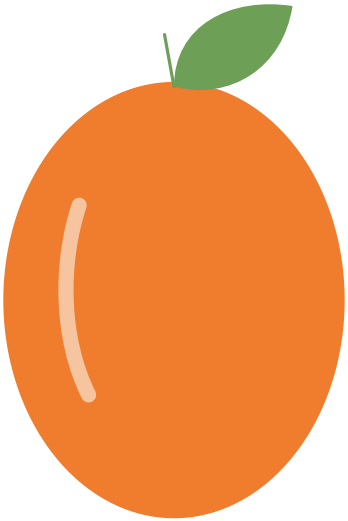


KA Opto Comp

Instruction manual

Kumquat Audio · Edition 1.7.11 · October 2026

kumquataudio.com

NO. 18

KA Opto Comp

A slow, smooth compressor that levels without being noticed.

KA Opto Comp is a slow, smooth compressor. Peak Reduction sets how much of the sound is held, Compress and Limit choose how firmly, and the release is two-stage and remembers how long it has been working, so it levels a voice or a bass without being noticed.

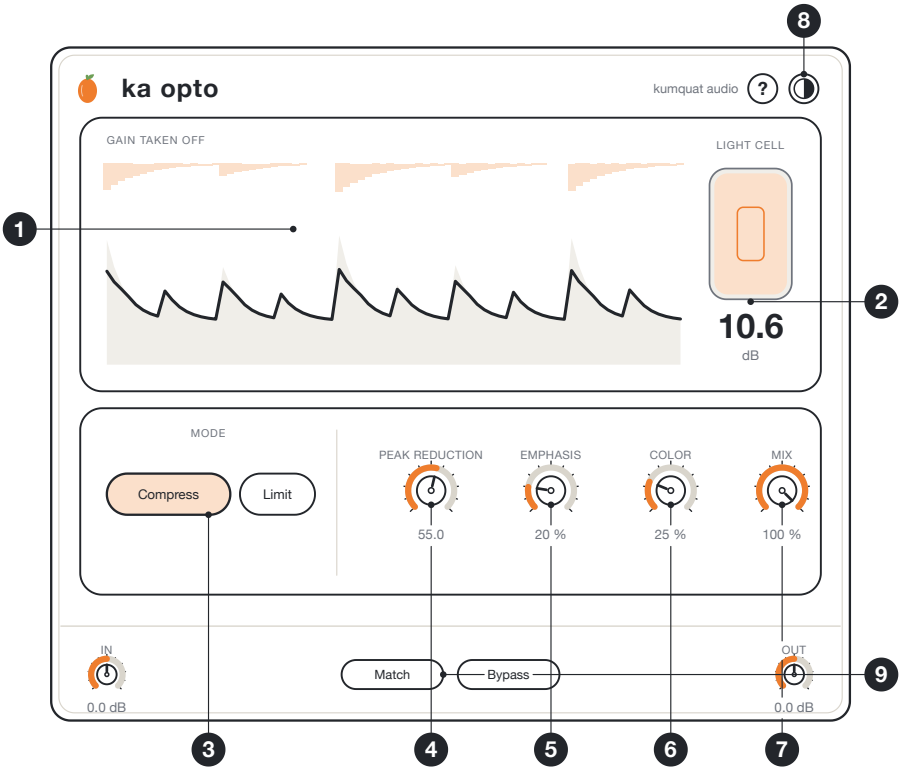


FIG. 1 The parts of KA Opto Comp. The numbers are explained on the next page.

Parts

fig. 1

1. **The picture**
   The level coming in (grey), the level going out (the line), and the gain being taken off, hanging from the top in orange.
2. **Light cell**
   How hard it is working. The bright core follows the sound quickly; the soft halo around it fades slowly. The number is the gain reduction in dB, held at the deepest value for a moment so that it can be read.
3. **Mode**
   Compress: a gentle ratio of about 3 to 1 with a very wide knee, for smoothing and leveling. Limit: about 10 to 1, firm, for catching peaks.
4. **Peak reduction**
   How much of the sound is held: it is the threshold, so more reduction means a lower threshold and more of the sound compressed.
5. **Emphasis**
   Lifts the highs in what the compressor listens to, so sibilance and cymbals are held down more firmly than the rest.
6. **Color**
   A warm saturation after the compressor, more of it the harder it works. At 0 it is only the compressor.
7. **Mix**
   How much compressed sound is blended with the original (parallel compression).
8. **Help and light/dark**
   The ? turns the pop-up help on and off. The half circle switches light and dark.
9. **In, Out and Match**
   In pushes the sound in. Out is the gain after the compressor, which is its make-up gain. In turns the sound up or down before the plug-in hears it, and Out turns the result up or down. Bypass plays the sound without the plug-in. Match keeps the output as loud as the sound that came in, whatever In and the plug-in do, so you hear what a setting does and not just a change in loudness.

Operation

step by step

1. Put the plug-in on a voice, a bass or a bus and play a passage.
2. Turn Peak Reduction up until the picture shows 3 to 6 dB of gain reduction on the loud parts. It is the threshold: more reduction, lower threshold.
3. Choose Compress (gentle, about 3 to 1) or Limit (firm, about 10 to 1).
4. Use Out (the knob at the bottom right) to make up the level. Turn Match on to compare with the plug-in off at the same loudness.
5. Add Emphasis to hold the highs more firmly (sibilance, cymbals). Add Color for a warm saturation, and lower Mix for parallel compression.

