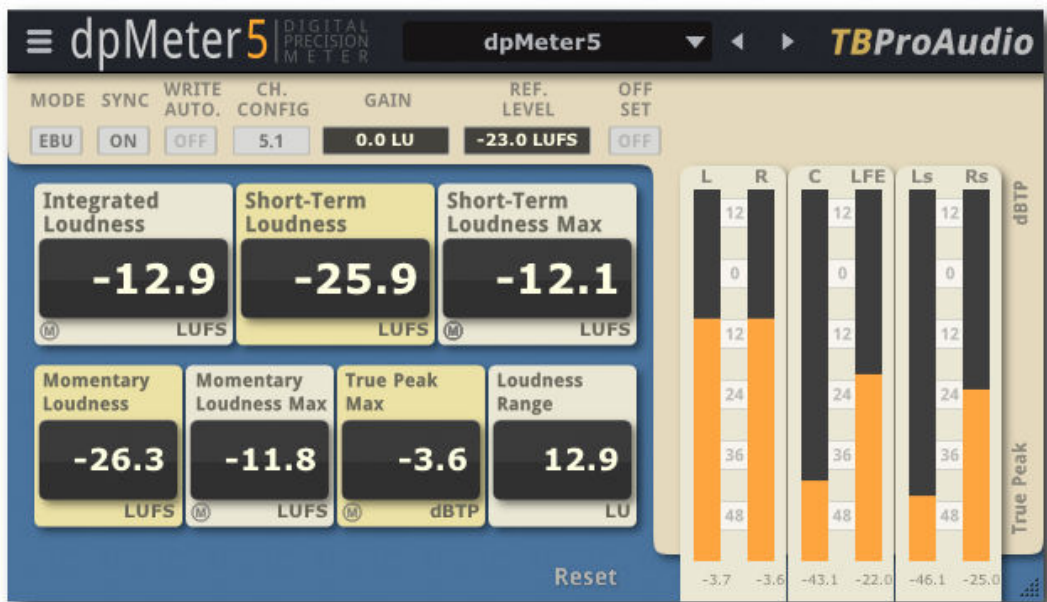


# dpMeter5

## Manual



TBProAudio 2021

# 1 Introduction

Welcome to dpMeter5, a precise digital audio multi channel meter including RMS, EBU R128 and TruePeak measurement. It is the successor of dpMeter4.

## 2 Features

dpMeter5 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 scaling
- Preset management

### 3 Design

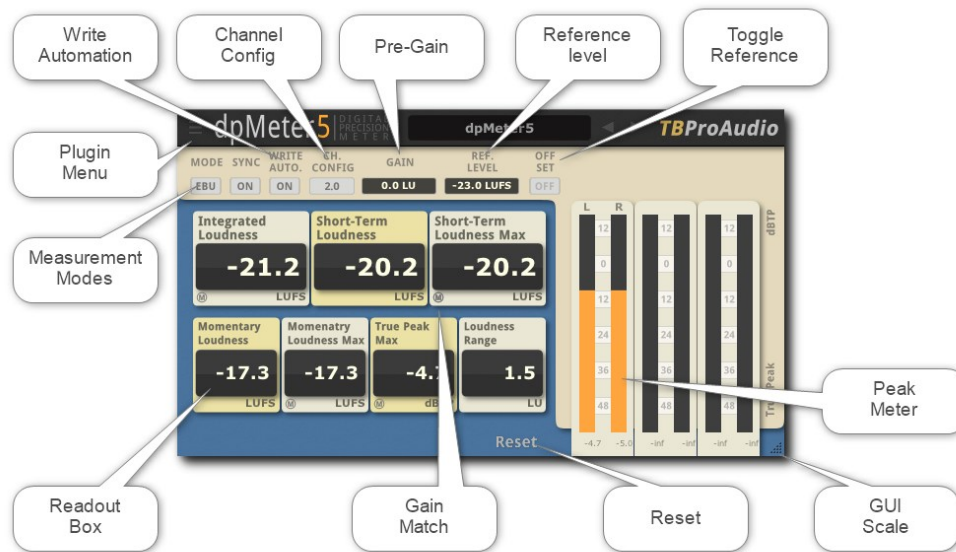
dpMeter5 combines two meter into one and adds manual loudness matching:

- 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 Peak Max minus RMS Integrated (Crest cannot go negative)

### 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 Plugin Controls



#### Mouse usage:

- Click and drag horizontally changes parameter value
- Ctrl click resets value
- Shift click and drag changes parameter value slower
- Double click open value entry box

## **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 menu**

The plugin menu provides further information, access to online version check, manual/change log, toggle tooltips, toggle TruePeak measurement and flag to avoid reset during DAW sync. This flag is useful in DAWs missing a dedicated pause function.

## **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**

Use the mouse to click and drag the small icon in the lower right corner. Double click for reset.

### **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

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### **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%/dpMeter5 (Windows) or /Users/xxx/Library/Application Support/ dpMeter5 (Mac OSX) are imported as user presets.

## **6 Credits**

DIAL font “Repetition Scrolling” by [tepidmonkey@yahoo.com](mailto:tepidmonkey@yahoo.com), Terms of use:

<http://www.fontframe.com/tepidmonkey>

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: [www.tbproaudio.de](http://www.tbproaudio.de).

Your team from TBProAudio :-)