



**NATIONAL
GEOGRAPHIC™**

BRESSER

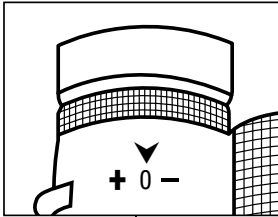
TrueView NG 10×42 Binoculars



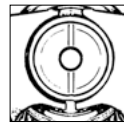
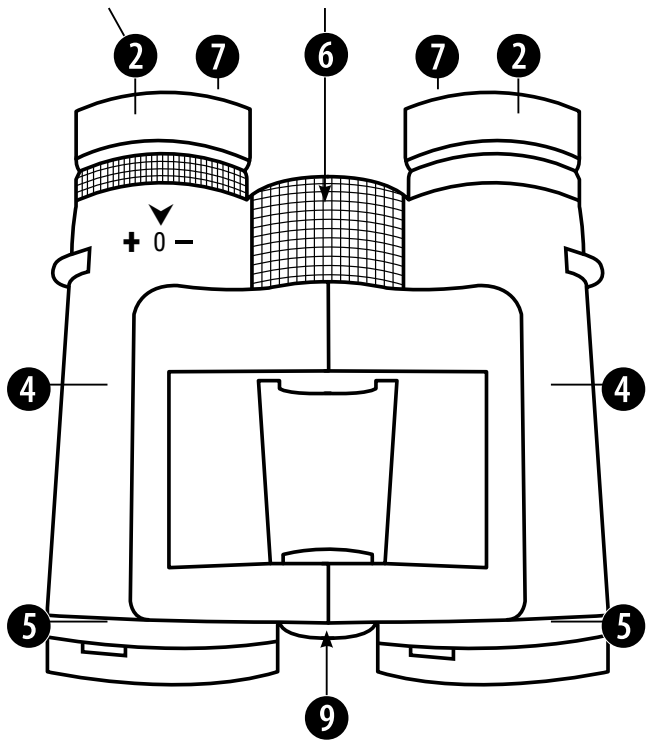
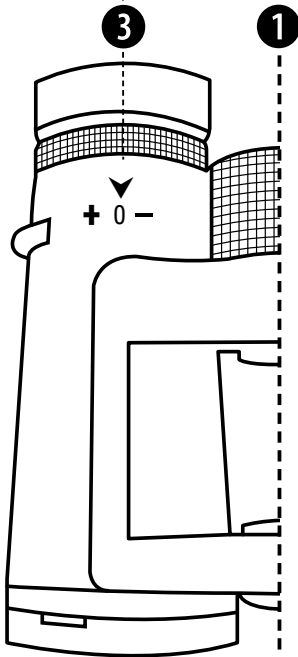
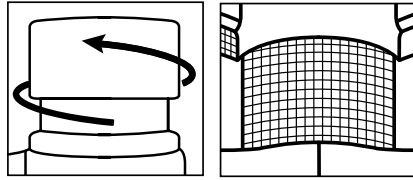
EN

Instruction Manual

Art.No. 9676202



2

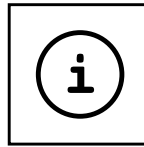




MANUAL DOWNLOAD:



www.bresser.de/download/9676202



BINOCULARS GUIDE:



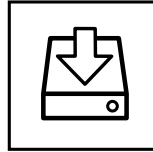
www.bresser.de/guide



BINOCULARS FAQ:



