

Klanghelm AUDIO PLUGINS

Main features:

- Painstakingly modeled behaviour and recreation of the general ballistics of classic VU meters.
- adjustable attack and release times
- Unique Overshoot parameter (1% - 10%) for extra smotherness and musicality of the meter
- Additional PPM mode with adjustable rise/fallback times
- Smart peak/clip LED with fully customisable reference levels

- Gain staging made easy. Trim your channel volume +/- 20 dB.

- VU reference freely adjustable

- Easy on the eyes, comes in four flavors (skins) to be pleasant to look at for (almost) everybody.

Two mutations included:

VUMT SOLO:

- Single VU meter
- Switchable additional needle to watch left and right channel level in one single display

VUMT DUO:

- Two VU meter displays to show either left/right or mid/side level information
- if switched to MS operation the volume trim knobs control the volume of the mid channel and side channel.

- Additional standalone apps (VUMT SOLO & DUO) included (MAC & WIN, 32 & 64 Bit).

VUMT SOLO

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Click on the logo to view the credits.
Click on the infobox to close.

Click at the top border of the frame to show a orange needle, which holds the current max VU level. Click again to hide this needle

Set the channel mode by clicking on the label . When set to O on a stereo channel the VU meter displays the stereo sum of the left and right channel. When set to OO a second (red) needle appears and represents the right channel. The other needle represents the left channel.

Volume control. If set to stereo operation, control sets the volume for both channel simultanuesly.
Use mousewheel or left-click and drag to change the volume. press shift or ctrl while using the mouse for finetuning. Doubleclick the control to reset the knob 0 dB. Click on the value display to type in values.

Clip LED. Lights up yellow/orange if the output level exceeds the peak level you set in the settings panel (your headroom). LED turns red when level exceeds your digital clip level set in the settings tab.

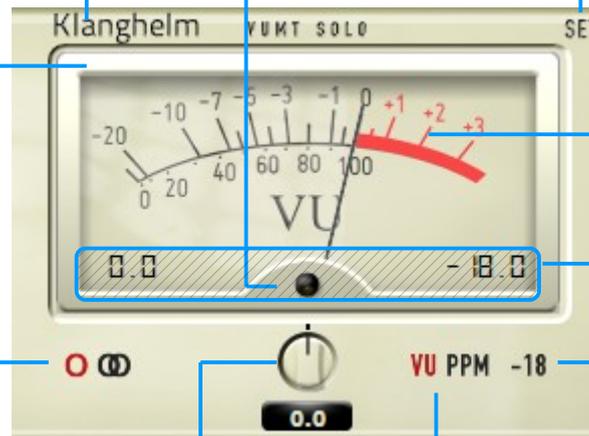
Click to open the settings window.

Click on the VU meter to switch through the four different skins.

Click in this area to display or hide current (digital) peak values (right corner) and current max VU values (left corner). Numbers turn red when exceeding 0dB

Left click/drag or use mousewheel to set your reference level. You can type in values by RIGHT clicking on the value. In VU mode you set the VU reference level, in PPM mode PPM reference level is set

Click to switch between VU and PPM mode.



VUMT DUO

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Clip LED. Lights up yellow/orange if the output level exceeds the peak level you set in the settings panel (your headroom). LED turns red when level exceeds your digital clip level set in the settings tab.

