

Answer on Question #47922, Physics, Mechanics — Kinematics — Dynamics The sound level of a siren is 120 dB. If a second siren is added, what is the new sound level?

A) 130 dB B) 240 dB C) 123 dB D) 126 dB

Solution

Adding second siren leads to change in power of sound in 2 times. In bels change is

$$\lg \frac{I}{I_0} \approx 0.3$$

In decibels - 10 times as in bells,

$$0.6 \cdot 10 = 3$$

Hence, sound level will be $120+3 = 123$ dB.