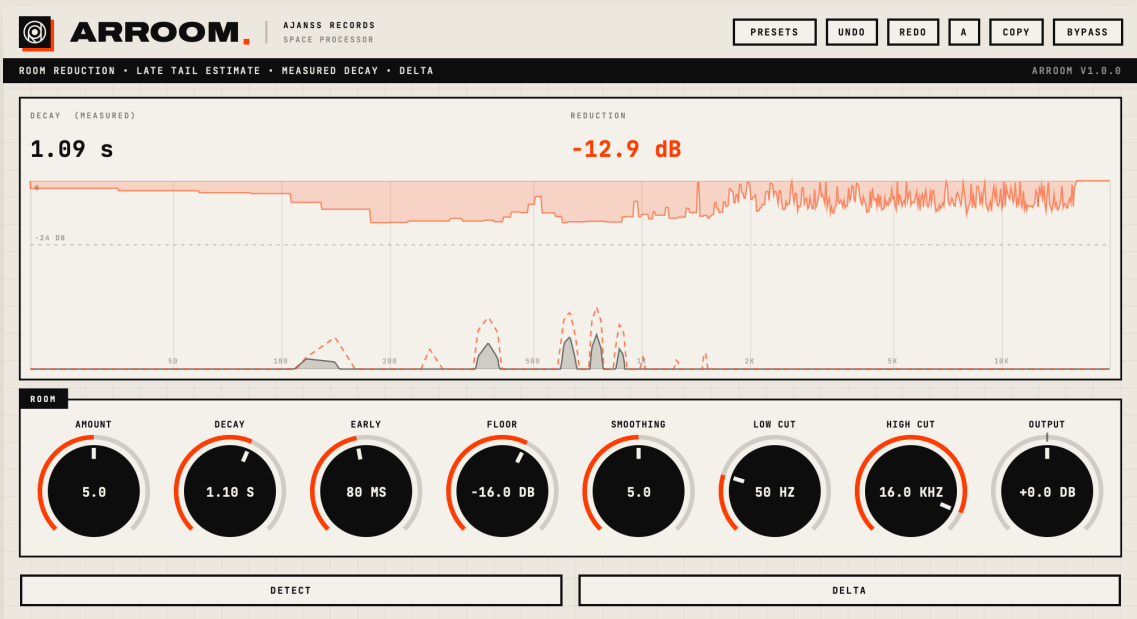


ARROOM

ROOM REDUCTION



VERSION

1.0.0

FORMATS

AU • VST3

PLATFORMS

macOS • WINDOWS

DOCUMENT

USER GUIDE

01 WHAT IT DOES

ARRROOM takes the room off a recording – the ring that hangs on after every word, the wash that makes a voice sound as though it is somewhere across the hall from you.

Reverberation has two halves and they are not the same thing. The **early reflections** arrive within the first few tens of milliseconds and tell you where the recording was made; most of the time you want them. The **late tail** is what blurs the words and pushes the sound away. ARROOM goes after the second one and leaves the first alone.

There is nothing to teach it. The estimate comes out of the recording itself: what you hear as tail now is the sound from a moment ago, decayed at the room's own rate. Give it that rate and it can work out how much of what you are hearing is room, band by band, and take that much out.

It was measured against a recording whose reverberation we built ourselves, so the dry original was on hand to compare against: in the gaps between words the tail fell **20.2 dB**, and on a recording with no room on it at all the output stayed within **15.7 dB** of the source – it does not invent work for itself. Latency is 2048 samples, reported to the host.

02 INSTALLING

macOS

Run **ARRROOM Installer.pkg** and follow the steps. You can choose which formats to install, and whether to install for every user or only for yourself. The package is signed and notarised by Apple, so it opens normally.

Windows

Run **ARRROOM Installer.exe** and follow the steps. The plugin is placed in the shared VST3 folder. The installer is not code-signed, so SmartScreen may warn you: click **More info**, then **Run anyway**. This is only needed once.

After installing

Rescan the plugin list in your DAW. ARROOM appears under **Ajanss Records > ARROOM**.

03 MEASURING THE ROOM

Two numbers decide everything ARROOM does, and only one of them is a matter of taste.

