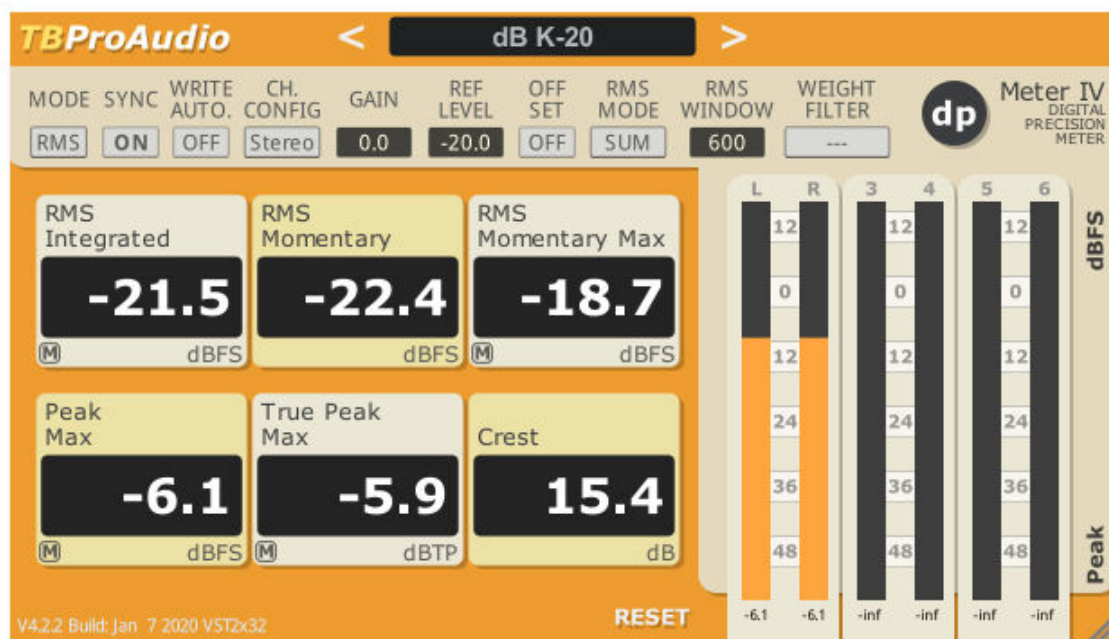


dpMeter 4

Manual



TBProAudio 2020

1 Introduction

Welcome to dpMeter 4, a precise digital audio multi channel meter including RMS, EBU R128 and TruePeak measurement. It is the successor of dpMeter 3.

2 Features

dpMeter 4 offers following features:

- click-free 64-bit internal processing
- measurement modes: RMS/EBU R128/DIAL
- multi channel metering: 2-6 RMS channels, 2.0 stereo, 4.0, 4.1 and 5.1 surround
- RMS: integrated, momentary, peak and true peak, Crest
- EBU R128: IL, SL, ML, true pack and loudness range
- DIAL (dialog gating): IL, SL, dialog percentage, loudness range (dialog gated), loudness range, true peak
- true peak measurement based on ITU BS.1770-4
- K/A/B/C/M-weighting filter
- continuous/synced measurement
- record metering results as automation data
- large and accurate live meters
- adjustable pre-gain
- manual loudness/peak/TP match with given reference level
- loudness offset mode
- GUI resizing: 50% up to 400%
- Preset management

