

# THE HANDBOOK ELECTROLAW

If you can begin at start and go all the way to finish, you will have covered **all** of "Ohms Law", one of the most important principles of electronics. It is the mathematical relationship between voltage, current, resistance, and power. (E, I, R and P respectively). If you are good at transposing simple algebra, it will help. If not, try it anyway and you will still learn something. Good luck! The basic formulas are  $E = IR$  and  $P = IE$ .

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**START**

**Maze 1 (Top Left):**  $E = \frac{IP}{IR}$ ,  $E = \frac{IP}{IE}$

**Maze 2 (Top Middle):**  $E = \frac{P/I}{I^2 R}$ ,  $E = \frac{P/I}{\sqrt{P/R}}$

**Maze 3 (Top Right):**  $E = \frac{E/I}{P/I^2}$ ,  $E = \frac{E/I}{\sqrt{PR}}$

**Maze 4 (Second Row Left):**  $I = \frac{P/E}{E^2/R}$ ,  $I = \frac{P/I}{P/I}$

**Maze 5 (Second Row Middle):**  $I = \frac{E/P}{E/R}$ ,  $I = \frac{E/P}{P/I^2}$

**Maze 6 (Second Row Right):**  $I = \frac{E/P}{E^2/R}$ ,  $I = \frac{E/P}{\sqrt{P/R}}$

**Maze 7 (Third Row Left):**  $R = \frac{P/I}{P/E}$ ,  $R = \frac{P/I}{E/I}$

**Maze 8 (Third Row Middle):**  $R = \frac{P/I^2}{EI}$ ,  $R = \frac{P/I^2}{E/R}$

**Maze 9 (Third Row Right):**  $R = \frac{P/E}{E^2/P}$ ,  $R = \frac{P/E}{P/I}$

**Maze 10 (Bottom Row Left):**  $P = \frac{E/I}{EI}$ ,  $P = \frac{E/I}{E/R}$

**Maze 11 (Bottom Row Middle):**  $P = \frac{E^2/R}{I/E}$ ,  $P = \frac{E^2/R}{E/I}$

**Maze 12 (Bottom Row Right):**  $P = \frac{I^2 R}{IR}$ ,  $P = \frac{I^2 R}{P/I}$

**FINISH**