DECAY is a fact about the room

It is how long the room rings on – the time the tail takes to fall away. Guessing it is the one mistake worth avoiding: set it too short and most of the tail is never recognised as tail, set it too long and the sound itself starts to look like room.

So measure it. Play a passage that has some silence in it and press **DETECT**. ARROOM looks at how the energy falls after each sound stops. The fall is measured the way a room's decay is properly measured – by integrating the energy backwards, which turns a noisy curve into a straight line – and the middle of all the readings is taken, so one odd event cannot drag the answer around. On a recording built with a known 1.20 second decay it measured **1.27 seconds**.

EARLY is a matter of taste

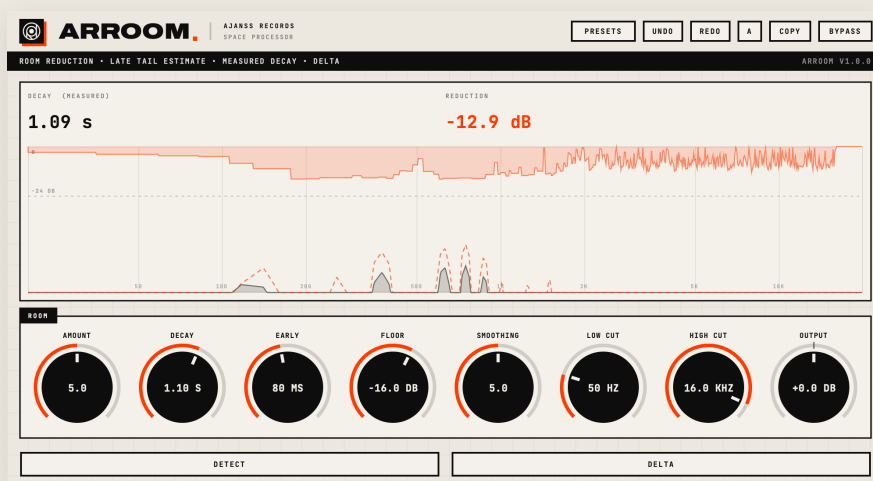
Reflections arriving inside this time are left alone. Shorten it and more of the room goes, including the part that told you where the recording was made; lengthen it and you keep more of that character while still clearing the long tail. A small room needs 30 to 40 milliseconds, a hall needs 100 or more.

Then set the amount

At **AMOUNT 0** nothing is subtracted at all and the output is the input. At 2 the estimate is taken out exactly as measured; above that more comes out than was measured, which reaches further into the tail and further into the sound. Raise it until the ring goes, and stop.

Use **DELTA** to hear what is leaving. It should sound like the room and nothing else. If you can hear the words in it, come back down, raise **FLOOR**, or lengthen **EARLY**.

04 THE INTERFACE



DECAY

The decay time being used. It says **MEASURED** once DETECT has found it from the material rather than taken it from the knob.

REDUCTION

How much is being taken out at this moment, averaged across the frequencies that carry signal.

THE FILLED CURVE

The spectrum of what is arriving.

THE DASHED CURVE

The estimated late tail. Where the filled curve rises well clear of it, that is the sound itself and it will survive; where the two meet, what is there is mostly room.

THE CURTAIN

Hanging from the top, how much is being removed at each frequency, on a scale marked from 0 down to -24 dB. It stops at LOW CUT and HIGH CUT, so you can see the band you have chosen.

Watch the dashed curve while a word ends. It rises as the tail takes over and falls as the room dies away – that movement is the estimate doing its work, and if it does not move at all, DECAY is set far too short for the room you have.

05 CONTROLS

AMOUNT 0 - 10	How much of the estimated tail is taken out. Zero is off and the output is the input. Two takes out exactly what was estimated; above that, more.
DECAY 0.10 - 3.00 s	How long the room rings on. Press DETECT to measure it from the recording instead of guessing.
EARLY 20 - 150 ms	Reflections inside this time are left alone. This is what separates "the room it was recorded in" from "the tail that has to go".
FLOOR -40 - 0 dB	The most any frequency may be turned down. Taking the room all the way out does not leave silence, it leaves a ringing texture in its place. Asked for 6 dB, the deepest measured reduction was 5.9 dB.
SMOOTHING 0 - 10	How much neighbouring frequencies are made to agree with each other. This and FLOOR together are what keep the result sounding like a recording rather than a machine.
LOW CUT 20 Hz - 2 kHz	Nothing below this is touched.
HIGH CUT 1 kHz - 20 kHz	Nothing above this is touched.
OUTPUT -24 - +24 dB	Level after the processing.
DETECT	Measure the decay time from the last few seconds and write it into DECAY.
DELTA	Listen to what is being removed instead of what is being kept.
BYPASS	Passes the signal through bit for bit.