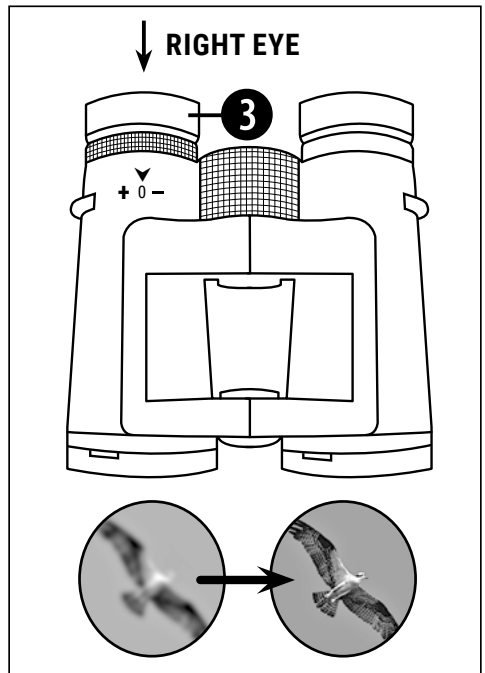
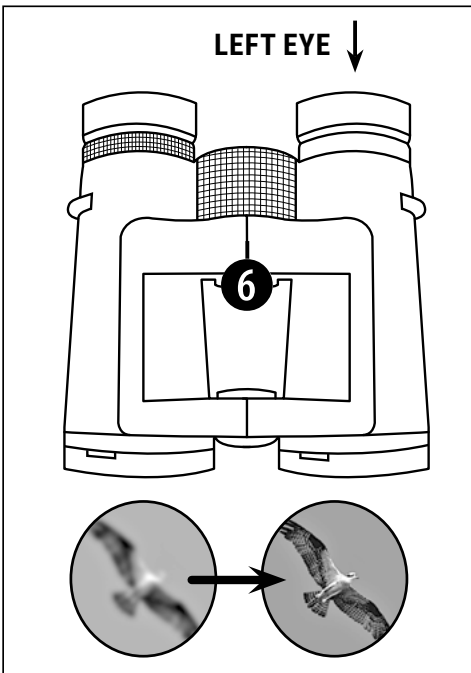
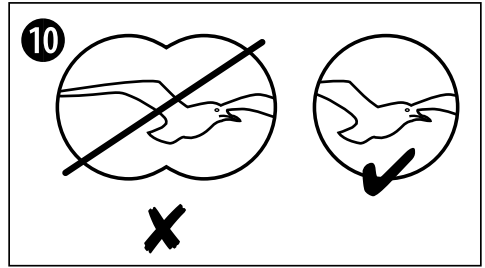
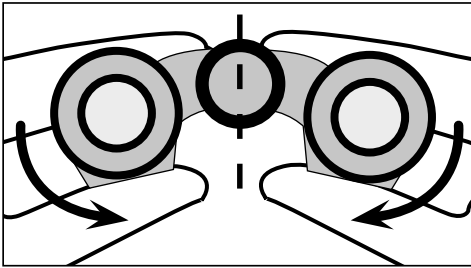
www.bresser.de/faq



DOWNLOADS:



www.bresser.de/downloads





General Warning



Risk of blindness

Never use this device to look directly at the sun or in the direct proximity of the sun. Doing so may result in a risk of blindness.

- Do not place the device, particularly the lenses, in direct sunlight. The concentration of light could cause a fire.
- Do not disassemble the device. In the event of a defect, please contact your dealer. The dealer will contact the Service Centre and can send the device in to be repaired, if necessary.
- Do not expose the device to high temperatures.



Privacy Protection

The binoculars are intended only for private use. Please heed the privacy of other people. Do not use them to look into apartments, for example.

Scope of delivery

Binoculars, Dust protection caps, Instruction Manual

List of Parts

- ① Centre axle
- ② Twist-up eyecups
- ③ Dioptre adjustment
- ④ Body of the binoculars
- ⑤ Lens tube
- ⑥ Central focussing wheel
- ⑦ Eyepiece
- ⑧ Objective lens
- ⑨ Threaded tripod connection
- ⑩ Image circle with correctly set eye distance

Eyepieces for spectacle wearers

Screw in the twist-up eyecups (2) to use the binoculars while wearing glasses. If you are not wearing glasses, unscrew the eyecups to achieve the required distance from your pupils.

Adjusting the eyepiece distance

The distance between your eyes differs between individuals. To achieve perfect interaction between your eyes and the eyepieces of your binoculars, set the angle at the centre of the binoculars (1) so that you see a circular image (10). Note this setting for later use.

Adjusting the focus

Look through your binoculars with your right eye closed. Now adjust the image for your left eye by turning the centre wheel (6) until it is sharp and clear. Close your left eye and adjust the image for your right eye by turning the dioptre ring (3) until it is also sharp and clear.

Mounting the binoculars on a tripod

Your binoculars have a threaded tripod connection (9) built in. The required tripod adapter is available as an optional accessory (Art. No. 1916001). With this accessory, you are able to mount your binoculars on all BRESSER tripods with a DIN mounting thread (e.g. Art. No. 4922100).

Binoculars ABC

MAGNIFICATION

The magnification value always is mentioned first in the model name (e.g. 10x42). With a magnification of 10x, the observed object appears one-tenth of the distance away that it really is.

OBJECTIVE DIAMETER

The lens pointing towards the object is called the objective lens. In the model name (e.g. 10x42), the second number stands for the objective diameter in millimeters. The objective lens diameter is an indicator of the amount of light that can enter the binoculars.

An objective diameter of 20 mm is sufficient for observations during the day. In twilight conditions, an objective diameter of 50 mm or larger is recommended, as the lenses can gather much more of the remaining light.

TRANSMISSION

The value of the ability to let light pass through optical systems is called transmission.

OCULAR

The ocular is on the side of a pair of binoculars pointing towards the eye and is often composed of three to six single lenses that form an achromat. The ocular is one of the factors that determines optical quality (i.e. color fidelity, sharpness and image distortion).

EYEPiece FOR SPECTACLE WEARERS

An eyepiece for spectacle wearers allows for a full field of view with and without eyeglasses. Its main aim is the adjustment of the distance from the eye to the ocular (eye relief). When an observer sees a circular image through the binoculars, the eye relief is set correctly.

BINOCULAR

Optical systems with two oculars are called binocular (hence the name binoculars).