Controls and settings

range · start

Control	Range	Starts at	What it does
Peak reduction	0 to 100	28	How much of the sound is held: it is the threshold.
Mode	Compress, Limit	Compress	About 3 to 1 with a very wide knee, or about 10 to 1.
Emphasis	0 to 100 %	0 %	Lifts the highs in what the compressor listens to.
Color	0 to 100 %	25 %	A warm saturation after the compressor; more of it the harder it works.
Mix	0 to 100 %	100 %	How much compressed sound is blended with the original.
In / Out	–24 to +24 dB	0 dB	In pushes the sound in; Out is the gain after the compressor (its make-up gain).
Match	on / off	off	Keeps the output as loud as the sound that came in, whatever In and the plug-in do. See In, Out and Gain Match.

TIP The release is slow. If you need it quicker, use KA FET Comp or KA Bus Comp; if you need it slower and smoother, use KA Opto Comp and let it level.

TIP On a voice, Emphasis around 30 to 60 % makes Opto hold sibilance down a little more.

TIP The harder it works, the softer the very top gets (about 1 dB at 8 kHz, more above) and the warmer its color.

TIP On the light cell, the bright core follows the sound and the halo around it fades slowly.

Specifications

Formats	Audio Unit, VST3
Channels	mono or stereo (the two sides are linked)
Delay	none
Window	700 × 520, can be resized [4]

How it works

a closer look

The compressor listens to the average level of the louder side, with the highs lifted by Emphasis. Peak Reduction sets the threshold. In Compress the ratio is about 3 to 1 with a very wide knee (18 dB), so it comes in very gradually; in Limit it is about 10 to 1.

The gain is turned down by two lights. The quick one takes about 10 milliseconds to come on and 60 to go off. The slow one takes about 120 milliseconds to come on, and from half a second to many seconds to go off. Together they make the release: half of it is gone in a moment, and the rest creeps away.

How long the slow light stays depends on how hard and for how long the compressor has been working: After a short squeeze it lets go quickly; after a long one it takes seconds.

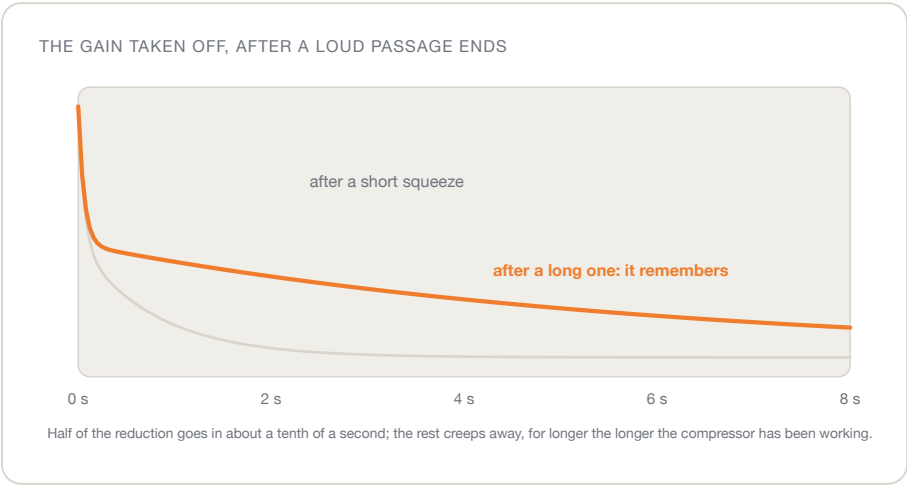


FIG. 2 Half of the reduction goes quickly; the rest creeps away.

CARE

Care and troubleshooting

If this happens	Do this
A plug-in does not appear in the list	Restart the music software. In Logic Pro, open the Plug-in Manager, select the Kumquat plug-ins and choose Reset & Rescan Selection.
An old name is still showing	Quit Logic with Cmd+Q and open it again. If it persists, remove the old copies from /Library/Audio/Plug-Ins/Components.
My key was not accepted	Copy all of it, from KA1 to the end, with no spaces added or lost. A key for one plug-in does not unlock the others.
The pop-up help does not show	Press the “?” at the top of the window to turn it on. It is one choice for all the plug-ins.
Which part of the picture does a knob change?	Point at the knob, or hold it down while you turn it: the part of the picture it controls lights up, with the knob’s name and value.
KA Drum Gate, Silence Trim, Auto Mixer or Time Align shows a message instead of a picture	Open Logic Pro using Rosetta, put the plug-in first in the Audio FX list, select a region and press play.
The sound is late	KA De-Click, De-Verb, De-Noise, Contour, Mic Blend, Saturator (it oversamples), EQ (with the suppressor), Multiband (in Linear phase) and Limiter delay the sound a little and tell the music software, which lines everything up. Do not compensate by hand. For playing through a plug-in, the Saturator, EQ and Multiband have a Live switch that takes the delay away; the compressors, De-Esser, Delay, Reverb and Rider have no delay at all.
A window is too small or too big	Drag the corner at the bottom right. The size is remembered, and it is the same for all the plug-ins: make one bigger and the others open that big.
The Limiter pumps	Leave Release on Auto, or set 60 to 100 ms. A release of a millisecond or two is the dirtiest setting.

If something is not right, write to **audiokumquat@gmail.com** and say which plug-in, which music software, and what you were doing.

FOR YOUR OWN NOTES

Notes