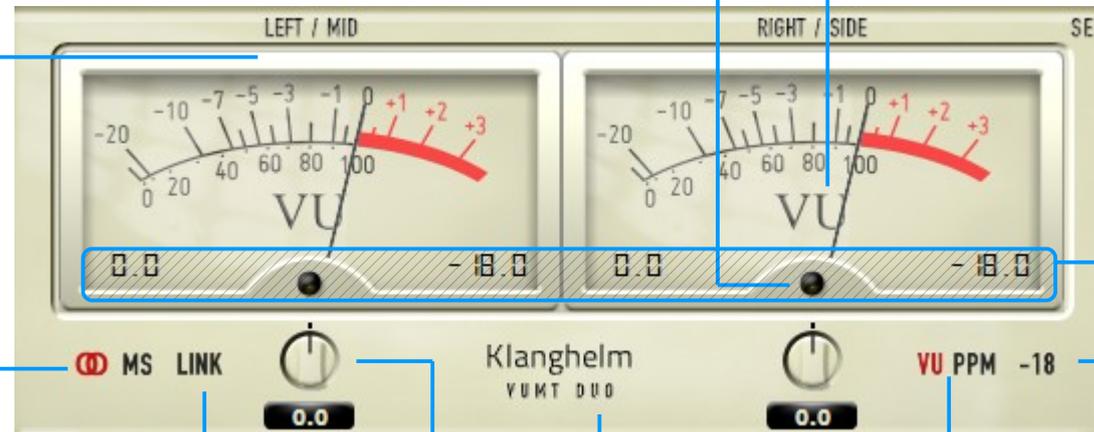
Click on the VU meter to switch through the four different skins.

Click at the top border of the frame to show a orange needle, which holds the current max VU level. Click again to hide this needle

Click to open the settings window.

Set the channel mode by left click on the label or light. When set to MS the left VU meter displays the mid signal and the right meter represents the side information.

Click in this area to display or hide current (digital) peak values (right corner) and current max VU values (left corner). Numbers turn red when exceeding 0dB



Click to link left and right volume control. Link function only works if channel mode is set to stereo

Click to switch between VU and PPM mode.

Volume control. Dependent on the selected channel mode it controls the left or mid channel. Use mousewheel or left-click and drag to change the volume. press shift or ctrl while using the mouse for finetuning. Doubleclick the control to reset the knob 0 dB. Click on the value display to type in values.

Left click/drag or use mousewheel to set your reference level. You can type in values by RIGHT clicking on the value. In VU mode you set the VU reference level, in PPM mode PPM reference level is set

Click on the logo to view the credits. Click on the infobox to close.

SETTINGS

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The settings panel is divided into three columns: VU, PPM, and LED. Each column has three knobs with numerical values below them.

Parameter	VU	PPM	LED
RISE	300	10	-6
FALL	300	1500	-0.20
OVER-SHOOT	1.0		2.0

Callouts and their descriptions:

- Click to close the settings panel**: Points to the top-right corner of the settings panel.
- Your peak level in dB. If the channel output exceeds this level the LED lights up yellow and gets more into orange the closer volume get to your clip level.**: Points to the PEAK knob (-6).
- Your (digital) clip level in dB. If the channel output exceeds this level the LED lights up red**: Points to the CLIP knob (-0.20).
- Hold time of the clip indicator in sec.**: Points to the HOLD-TIME knob (2.0).
- Fallback time in ms.**: Points to the RISE knob (300).
- Fallback time in ms.**: Points to the FALL knob (300).
- Needle overshoot in %**: Points to the OVER-SHOOT knob (1.0).

Tuning the VU meter:

A standard VU meter has to reach 99% full-scale deflection in 300ms and overshoot not less than 1% and not more than 1.5%. The default setting in VUMT exactly meets these specs. Its default overshoot is set to 1 %.

In the real world you'd need to compensate higher overshoot settings with a longer rise time to stay within spec. The plugin does that automatically. The rise time of the VU meter always determines the time the needle takes to reach 0dBVU, regardless of the overshoot settings. So you don't have to calculate anything.

The VU performance is tuned for an approx. equal rise and fall time (as the nature of VU meters) , i. e. If you set both rise and fall time to 600 ms or even 900 ms you'll get the same overshoot values/performance as with 300 ms rise/fall.

The independent rise/fall controls are meant more for finetuning, i. e. if you want you emulate the behaviour of another vu you are used to. What won't yield to the desired results is, if the fallback time is set much shorter than your rise time (600ms rise, 150 ms fallback). If you need very short fallback times and longer rise times you can tweak the PPM mode for that task. In PPM mode no overshoot is taking place.



Code and GUI: Tony Frenzel

Special thanks to **Oli Larkin** (www.OliLarkin.co.uk) and **Cockos** (www.cockos.com) for providing the framework (WDL-OL) used to build VUMT.

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