

## Choosing your Binoculars

Binoculars are described with two numbers separated by an X, 8x32 for example. The first number is the magnification (8) they magnify up to eight times, the second number (32) is the size of the objective lens in millimetres. So the bigger the objective lens, the more light enters and the brighter the object will appear. Anything upto 10x or even 12 x are good for hand held use, but remember the higher the magnification the steadier your hands will need to be, so if you are bird watching or viewing a sports event that could move quickly you will want a lower magnification.

**Field-of-View** is the size of an area that can be viewed using the binoculars. For example, if two people were standing 1000 yards away from you, one was to your left and one to your right and the distance between the two people was 350 feet, then your field-of-view would be 350ft at 1000 yards while looking through the binoculars. Generally, higher powered binoculars give you a smaller field-of-view and the opposite is true for lower powered binoculars

**Prisms** are located inside binoculars that act like mirrors. It is a reflective coating on glass that bends and refracts light to bring the subjects you are looking at to your eyes. The image that passes through the binocular lenses is upside down due to the function of the lenses. The prisms are the optical pieces of glass that correct this and invert the image back to its normal position.

The **BAK-4 prism** is made of a high quality glass and produces sharp images and good edge to edge sharpness. Generally, higher quality binoculars will use BAK-4 prisms in the construction process. Phase coated prisms take it one step further, the coating process enhances the resolution and contrast of images and reduces glare coming through the binocular, generally applied only on more expensive binoculars.

In **Roof Prism** binoculars the prisms overlap closely, allowing the objective lenses to line up directly with the eyepiece. The result is a slim, streamlined shape in which the lenses and prisms that magnify and correct the image are in a straight line. Many binoculars today utilize prisms which bend the light as it enters the objective lens and helps to magnify the image as it passes through the frame. The result is a binocular that can be made smaller and more powerful.

**Focusing binoculars**, this is done through the center focus wheel and a right eye diopter adjustment near the eyepiece which will account for the small difference in the strength of each eye. While looking through the binoculars at a stationary target about 30-50 feet away, close your right eye and focus using the center wheel until the image is clear for your left eye. Once clear, close your left eye and open your right eye. Looking at the same target adjust the right side diopter **ONLY** on the right eyepiece (**DO NOT** use the center focus wheel) until the image is clear. When the image is clear you can now open both eyes and use **ONLY** the center focus wheel to make adjustments. Your right side diopter setting is now fixed for your settings. No further adjustment will be necessary except for the center focus wheel. Always read the user manual included in your purchase.

**Eyecups** are designed to exclude any additional stray light that may interfere with the eyepieces during use. Some models use rubber eyepieces that fold down while some may use twist up/down or pull up/down. Generally, eyeglass wearers will keep the eyecups down which will bring your eyes closer to the lenses improving your view.