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Subject: but

Posted by [dbeardsl](#) on Wed, 17 Apr 2002 20:28:12 GMT

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The volts are different cause I'm calculating sensitivity at 1 Watt. thats why it doesn't look right.---the system of equations  
$$\text{Watts} = \text{Current} * \text{Volts}$$
$$\text{Volts} = \text{Current} * \text{Resistance}$$
---expanded solutionso  
$$\text{Watts} = \text{Current}^2 * \text{Resistance}$$
so  $\text{Current}^2 = \text{Watts} / \text{Resistance}$ so  $\text{Current} = \sqrt{\text{Watts} / \text{Resistance}}$ since  $\text{Volts} = \text{Current} * \text{Resistance}$   
$$\text{Volts} = \sqrt{\text{Watts} / \text{Resistance}} * \text{Resistance}$$
so  $\text{Volts} = \sqrt{\text{Watts} * \text{Resistance}}$ so  $2.83\text{V} = \sqrt{1\text{W} * 8}$  for 8 ohms. $2\text{V} = \sqrt{1\text{W} * 4}$  for 4 ohms.If you measure sensitivity at 2.82V/1M, then the Voltage will be the same and Wattage will be different.