06 PRESETS

Fifteen starting points, and each one is a description of a room rather than a degree of strength. What separates them is DECAY and EARLY: a small booth rings for less than half a second and its reflections arrive inside 30 milliseconds, a church rings for seconds and its first reflections take more than 100.

SMALL ROOM	0.45 s · 40 ms	VOCAL BOOTH (BOXY)	0.35 s · 30 ms
BEDROOM (UNTREATED)	0.55 s · 45 ms	OFFICE (INTERVIEW)	0.70 s · 60 ms
LIVING ROOM	0.65 s · 55 ms	LARGE ROOM	1.10 s · 80 ms
HALL	1.80 s · 110 ms	CHURCH (LONG TAIL)	2.60 s · 130 ms
STAIRWELL	1.40 s · 70 ms	GENTLE (KEEP THE ROOM)	amount 2.0
STRONG	amount 8.0	DIALOGUE	0.60 s · 50 ms
PODCAST (TWO MICS)	0.55 s · 45 ms	DRUMS (KEEP THE PUNCH)	120 ms early
ACOUSTIC GUITAR	0.70 s · 70 ms		

Every one of them is a guess about the room until you press DETECT. Your own presets are saved next to these, in the **USER** tab of the preset browser.

A keeps a second setting you can compare against, and **COPY** copies the current one into it.

07 STARTING POINTS

A voice recorded in an untreated room

Load **BEDROOM (UNTREATED)** and press **DETECT** on a passage with pauses in it. Raise **AMOUNT** until the ring after each word goes, and stop there. If the voice starts to sound thin or a little hollow, lengthen **EARLY** before you lower **AMOUNT** – you are probably taking out reflections that were doing you a favour.

An interview in an office

Load **OFFICE (INTERVIEW)**. Rooms like this ring hardest in the low mids, so **LOW CUT** at 90 Hz keeps the weight of the voice and **HIGH CUT** at 12 kHz keeps **ARRROOM** away from the consonants. **DETECT** first; office decay times vary more than you would think.

Drums you want to tighten without flattening

Load **DRUMS (KEEP THE PUNCH)**. **EARLY** is long here on purpose: the first 120 milliseconds of a drum room are the sound of the kit, not a problem to be solved. What comes after that is the wash, and that is all this preset touches.

When the recording is already dry

Nothing needs doing, and **ARRROOM** will not do much: on a dry recording the output stayed within 15.7 dB of the source. If you are unsure, press **DETECT** – a short measured decay is the plugin telling you there is no room to remove.

Checking your work

Press **DELTA** and listen to the whole passage; it should sound like the room and nothing else. Then use **BYPASS** and listen for what changed apart from the ring. If the sound has moved closer but also got smaller, raise **FLOOR**.

08 WHAT WE MEASURED

Measured against a recording whose reverberation we built ourselves, so the dry original could be compared against directly: a known decay of 1.20 seconds, starting 120 milliseconds after the sound.

Reported latency	2048 samples
BYPASS	bit for bit
AMOUNT at zero	nothing removed
Tail between words	-20.2 dB
Distance to the dry original, untreated	-9.0 dB
... after ARROOM	-11.0 dB
A recording with no room on it, after DETECT	within -15.7 dB
DETECT against a known 1.20 s decay	1.27 s
FLOOR asked for -6 dB	-5.9 dB reached
Output plus DELTA against the input	identical

09 SUPPORT

For questions, bug reports and feature requests, please reach us on Instagram at [@ajanssrecords](https://www.instagram.com/ajanssrecords). Please include your operating system, your DAW and its version, the plugin format you are using, and the plugin version shown in the top right of the window.

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