3 Design

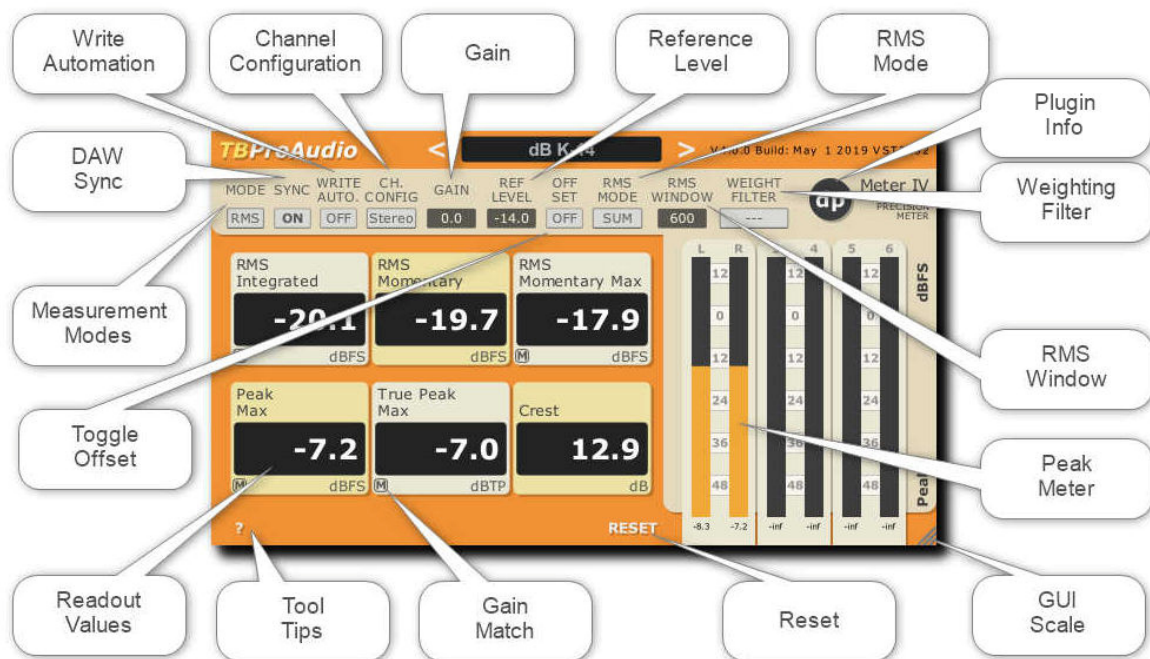
dpMeter 4 combines two meter into one and adds manual loudness matching:

- RMS: accurate multi channel RMS meter with variable window size and true peak measurement based on ITU BS.1770-4
- EBU R128: loudness meter based on EBU R128-2014 including true peak and LRA measurement
- DIAL “K” weighting (ITU BS.1770-4) and gating according Dolby Labs reference code, <https://www.dolby.com/us/en/technologies/speech-gating-reference-code.aspx>
- Additional manual loudness/peak/True Peak-matching with reference level
- [RMS mode] Crest is defined as Max Peak minus RMS Integrated

4 Minimum System Requirements

- Windows XP SP3 or newer
- Mac OS X 10.9 or newer
- Win: 32/64 Bit VST, 32/64 Bit VST3, 32 Bit RTAS, 32/64 Bit AAX
- OS X: 32/64 Bit VST, 32/64 Bit VST3, 32/64 Bit AU, 32 Bit RTAS, 32/64 Bit AAX
- Tested with: Cockos Reaper, Steinberg Cubase/Nuendo/Wavelab 6/7/8/9/10, FL Studio 12.x/20.x, PT10/12/2018, Reason 9.5/10, Studio One, Ableton Live

5 Plugin Controls



Mouse usage:

- Click and drag horizontally changes parameter value
- Ctrl click and drag changes parameter value faster
- Shift click and drag changes parameter value slower
- Alt click rests to default value

Double click or right click open value edit box, finish with enter.

5.1 Measurement Modes

Toggles measurement mode: RMS (orange screen), EBUR128 (blue screen), DIAL (purple screen)

DIAL measurement at sample rates 44100/48000Hz only.

5.2 DAW Sync

Measurement can run either in sync with DAW (ON) or continuous (OFF)

5.3 Write Automation

Disable/enable writing of automation data to DAW. Please consult your DAW manual how to enable reading/writing plugin automation data.

