
K-Meter

=====

Implementation of a K-System meter according to Bob Katz' specifications

Copyright (c) 2010-2011 Martin Zuther (<http://www.mzuther.de/>)

This program is free software: you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation, either version 3 of the License, or (at your option) any later version.

This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details.

You should have received a copy of the GNU General Public License along with this program. If not, see [<http://www.gnu.org/licenses/>](http://www.gnu.org/licenses/).

Thank you for using free software!

FLAC-compressed wave file (44.1 kHz, 24 bit)

=====

Please verify correctness of peak meter and maximum peak meter programmatically.

Given values describe the left channel. The right channel is delayed by one second and its level has been attenuated by 1.93 dB.

00:00.000 - 00:02.000 silence
00:02.000 - 00:07.000 square wave (20 Hz, -41.0 dBFS)
[left peak meter should read -21.00 dB (K-20)]
[right peak meter should read -22.93 dB (K-20)]
[left maximum peak should read -21.00 dB (K-20)]
[right maximum peak should read -22.93 dB (K-20)]
00:07.000 - 00:09.000 silence
00:09.000 - 00:14.000 square wave (180 Hz, -29.0 dBFS)
[left peak meter should read -9.00 dB (K-20)]
[right peak meter should read -10.93 dB (K-20)]
[left maximum peak should read -9.00 dB (K-20)]
[right maximum peak should read -10.93 dB (K-20)]
00:14.000 - 00:16.000 silence
00:16.000 - 00:21.000 square wave (530 Hz, -17.5 dBFS)
[left peak meter should read +2.50 dB (K-20)]
[right peak meter should read +0.57 dB (K-20)]
[left maximum peak should read +2.50 dB (K-20)]
[right maximum peak should read +0.57 dB (K-20)]
00:21.000 - 00:23.000 silence

00:23.000 - 00:28.000 square wave (1111 Hz, -8.3 dBFS)

[left peak meter should read +11.70 dB (K-20)]
[right peak meter should read +9.77 dB (K-20)]

[left maximum peak should read +11.70 dB (K-20)]
[right maximum peak should read +9.77 dB (K-20)]

00:28.000 - 00:30.000 silence
00:30.000 - 00:35.000 square wave (1501 Hz, -0.1 dBFS)

[left peak meter should read +19.90 dB (K-20)]
[right peak meter should read +17.97 dB (K-20)]

[left maximum peak should read +19.90 dB (K-20)]
[right maximum peak should read +17.97 dB (K-20)]

00:35.000 - 00:37.000 silence
00:37.000 - 00:42.000 square wave (2890 Hz, -36.0 dBFS)

[left peak meter should read -16.00 dB (K-20)]
[right peak meter should read -17.93 dB (K-20)]

[left maximum peak should read +19.90 dB (K-20)]
[right maximum peak should read +17.97 dB (K-20)]

00:42.000 - 00:44.000 silence
00:44.000 - 00:49.000 square wave (4190 Hz, -69.5 dBFS)

[left peak meter should read -49.50 dB (K-20)]
[right peak meter should read -51.43 dB (K-20)]

[left maximum peak should read +19.90 dB (K-20)]
[right maximum peak should read +17.97 dB (K-20)]

00:49.000 - 00:51.000 silence
00:51.000 - 00:56.000 square wave (8345 Hz, -85.0 dBFS)

(it seems like I have driven Sound Forge's test
tone generator to its limits -- the peak level
meter readings given below have been measured
using the "Statistics" dialog in Sound Forge)

[left peak meter should read -65.05 dB (K-20)]
[right peak meter should read -66.99 dB (K-20)]

[left maximum peak should read +19.90 dB (K-20)]
[right maximum peak should read +17.97 dB (K-20)]

00:56.000 - 00:59.000 silence

Validation settings

=====

File: peak_meter.flac
Host SR: 44 100 Hz
Channel: All
Display: [] Average meter level
[x] Peak meter level
[x] Maximum peak level
[] Stereo meter value
[] Phase correlation