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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, 16 bit)

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Please verify correctness of meter ballistics programmatically.

00:00.000 - 00:02.000 silence  
00:02.000 - 00:12.000 sine wave (2 kHz, 0.0 dB FS peak)  
00:12.000 - 00:12.600 silence

00:12.600 [check fall time of average meters]

00:12.600 - 00:14.600 sine wave (2 kHz, 0.0 dB FS peak)  
00:14.600 - 00:24.600 silence  
00:24.600 - 00:25.200 sine wave (2 kHz, 0.0 dB FS peak)

00:25.200 [check rise time of average meters]

00:25.200 - 00:27.200 silence  
00:27.200 - 00:37.200 sine wave (2 kHz, 0.0 dB FS peak)  
00:37.200 - 00:40.200 silence

00:40.200 [check fall/rise time of peak meters]

00:40.200 - 00:42.200 sine wave (2 kHz, 0.0 dB FS peak)  
00:42.200 - 00:44.200 silence

Validation settings

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

## Metering minima

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-(20.00 dB + 70.00 dB) = -90.00 dB  
(see constructor of class "MeterBallistics")

## Fall time of average meters (sine wave, 0.0 dB FS peak)

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99% of final reading in 600 ms integration time

K-20 = 20.00 dB - 90.00 dB \* 99% = -69.10 dB  
K-14 = 14.00 dB - 90.00 dB \* 99% = -75.10 dB  
K-12 = 12.00 dB - 90.00 dB \* 99% = -77.10 dB  
Norm = 0.00 dB - 90.00 dB \* 99% = -89.10 dB

## Rise time of average meters (sine wave, 0.0 dB FS peak)

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99% of final reading in 600 ms integration time

K-20 = 20.00 dB - 90.00 dB \* 1% = 19.10 dB  
K-14 = 14.00 dB - 90.00 dB \* 1% = 13.10 dB  
K-12 = 12.00 dB - 90.00 dB \* 1% = 11.10 dB  
Norm = 0.00 dB - 90.00 dB \* 1% = -0.90 dB

## Fall time of peak meters (sine wave, 0.0 dB FS peak)

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-26 dB in 3 seconds

K-20 = 20.00 dB - 26.00 dB = -6.00 dB  
K-14 = 14.00 dB - 26.00 dB = -12.00 dB  
K-12 = 12.00 dB - 26.00 dB = -14.00 dB  
Norm = 0.00 dB - 26.00 dB = -26.00 dB

## Rise time of peak meters (sine wave, 0.0 dB FS peak)

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immediate (one sample)

K-20 = 20.00 dB  
K-14 = 14.00 dB  
K-12 = 12.00 dB  
Norm = 0.00 dB