RMS mode:

OUT:RMS IL, OUT:RMS ML, OUT:RMS ML Max, OUT:RMS Peak Max, OUT:RMS TP Max, OUT:RMS Crest

EBUR128 mode:

OUT:EBU IL, OUT:EBU ML, OUT:EBU ML Max, OUT:EBU SL, OUT:EBU SL Max, OUT:EBU TP, OUT:EBU LRA

DIAL mode:

OUT:DIAL IL, OUT:DIAL LRA, OUT:DIAL Percentage, OUT: DIAL SL, OUT: DIAL SL Max, OUT: DIAL TP, OUT:DIAL NLRA

5.4 Reset

Resets all measurements

5.5 Plugin info menu

Click on “dpMeter IV” logo to open plugin info menu..

It provides plugin information, access to online manual/change log, toggle tooltips and toggle TruePeak measurement.

5.6 Gain Match

Clicking on the small “M” button or with shift directly on the value matches the readout value with reference level by adjusting automatically the gain value.

5.7 Toggle Offset

Enables value offset display, all RMS/EBUR128 values are displayed in relationship to reference level (in dB/LU).

5.8 Readout values

Depending on measurement mode (RMS, EBUR128 or DIAL) most relevant values are displayed.

5.9 Meters

Meters for up to 6 input channels. In RMS mode peak values are displayed, in EBUR128 mode true peak values are displayed.

LED signal meter range is from -60dBFS to +12dBFS, in 3dB steps.
Value below meter shows maximum value. If signal clips (above 0dBFS/0dBTP) the top-LED lights red.

5.10 GUI Scale

Click and drag with the mouse to enlarge the GUI. The GUI scale goes from 50% up to 400%. GUI scale is set back to default with control left mouse click on the “dpMeter4” logo or double click on the resize icon.

5.11 (RMS) Channel configuration

Sets channels for RMS measurement, others channels are ignored

5.12 (RMS) Gain

Sets additional gain before measurement, can be set automatically by clicking on small “M” button of the readout values, depending on reference level.

5.13 (RMS) Reference Level

Set reference level in dBFS, is used in case of manual loudness matching and loudness offset display.

5.14 (RMS) Offset

Display loudness levels referenced to reference level.

5.15 (RMS) RMS Mode

RMS Sum: All active channels are summed to a single true RMS value
AES17: All active channels are calculated according AES17 spec. RMS window is ignored.
RMS Avg: All active channels are averaged to a single true RMS value

5.16 (RMS) RMS Window

Sets RMS window size, 10ms to 5.000ms, default 300ms

5.17 (RMS) Weighting Filter

Sets IT1170, A, B, C, M A+3dB weighting filter.

5.18 (EBUR128) Channel Configuration

Sets channels for EBUR128 measurement, others channels are ignored

5.19 (EBUR128) Gain

Sets additional gain before measurement, can be set automatically by shift mouse click on readout value, depending on reference level.

5.20 (EBUR128) Ref Level

Set reference level in dBFS/LUFS, is used of manual loudness matching and loudness offset display.

5.21 (EBUR128) Offset

Display loudness levels referenced to reference level.

5.22(DIAL) Channel Configuration

Sets channels for dialog measurement, others channels are ignored

5.23(DIAL) Gain

Sets additional gain before measurement, can be set automatically by shift mouse click on readout value, depending on reference level.

5.24(DIAL) Ref Level

Set reference level in LKFS, is used of manual loudness matching and loudness offset display.

5.25(DIAL) Offset

Display loudness levels referenced to reference level.

5.26(DIAL) SL Window

Sets SL window size, 10ms to 99.000ms, default 3.000ms

5.27 Presets

Preset menu loads and saves user presets. Presets stored under %localappdata%/dpMeter4 (Windows) or /Users/xxx/Library/Application Support/ dpMeter4 (Mac OSX) are imported as user presets.

6 Credits

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DIAL gating code by Dolby Labs reference code,

<https://www.dolby.com/us/en/technologies/speech-gating-reference-code.aspx>

7 Conclusion

So finally if you have any questions or suggestions just let us know. And have fun with our tools and visit us here: <http://www.tb-software.com/TBProAudio/index.html>

Your team from TBProAudio :-)