



Quanser Magnetic Levitation

The Quanser Magnetic Levitation device is a single degree of freedom electromagnet-based system that allows users to levitate a ball vertically up and down. The overhead electromagnet generates an attractive force on the metal ball that initially sits on the post. The position of the ball is measured using a photo-sensitive sensor embedded inside the post. The system also includes a current sensor to measure the current inside the electromagnet's coil.

Basic technical parameters:

- Dimensions: 15.1 x 15.1 x 27.6 cm, 3.8 kg
- photosensor sensitivity: 0.28 cm/V
- coil core radius: 0.8 cm
- electromagnet force constant: $6.53 \times 10^{-5} \text{ N.m}^2 / \text{A}^2$
- compatible with NI LabView and Matlab/Simulink
- comprehensive educational materials included
- Open architecture allows users to create their own control algorithms.