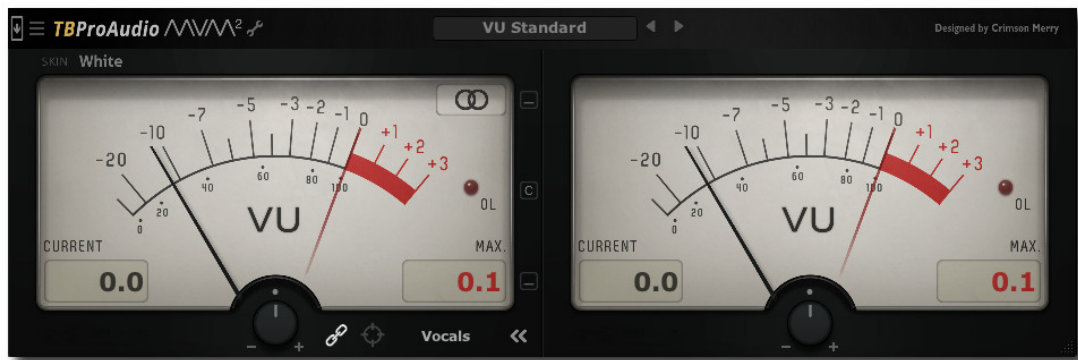


# mvMeter2

## Manual



TBProAudio 2024

# 1 Introduction

Welcome to mvMeter2, a multivariable meter including RMS, EBU R128, VU and PPM measurement.

## 2 Features

mvMeter2 offers following features:

- behavior of classic analog VU and PPM meters
- multiple measurement modes: PEAK, RMS, EBU R128, VU and PPM
- multi channel metering: stereo, left, right, mid, side
- single and dual meter display
- adjustable reference level
- adjustable meter delay
- adjustable meter hold
- adjustable OL level
- DAW synced measurement
- preset management
- adjustable pre-gain, gain matching
- instance label
- large and accurate live meters
- 64-bit internal processing
- 5 different meter themes
- Free GUI scaling up 400%, ready for 4k displays
- GPU and non GPU version

### 3 Design

mvMeter2 combines multiple meters into one plugin framed by a classic VU/PPM meter design:

- RMS: 600ms integration time
- RMS+3dB: 600ms integration time, +3dB compensation according to AES-17
- EBU R128-2014: ML and SL loudness measurement
- Classic VU meter with dB and VU scale
- Classic PPM Meter with BBC and EBU scale
- Hold needle
- Current and max value readout
- Overload LED

### 4 Minimum System Requirements

- Windows 7, OpenGL 2 GFX card
- Mac OS X 10.11, Metal GFX card
- SSE2 CPU
- Win: 32/64 Bit VST, 32/64 Bit VST3, 32/64 Bit AAX
- OS X: 64 Bit VST, 64 Bit VST3, 64 Bit AU, 64 Bit AAX
- Tested with: Cockos Reaper, Steinberg Cubase/Nuendo/Wavelab 6+, FL Studio 12+, PT2018+, Reason 9.5+, Studio One, Ableton Live
- For latest information please visit [www.tbproaudio.de](http://www.tbproaudio.de)

### 5 Features



Preset menu: click to enter the preset menu, displays current preset and click to select previous or next preset.

Plugin menu: Get more information about the plugin, online version check, open the online manual, change log and fixed GUI scaling

Config page: meter settings

Theme Selector: White, Classic, Dark, Retro or Deluxe

Channel Selector: click to select the channel mode.

Single meter display: stereo, left, right, mid and side channel.

Dual meter display: left/right, and mid/side channel.

Note for single meter display (stereo channel mode):

Meter modes RMS, RMS +3, VU and PPM: channels are averaged.

Meter modes Peak: channel max.

Meter modes EBU ML, EBU SL: channels are summed (as described in EBU R128 spec)

Current Meter Value: readout of current meter value

Max. Meter Value: readout of max. meter value, click to reset value,

Meter Modes:

Peak:

RMS: 600ms integration time, -20/+3 scale

RMS+3dB: 600ms integration time, +3dB compensation according to AES-17, -20/+3 scale

EBU R128: ML and SL loudness measurement, -20/+3 scale

Classic VU meter with dB and VU scale

Classic PPM Meter with BBC and EBU scale

Pre-Gain: depending on the Channel Selector it controls the volume of the channel, click with right mouse button for numerical input. Double click resets value.

Gain Link: (dual screen only) sets both gain knobs together

Gain Match: matches the max. value with the reference value of corresponding meter mode by adjusting the pre gain value automatically.

single needle mode: pre-gain is calculated based on the max. value

dual needle mode: pre-gain is calculated based on the highest max. value of both channels and set to both pre-gain controls

Instance Label: click on the label to change the name of the plug-in instance.

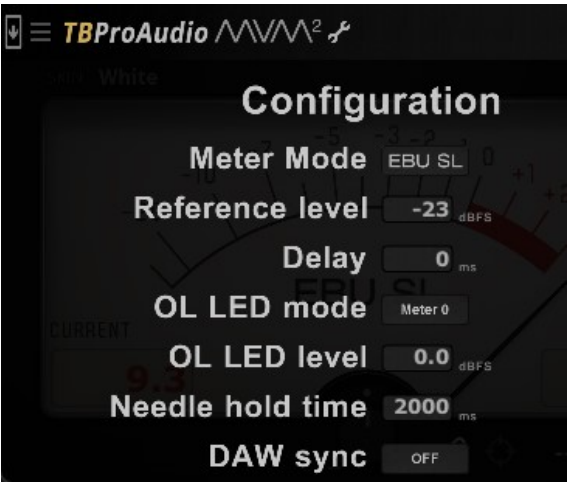
Needle Mode: click to change the function of red needle, off, current or max. value.

Hide/Show GUI Elements: click to show/hide different controls like GUI scale, FPS, channel mode, current/max readouts, gain link/gain match button.

Single/Dual meter display: enables either single or dual meter display.

GUI Scale: mouse click and drag the bottom right scale icon.

Configuration page:



Meter Modes: peak, RMS, RMS+3, EBU, VU, PPM  
Reference. Level: sets the reference level in dB(FS) for the current meter mode. E.g. reference level for classic VU meter is -18dbFS  
Delay: delays the meter activity so it is time-synced with other busses with different latencies.  
OL (overload) LED mode: meter 0 = if needle is above meter zero or digital peak = if above OL LED level (in dBFS)  
OL (overload) LED level: LED lights if digital signal level is above value  
Needle hold time: determines how long current meter value is held  
DAW sync: enables meter reset with DAW play start

Presets:

Preset specification

(dBFS)	-43	-40	-38	-34	-32	-30	-20	-18	-17	-15	-11	-9	-6	0	1	2	3	Meter Mode	Reference Level dBFS
Peak							-20	-18										Peak	0
RMS-20							-20	+2	+3									RMS +3dB	-20
RMS-14							-20	-4		+3								RMS +3dB	-14
RMS-12							-20	-6			+3							RMS +3dB	-12
EBUR128 ML							-20	+3										EBU ML	-23
EBUR128 SL							-20	+3										EBU SL	-23
VU Standard								0	+3									VU	-18
PPM (Ila - BBC)								4					7					PPM	-18
RMS Standard								-23	-21									RMS	0
RMS +3dB (AES-17)								-20	-18									RMS +3dB	0

Readout values for 1kHz sinus -18dBFS Peak

6 Conclusion

So finally if you have any questions or suggestions just let us know. Enjoy our audio tools and visit us here: [www.tbproaudio.de](http://www.tbproaudio.de).

Your team from TBProAudio :-)