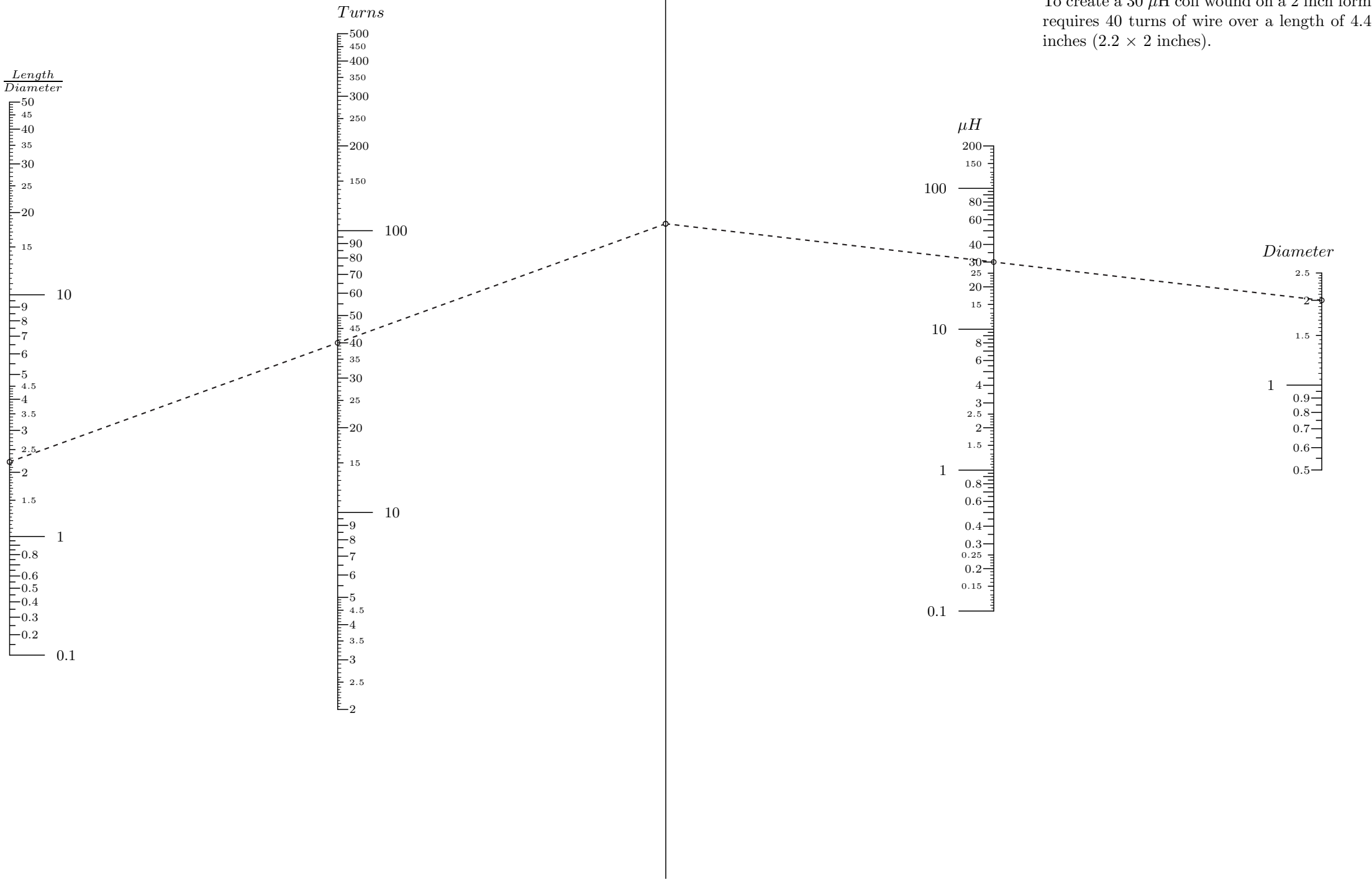# Single-layer air coil calculator

Nomograph to calculate inductance of single layer air coil. Nomograph design adapted from Electronics World magazine, August 1962 (page 55).

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This nomograph implements the following formula:

$$\mu H = \frac{r^2 \times N^2}{9r + 10l}$$

where $r$ is the radius of the coil (in inches), $N$ is the number of turns, $l$ is the length of the coil (in inches).

Example shown:
To create a 30 $\mu$H coil wound on a 2 inch form requires 40 turns of wire over a length of 4.4 inches (2.2 × 2 inches).

$Turns$

$\dfrac{Length}{Diameter}$

$\mu H$

$Diameter$