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

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FLAC-compressed wave file (44.1 kHz, 16 bit)
============================================
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 dBFS 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 dBFS peak)
00:14.600 - 00:24.600  silence
00:24.600 - 00:25.200  sine wave (2 kHz, 0.0 dBFS 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 dBFS 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 dBFS peak)
00:42.200 - 00:44.200  silence


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


Fall time of average meters (sine wave, 0.0 dBFS peak)
======================================================
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 dBFS peak)
======================================================
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 dBFS peak)
===================================================
-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 dBFS peak)
===================================================
immediate (one sample)

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