MONOCULAR

Optical systems with one ocular are called monocular.

TWILIGHT OUTPUT

The twilight output number quantifies binocular visual performance and detail visibility in twilight conditions.

Formula:

$\sqrt{\text{Lens diameter} \times \text{magnification}}$

The result is evaluated purely mathematically and is only of interest when comparing differing types of binocular (e.g. 8x30, 7x50 and 10x50). The number calculated disregards binocular performance increase due to optical treatment, top-quality glass types and the like. See luminous intensity for more information.

DIOPTRIC COMPENSATION

In binoculars with centre wheel focusing, the right eyepiece can be adjusted. This compensates for the user's eyesight deficiencies. In models with single eyepiece adjustment, both eyepieces can be turned, as they also serve to adjust the focus.

RUBBER ARMOUR

Binoculars with rubber armour are advisable for rugged, professional uses. The black or olive green rubber armour protects the instrument against splashing, dropping and impacts. The armour on our instruments has fast colouring and is proof against sunlight.

COLLIMATION (double image)

This term means the parallel alignment of both halves of a pair of binoculars. If an instrument is subjected to any major impact or dropped, the prisms may become misaligned, making the instrument out of collimation. Observation through such an instrument yields double images, as the contours seem to the observer to be displaced.

Readjusting for eyesight can compensate minor maladjustment of this kind. However, a headache may result if such an instrument is used for any length of time. Such instruments should always be sent in for repair.

LUMINOUS INTENSITY (general information)

The luminous intensity (LI) quantifies the brightness of a pair of binoculars. Under normal circumstances, a 7x50 pair (LI 51) yields much greater intensity than a 10x50 pair (LI 25). To exploit the greater intensity of 7x50s, the user's pupils must be dilated to the size of the instrument's exit pupil [EP] (in 7x50: $50/7 = EP 7.14$). In people over age 50, the pupil often doesn't fully dilate. In such cases, the higher luminosity cannot be exploited.

LUMINOUS INTENSITY (geometric)

The geometric luminous intensity is the mathematical brightness value of a pair of binoculars. Models with higher luminous intensity are especially suited to observation at twilight.

Formula for calculating luminous intensity:

$(\text{Lens diameter} / \text{magnification})^2$

e.g. $(50/10)^2 = 5 \times 5 = 25$

This calculation disregards any features improving performance, such as BaK-4 prisms, multicoating or optical glass quality.

FIELD OF VIEW

This is understood to mean the visible image at a distance of 1,000 metres from the object being observed. This measurement is usually given in metres.

If given as an angle, $1^\circ = 17.5 \text{ m}$.

An instrument with a field of vision over 120 m/1,000 m is called 'large field', and one with a field of vision over 140/1,000 m is 'wide angle'. Wide angle instruments are particularly suitable for viewing moving objects such as footballs or horses.

TRIPOD CONNECTION

Many binoculars have a tripod thread built in. These binoculars can be screwed onto a tripod using an adaptor, which guarantees a static image.

COATING

Normal optical lenses reflect part of the light falling on them.

This causes a loss of light and a reduction in contrast due to light scatter.

Coating the lenses by steaming a reflection-reducing mineral layer onto them greatly reduces reflection and increases light transmission (permeability).

! NOTES on cleaning

- Clean the eyepieces and lenses only with a soft, lint-free cloth, like a microfibre cloth. To avoid scratching the lenses, use only gentle pressure with the cleaning cloth.
- To remove more stubborn dirt, moisten the cleaning cloth with an eyeglass-cleaning solution and wipe the lenses gently.
- Protect the device from dust and moisture. After use, particularly in high humidity, let the device acclimatize for a short period of time, so that the residual moisture can dissipate before storing. Remove the dust cover and store it in the included bag during use.

DISPOSAL

- Dispose of the packaging materials properly, according to their type, such as paper or cardboard. Contact your local waste-disposal service or environmental authority for information on the proper disposal.
- Please take the current legal regulations into account when disposing of your device. You can get more information on the proper disposal from your local waste-disposal service or environmental authority.

WARRANTY & SERVICE

The regular guarantee period is 10 years and begins on the day of purchase. You can consult the full guarantee terms and details of our services at: www.bresser.de/warranty_terms.



YOUR PURCHASE
HAS PURPOSE

WHEN YOU SHOP WITH US, YOU HELP FURTHER THE WORK OF OUR SCIENTISTS, EXPLORERS, AND EDUCATORS AROUND THE WORLD.

To learn more, visit [natgeo.com/info](https://www.natgeo.com/info)

© National Geographic Partners LLC. All rights reserved.
NATIONAL GEOGRAPHIC and Yellow Border Design are trademarks of National Geographic Society, used under license.

Visit our website: www.nationalgeographic.com



Bresser GmbH
Gutenbergstr. 2
DE-46414 Rhede

www.bresser.de · info@bresser.de