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### **FLAC-compressed wave file (44.1 kHz, 16 bit, stereo)**

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Please verify correctness of meter ballistics programmatically. Calculated values are only valid in "RMS" mode. Small differences due to time granularity of validation logging are acceptable.

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: RMS: All, ITU-R: 1  
Display: ☒ Peak meter level  
☒ Average meter level  
☐ Maximum peak level  
☐ Stereo meter value  
☐ Phase correlation

## **Metering minima**

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For the calculations, see the Python script "meter\_ballistics.py".

### **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

**Fall time average (K-20): -72.09 dB (ITU-R: -69.2 dB)**

Fall time average (K-14): -78.09 dB

Fall time average (K-12): -80.09 dB

Fall time average (Norm): -92.09 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

**Rise time average (K-20): +19.07 dB (ITU-R: +21.4 dB)**

Rise time average (K-14): +13.07 dB

Rise time average (K-12): +11.07 dB

Rise time average (Norm): -0.93 dB

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

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-26 dB in 3 seconds

**Fall time peak (K-20): -6.00 dB**

Fall time peak (K-14): -12.00 dB

Fall time peak (K-12): -14.00 dB

Fall time peak (Norm): -26.00 dB

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

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immediate (one sample)

**Rise time peak (K-20): +20.00 dB**

Rise time peak (K-14): +14.00 dB

Rise time peak (K-12): +12.00 dB

Rise time peak (Norm): +0.00 dB