYS	Piano · Piano (Electric)
SYNTHS & STRINGS	Pad · Lead · Strings
BUS	Drum Bus · Kick & Bass · Instrument Bus · Mix Bus (SQUEEZE) · Mix Bus (Transparent)

Source types are not presets

A source type does not recall a set of knob positions. It configures the engine before any measurement is taken, defining what the engine expects from that kind of material.

The measurement and the source type describe different things. The measurement describes the signal. The source type describes the material. A synth bass and a low tom can measure almost identically and require different treatment.

What the source type sets

- **Crossover points.** The band boundaries move according to the material, so the low band on a kick covers a different range than the low band on a vocal.
- **Timing constants.** How quickly the dynamics processing responds.
- **Tonal targets.** Where the Warmth shelf sits, and where the Air lift is applied.
- **Width permission.** Whether the stereo stage operates for that source type.

CHAPTER 06

Tone

Tone shapes the character of the processing. There are three. Each is a complete configuration of the engine rather than a single parameter or a layer applied over a default.

Subtle	Stays closest to the source. The least coloured of the three, applying control with minimal tonal change.
Warm	Applies more saturation and low end shaping than Subtle, adding weight and colour.
Aggressive	The most forward of the three. Drives the material harder and is audible as processing.

Tone can be changed at any time, before or after Learn. Because each tone reconfigures the whole engine, the three produce distinct results on the same material rather than a greater or lesser amount of the same processing.

Choosing a tone

- **Subtle** suits material that is already the right shape and needs holding together rather than colouring.
- **Warm** is the most generally useful of the three, and a reasonable default on busses.
- **Aggressive** suits drums, bass and anything that should arrive with force.

Changing tone after Learn

Selecting a different tone after Learn has run does not apply it on its own. The engine builds its configuration from the tone and the measurement together, so Learn must be run again for the new tone to take effect.

If a tone change appears to make no difference, run Learn again over the same passage.

CHAPTER 07

Learn

Learn is the measurement stage. It analyses the audio playing through the plugin and builds the configuration from the result.

What Learn measures

- **Peak.** The highest instantaneous level in the passage. Gain Match uses this as its reference.
- **RMS.** The average energy across the passage.
- **Mid and side energy.** How the material is distributed across the stereo field.
- **High frequency content.** The amount of energy in the upper spectrum.

How the measurement is used

Peak measured against RMS gives the crest factor. That figure drives most of the configuration. Because the engine works from the dynamic shape of the material rather than a fixed threshold, dense and open sources are configured differently without further input.

The crest factor determines how hard the dynamics processing works, how much saturation drive is available, and how much headroom the ceiling stage has.

When the measurement is complete, the engine builds its internal configuration and sets the front panel controls to the derived positions.

Storage and privacy

Learn takes a measurement of the audio passing through the plugin and discards the audio. Nothing is recorded, nothing is stored and nothing is transmitted.

Repeatability

The analysis is a measurement algorithm with a fixed rule set rather than a model. Running Learn twice over the same passage produces identical results, and a saved project recalls the same behaviour when it is reopened.

Let Learn finish on its own

Learn decides for itself when it has gathered enough information. Different material requires different amounts of audio, so the measurement may take longer on one source than on another.

Do not stop Learn manually. It builds the chain and ends the analysis by itself once it has what it needs.

CHAPTER 08

Controls

Shaping modules

Saturation

Adds harmonic content to the signal. The drive available is informed by the crest factor measured during Learn, so the same knob position produces a different amount of drive on dynamic material than on dense material.

Density

A multiband upward compressor. It raises quieter material toward the louder material within each band, increasing sustained energy.

Density uses an automatic floor threshold derived from the Learn measurement. Signal below that floor is not processed, so noise, room tone and bleed are not raised along with the material.

Warmth

A low shelf applied relative to the source, with a dip bell above it. The bell prevents the added low end from accumulating into the low mids.

The frequencies at which the shelf and bell operate are set by the selected source type.

Air

Raises high frequency content. The amount applied is scaled to the high frequency energy Learn measured in the source, so a bright source and a dull source receive different amounts of lift at the same knob position.

Transients

A transient shaper. It increases the attack portion of the signal relative to the sustained portion, which brings the material further forward in a mix.

