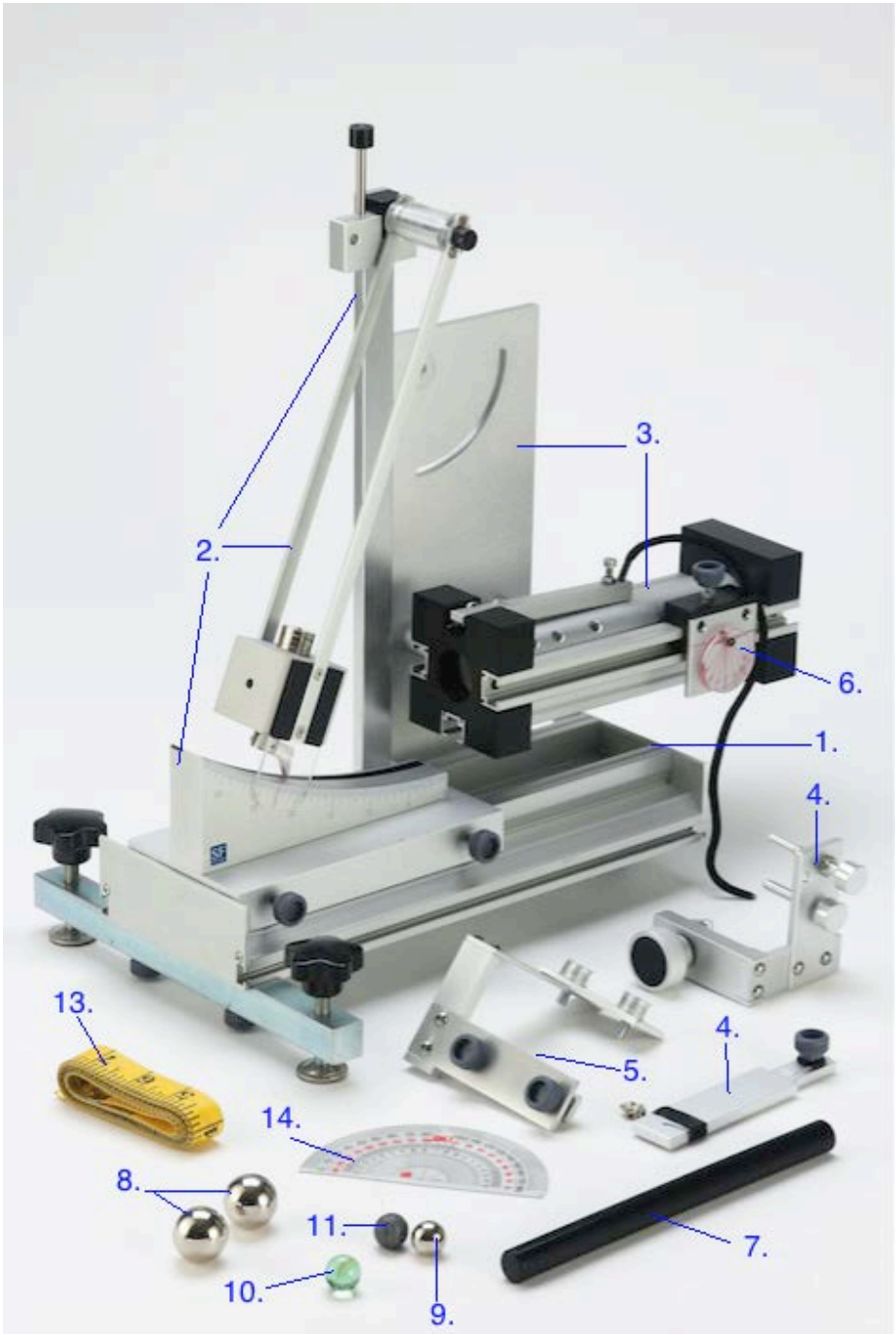
F07 Projectile and collision experiment



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Experiments:

1. Kinematic equation of projectile motion can be formulated.
2. Momentum conservation of a steel ball in elastic collision can be verified.
3. With conservation of momentum and mechanical energy for perfectly elastic collision, the initial velocity of a ballistic pendulum in can be computed.

Specifications:

Aluminum experimental platform x1

1. Aluminum alloy, an top 3 D biconvex guide track ,on the surface, is fastened by U-shaped clips below and one of both sides is adhered to an meter of inclination of 45-degree. And the type of three-point level supporter of 120 x12x4.5cm is subjected at at both ends.
2. Pendulum set with base, 0°~33° ±0.2°angle device can precisive stop the catcher at any angle position and projectile catcher can catch Φ16~25mm bullet , attached weight 5gx4, the pendulum effective length 280mm weight 235g, it hanged steadily by two frictionless bearings x1
3. Three steps launcher set made by aluminum can push bullet ϕ25mm, Φ16mm and attach a thick aluminum launcher mount plate for 0°~90° projectile experiment and collision experiment x1
4. Drop shoot bracket 0° and 30° x1
5. Photogate mounting bracket x1
6. Angle scale x1
7. Loading rod x1
8. Steel ball ϕ=25mm x2
9. Steel ball ϕ=16mm x1
10. Glass ball ϕ=16mm x1
11. Lead ball ϕ=16mm x1
12. Thin cushion 2mm thick x6
13. Tapemeasure 3m x1
14. Protractor x1

Option:

1. Photogate timer （Display x1）
2. Photogate timer (External x1)