
K-Meter

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

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

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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 peak)
[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 peak)
[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 peak)
[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 peak)

[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 peak)

[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 peak)

[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 peak)

[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 peak)

(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

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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