



?

Questions of the "tonmeister test"

61

UdK Berlin
Sengpiel
12.2008
F + A

1. Which directional characteristic does a free hanging pressure zone microphone PZM have (not located on a flat area as usual) **a)** above the lower cut-off frequency and **b)** below the lower cut-off frequency?

a)

b)

Look at: "Frequenzgang bei verschiedenen Grenzflächendurchmessern":

<http://www.sengpielaudio.com/UntereGrenzfrequenzbeimGrenzflaechenmikrofon.pdf>

2. How many different power circuits do we have to use for 20 kW lighting and 4 kW sound, conforming to the law, without problems all together, when every circuit is fused with 16 amps seperately?

3. In sound engineering a known value of the excess sound pressure is exact 1 Pa. The usual air pressure (international standard atmosphere) 1 atm is $p_0 = 101325$ Pa. Between which values in pascal these sound wave of 1 Pa swings to and fro as superposition to the normal air pressure?

4. In the user's manual of a record player for the black 30 cm discs you find, that the pick-up should press with a stylus force of 0.015 Newton on the disk. You own a tension spring balance. How many grams must the spring balance show?

5. How much is the difference in decibel between +6 dBu and 12.3 mV?

<http://www.sengpielaudio.com/RechnerSpannungLeistung.htm>

6. We got a 1000 watt power amplifier, which delivers 100 watts. The master fader is pushed up another 6 decibels. How much power the amplifier will now deliver now?

<http://www.sengpielaudio.com/RechnerSpannungLeistung.htm>

7. Which amplification factor (gain) v is equal to the voltage level of 52 dB?

<http://www.sengpielaudio.com/RechnerSpannungLeistung.htm>

8. Explain **a)** the correct term for "energy efficiency" and **b)** explain how much the efficiency of a studio monitor in percent is about. In loudspeaker datas the sensitivity in dB/W/m is given, which is often not correct called energy efficiency. This is not meant.

a)

b)