



Signal Noise SN02-G

VU Meter

INSTALLATION

The package should contain the following files:

<i>SN02G VU Meter.dll</i>	– 32-bit version
<i>SN02G VU Meter x64.dll</i>	– 64-bit version
Jrhand.ttf	- font for tape strip
<i>sn02_manual.pdf</i>	– manual (this file)
install_the_font_first.txt	- text installation notes

To install the plug-in, install the font first. Copy the font file to Windows' font directory, or right-click the font file and select "Install" from the popup menu. Then copy the DLL files of the version(s) you wish to use to the respective VST plug-in folders. Tested with Cubase 5.1 (32-bit) and Cakewalk 2019 (64-bit).

CREDITS

SN02-G is based on VUSOFT, a Matlab software VU meter, proposed by Bryce E. Lobdell and Jont B. Allen, and presented in the paper "*A model of the VU (volume-unit) meter, with speech applications*", 2005-2006 [[1](#)].

DISCLAIMER

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DESCRIPTION AND GENERAL USAGE

SN02-G is a mono/stereo/mid-side needle VU meter plug-in with variable dBFS reference level and optional maximal value indicator. The plug-in is optimized for HDTV screen resolution and is designed to occupy minimal screen real estate while still preserving comfortable readability and fast access to all controls at low ASIO/CPU levels.

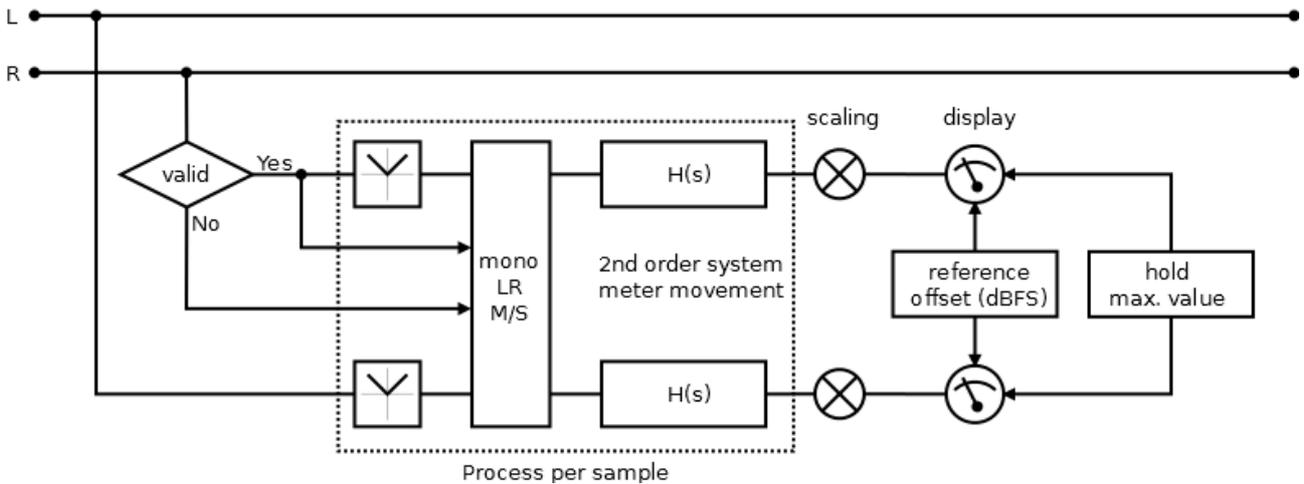


Figure 1.

Click and drag the switches horizontally to increase or decrease their value, alternatively, click on the desired value of the respective switch. Click the on/off button to change its state. Ctrl-click the switches to reset them to default (hard coded) values

CONTROLS

Legend: mono - ○ stereo - ∞ mid/side - ⊗



Figure 2. - standard GUI



Figure 3. - extended GUI

- 1) **Ref:** Sets the nominal reference level (0 dBvu) of the VU meter. Available values are -12, -14, -18, and -20 dBFS.
- 2) **Mode:** Sets the operation mode of the VU meter. Available modes are mono, stereo, and mid/side. This switch has no effect if the plug-in is inserted on a mono track.
- 3) **Hold:** Button that toggles the indicator needle of current maximal value for both VU meters on and off.
- 4) **VU meter 'L':** Top VU meter. If the plug-in is inserted on a stereo track, it provides the visual representation of dBvu value of summed LR signal (mono mode), left channel (stereo mode), or mid (mid/side mode). If the plug-in is inserted on a mono track, it provides the visual representation of dBvu value of track's mono signal. The black needle displays actual dBvu value, the optional red needle displays maximal value, and has a hold duration of 1 second.
- 5) **VU meter 'R':** Bottom VU meter. If the plug-in is inserted on a stereo track, it provides the visual representation of dBvu value of summed LR signal (mono mode), right channel (stereo mode), or side (mid/side mode). If the plug-in is inserted on a mono track, it behaves in an identical manner as the top VU meter.
- 6) **Scribble strip:** Clicking on the logo, you can access the scribble strip text edit box. It will hold up to 256 characters but only first 30 will be displayed. Note that the strip is displayed only when it contains at least one character. If you wish to remove it simply delete all text and click enter.
- 7) **Plug-in name:** Clicking on the plug-in name switches between standard and large version of the GUI (SN02-GX).
- 8) **Sample peak leds:** Sample peak leds with hold time of 300 ms.

KNOWN LIMITATIONS

Although the plug-in's algorithm adheres to standard for VU meters (ASA, 1954) [1], omission of 8x oversampling, in order to keep the implementation real-time efficient, is most probably the root cause of non-compliant behavior in region around ca. 12 kHz, where under test conditions (static sine wave) the deviation is +/- 1 dB instead of the specified 0.5 dB [2].

Another note should be taken, that when submitting the plug-in to the test as outlined in *"Method to Evaluate the Ballistics of Audio Meters"* (Acuna, 2015), it exhibits behavior that, according to methodology of said paper, should be interpreted as metering of average value (as opposed to real VU). This, however, casts some doubts on the test method itself, since Acuna uses the very model by Lobdell and Allen, implemented by this plug-in, as the basis of his analysis [3].

REFERENCES

[1] <https://www.researchgate.net/publication/6507148>

[2] https://en.wikipedia.org/wiki/VU_meter#Frequency_response

[3] <https://www.researchgate.net/publication/283040459>