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[Free Fall Apparatus](#) [Gravity Acceleration Apparatus](#)



[Free Fall Apparatus](#)

Advanced 'G' Kit

[Free Fall Apparatus](#) is designed for studying and measuring the acceleration of gravity.

Experiment procedure: A steel ball is suspended with an electromagnet. The ball is released by a switch on the [digital timer \(download\)](#) to allow the free fall motion. During its descent (or “free fall”), the only force acting on the ball is the force of gravity. The [digital timer \(download\)](#) displays the fall time to the first photogate and the time to pass through the gate after the experimental run. Acceleration of the free fall motion of the steel ball is captured by moveable photogates and recorded by the [digital timer \(download\)](#). The steel ball which is caught after the free fall in a catcher (pocket) at the bottom of the post.

This [Free Fall Apparatus](#) is consisting a triangular base with level adjuster knobs and a rugged aluminum alloy rod with Scale for quick setup. The photogates on the vertical rod can be freely moved to any position and can be easily read against the bright yellow scale. A special photogate pair and electromagnet pre-wired to a cable harness are supplied, making electrical setup simple. Just plug the harness into the rear panel of a [digital timer \(download\)](#). A plumb line, included, screws into the bottom of the release electromagnet. The line passes through the photogates and is illuminated by the photogate beam when the apparatus is in correct vertical alignment.

It comes with a rugged aluminum alloy rod with Scale, an electromagnetic ball release, a pair of photogates on a long cable harness, two steel balls, a plumb line, a catcher, and an instructional manual. Required by not included: [Digital Timer with Photogates\(download\)](#).

[Free Fall Apparatus](#)

[Main Technical Parameters](#)

Free Fall Apparatus	Specification
SKU	0201010210
Overall height of apparatus	140cm
Overall height of experiment	120cm
Power of electromagnet	DC 6 V
Diameter of steel ball	16mm
Relative errors on measuring g: (the acceleration of free fall)	2%

<u>Free Fall Apparatus</u>	Specification
SKU	0201010220
Overall height of apparatus	160cm
Overall height of experiment	150cm
Power of electromagnet	DC 6 V
Diameter of steel ball	18mm
Relative errors on measuring g: (the acceleration of free fall)	2%

*Products and configuration list described herein are subject to changes without notice.