

# BUSHNELL®

## MARINE 7x50 BINOCULARS



- \*FOGPROOF
- \*WATERPROOF
- \*UV COATING
- \*RUBBER ARMORING
- \*FOLD-DOWN EYE CUPS



The perfect binocular for sailors and outdoorsmen. Features a liquid-filled compass built into the viewing optics. Compass swing stops immediately due to advanced damping design. Compass bearings are called out in easy-to-read precise 1° increments. Ideal for shipboard navigation work or locating objects accurately. A range-finding scale allows the viewer to estimate the range of objects to a known size. The BUSHNELL MARINE is fully waterproof/fogproof and shock protected with suregrip rubber armoring and has roll-down eyecups for use with sunglasses and prescription eyeglasses. Optics feature fully multi-coated lenses for excellent light transmission. The BUSHNELL MARINE comes complete with rugged nylon case and neck strap. Built to last with a lifetime limited warranty.

### SPECIFICATIONS

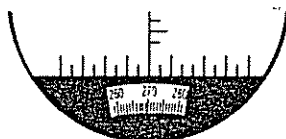
Magnification	7 X	Relative brightness	51
Objective lens diameter	50 mm	Interpupillary distance	56 - 72 mm
Eye relief	18 mm	Maximum width	3 in
Real field of view	7°	Minimum width	2.5 in
Field of view at 1000 yds	367 ft	Length	7 in
Exit pupil diameter	7.1 mm	Weight	37 oz (1049 g)

### HOW TO USE

First, adjust the width (interpupillary distance) of your binoculars so that when you look through them, you see a single circular image. Then focus the binocular for one eye at a time by turning the ocular (eyepiece) until you see an equally sharp image with each eye. If more than one person will be using the binoculars, you should mark the left and right eyepieces for your own vision to permit quick readjustment.

### USING THE COMPASS

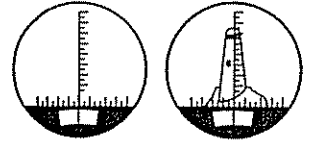
The compass is a precision unit. It has extremely fast damping so that there is almost no "swing" and is connected for dip (Latitude). The compass scale is in one degree increments and is aligned with the vertical range finding scale. When using the compass, always keep in mind the local variation between magnetic and true north.



### HOW TO USE THE RETICLE

The vertical scale (reticle) visible through the left half of the binocular, above the compass display, allows you to calculate distance to an object if you know its height, or to calculate the height of an object if you know its distance from you.

Each mark on the vertical scale has a value of 5 MIL (1 Mil is equivalent to an angle that can determine an object one meter in height at a distance of 1000 meters). Therefore, if a navigation chart gives the height of an object, by sighting on it and counting the number of MILs, you can determine how far away it is. Here are the two formulas:



To measure distance when the height is known:

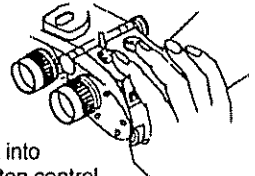
$$\frac{\text{Object height (m)}}{\text{Scale Reading}} \times 1000 \text{ m} = \text{Distance in meters}$$

To measure object height when the distance is known:

$$\frac{\text{Distance (m)} \times \text{Scale Reading}}{1000} = \text{Object height in meters}$$

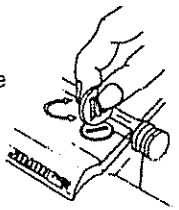
### SPECIAL INSTRUCTIONS FOR COMPASS

How to use the built-in compass light and reticle. The BUSHNELL MARINE compass model comes with built-in LED compass illuminator for use at night and in low light conditions. (Incidentally, the compass is built into the left tube of the binocular but the push button control for the light and the battery are located in the right tube. This was done to minimize the chance that electrical interference might affect compass performance.) When the ambient light does not permit you to see the compass heading clearly, press the button atop the right tube. If the light is dim or does not come on, replace the batteries. If the light does not operate after replacing the batteries, please contact the Bushnell dealer nearest you.



### HOW TO CHANGE THE BATTERIES

To change the battery, use a thin coin to remove the battery cover by turning it counter-clockwise. Remove the two batteries. The batteries have a (+) on the front and a (-) on the back. Be sure to insert the new batteries with (+) signs in the same direction. Replace the battery cover by turning it clockwise.



### BATTERY EQUIVALENTS

MANUFACTURER	TYPE
Toshiba, Maxell, Panasonic	LR43
Varta	12GA
Eveready	186
Duracell	D188AB
Rayovac	186-1

### IMPORTANT

AFTER EXPOSURE TO THE TO SALT WATER OR SPRAY, FLUSH THE BINOCULARS THOROUGHLY WITH FRESH WATER AND WIPE DRY. AVOID EXTENDED EXPOSURE TO BRIGHT SUNLIGHT AND SEVERE TEMPERATURE FLUCTUATIONS. FOR EXAMPLE, IF THE BINOCULAR HAS BEEN USED UNDER VERY COLD CONDITIONS, BRINGING IT INTO A HEATED ENVIRONMENT COULD CAUSE CONDENSATION BUILD UP. ALLOW TIME FOR GRADUAL CHANGE IN TEMPERATURE.

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SPORTS OPTICS WORLDWIDE

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