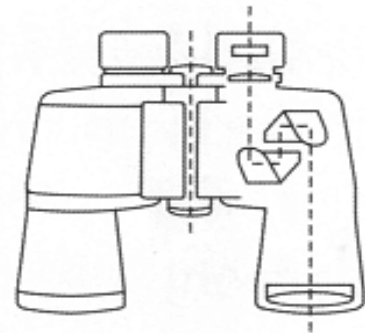


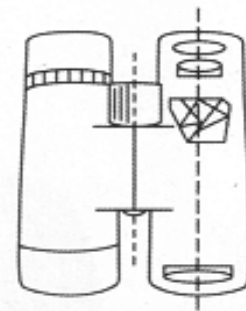
# BINOCULAR BASICS

## OPTICAL SYSTEMS

**Porro Prisms:** This design has been a proven performer for over 100 years. The distinctive, off-set binocular housings accommodate two internal porro prisms that are used to elongate the light path to enable higher magnifications than primitive field or "opera" glasses. Porro prism binoculars typically deliver exceptionally high optical quality at more affordable prices than roof prism binoculars of the same power rating (see below).



**Roof Prisms:** Roof prism binoculars are streamlined and compact because they utilize trim roof-shaped prisms to elongate the light path. Roof prism binoculars are usually more expensive than equivalent porro prism models.



## ANTI-REFLECTIVE OPTICAL COATINGS

Because glass surfaces reflect back up to 4% of any light that passes through, a binocular built without anti-reflective coating on its lens surfaces would deliver a very poor, darkened image. Most better-quality binoculars treat all or most of the lens surfaces with vacuum-deposited layers of magnesium fluoride and other exotic elements to reduce light loss through reflection – which increases light transmission and delivers a bright, clear view. Typically, the more lens and prism surfaces that are coated, the brighter and clearer the image, but at an incremental increase in cost.

**Coated Lenses:** This means that some lens and prism surfaces are coated to produce a reasonably bright image at a modest cost.

**Fully Coated Lenses:** All air-to-glass surfaces are coated for an even brighter view.

**Multi-Coated:** This means that the manufacturer applied multiple coats of anti-reflective layers to most of the lens and prism surfaces.

**Fully Multi-Coated:** The brightest and most expensive option, where all surfaces are treated with multiple layers for optimum light transmission.

**Rubicon® Coated:** A Tasco® exclusive, comprised of 14 different layers of multi-coating on the objective lens with a ruby-red tint to filter out red light for reduced glare in bright light.