It operates on the detail content of the signal independently of the Density processing, so attack added here is not reduced by the density stage.

Width

A stereo widener operating on side content. The processing is bounded so that the signal remains mono compatible at any setting: a mono fold does not produce comb filtering or level loss.

On source types where width processing is disabled, this control has no effect. See chapter 5.

Drive, level and dynamics

Squeeze

Drives the configuration toward its maximum through a detail preserving clipper. The clipper is shaped so that peak reduction occurs without the flat topped result of hard clipping.

At zero the full configuration is still active. Only the final drive stage is removed.

Dry/Wet

A parallel blend across the whole engine rather than a per stage mix. The unprocessed input is blended against the fully processed output.

At zero the output is bit for bit identical to bypass.

Output

Sets the output level of the plugin. When Gain Match is engaged this control is moved automatically. Adjusting it manually returns control to you from the position it had reached.

Gain Match

Uses the peak level measured during Learn as its reference. When engaged, it lowers the Output so that the peak of the processed signal matches the peak of the original, and moves the Output knob to that position.

Gain Match does not lock the Output control. Adjusting Output manually releases Gain Match, and the level continues from the position it had reached.

Max Loudness

The output is capped by default at six decibels above the source peak. Max Loudness raises that cap toward the limit of the plugin and drives the signal harder internally at the same time, into the clipper first and then, past approximately the midpoint of the control, into the limiter as well.

Max Loudness works from the Learn measurement and only takes effect once Learn has been run. Raising it beforehand applies no change.

No front panel control moves while Max Loudness is adjusted. The change is internal to the engine.

Manual dynamics

A toggle beneath the centre meter switches the dynamics section to manual mode. Threshold, Ratio and Makeup Gain are then available as conventional compressor controls in place of the derived dynamics configuration.

CHAPTER 09

Procedures

Processing a mix bus

Select Mix Bus (SQUEEZE) or Mix Bus (Transparent) and a tone. Play a representative section and press Learn. Engage Gain Match before assessing the result, so that the comparison is made at matched level.

Processing a single track

Select the source type matching the instrument. The crossover points, timing constants and width permission are set accordingly. Run Learn over a busy passage rather than a sparse one.

Changing the tone on a configured track

Select the new tone, then press Learn again. The engine derives its configuration from the tone and the measurement together, so the change is applied on the next measurement rather than immediately.

Comparing against another processing chain

Place Squeeze on the same material as the existing chain and engage Gain Match on both. Level differences dominate any comparison made without level matching.

Identifying what each module contributes

Double-click a module knob to bypass it while the rest of the configuration continues to run. Working through Saturation, Density, Warmth, Air, Transients and Width one at a time isolates each stage.

Increasing loudness

Run Learn first, since Max Loudness works from the measurement. Then raise Max Loudness gradually. Past approximately the midpoint of the control the limiter is engaged in addition to the clipper. Increase until the character of the material begins to change, then reduce.

Comparing against the unprocessed signal

Set Dry/Wet to zero for a bit for bit bypass. Set Squeeze to zero to keep the configuration running without the final drive stage. These are two different comparisons.

CHAPTER 10

Troubleshooting

The plugin does not appear in the DAW

Confirm the format your host uses was installed, VST3, Audio Units or AAX, then rescan your plugin folders. Some hosts require a restart before newly installed plugins are detected.

Learn does not produce a result

Learn measures audio passing through the plugin. Confirm the transport is running and that signal is reaching the plugin input. If the passage is very short or very quiet, run Learn again over a longer section. Let Learn finish on its own rather than stopping it.

Max Loudness has no effect

Max Loudness depends on the Learn measurement. Run Learn, then adjust it.

Changing the tone made no audible difference

A new tone is applied on the next measurement. Run Learn again after selecting it.

The Width control has no effect

Width processing is disabled on kick and bass source types. Select a different source type if the material requires width processing.

The processed signal is louder but not obviously better

Engage Gain Match and compare again. Level differences dominate any assessment made without level matching.

The plugin behaves differently from when the project was saved

Learn is deterministic and the same passage produces the same result. Check that the source type and tone are as they were saved, and that the session is loading the stored parameter values.

Any issues or questions?

Please visit a2dsound.com/support.

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Steinberg VST 3 SDK, version 3.7.2

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