

# BROWE COMBAT OPTIC (BCO) Titanium 4x32 Combat Optic.

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## 4X32 BROWE COMBAT OPTIC (BCO)

BROWE, Inc. is proud to introduce our new Titanium 4x32 BROWE Combat Optic (BCO). It combines the best-in-practice features, such as the high quality optical glass, high precision machining, and rugged military design with unique next-in-practice features that places the BROWE Combat Optic at the top of its class. The BCO will offer customers a modern designed combat optic with many unique features, such as our Single Intuitive Control (SIC), Target Light Sensor Technology, field programmable BCO Microcontroller, and a vibration sensor that is all packaged in a versatile Titanium housing.

ZERUME

## Specifications 4x32 BC0:

Magnification: 4x Entrance Pupil: 32mm Exit Pupil: 8mm Eye Relief: 37mm Length: 132mm nominal Width: 67mm nominal Weight: <500g with batteries Field of view: 7 ° (36.80 ft @ 100yds) Adjustment at 100 meters: .5 MOA Reticle: BCO Ballistic Chevron Ballistic Correction: 100m to 800m 5.56 NATO Color Day/Night: Red Illumination source: Battery-powered LED Illumination source control – Automatic: Flash programmable Microcontroller Illumination source control – Manual: 10 day settings and 3 night vision Battery Life: 2000hrs avg. (Min 720hrs on max) Housing Material: Military Grade Titanium TiCP-2 Water Proof: 42m / 130ft. Fog proof: Filled with dry nitrogen Lens Coatings: Broad Band Anti-Reflective Origin: Made in the USA Patent Number: Patent Pending

## Single Intuitive Control (SIC):

The entire system was designed with a single concept in mind: KEEP IT SIMPLE! Understanding that an intuitive control system is a top requirement, BROWE, Inc. has developed the Single Intuitive Control program. The operation is simple. The system rests in its "off" position or "sleep" mode. The first press of SIC button puts the system into "automatic" mode. In this mode, the LED automatically adjusts to the ambient light conditions using the Target Light Sensor Technology. The second press of the button will put the system in "manual" mode. It will start at the brightest day setting and with every press of the SIC button it will cycle through ten (10) day and three (3) night vision settings. Holding the SIC button for more than three (3) seconds will put the system back into "sleep" mode, conserving battery life. Hitting the button once again will put it back into "automatic" mode.

### Target Light Sensor Technology:

The BCO has a Cadmium-Sulfide photocell that measures target light levels. For many years, photo sensors have been used in a variety of optics to detect ambient light. What makes the BCO Target Light Sensor Technology unique is that it actually measures the target light levels and automatically adjusts the brightness to properly contrast the target light.

With extensive research and development, it was discovered that mounting a sensor in the light path behind the objective lens magnifies the incoming light and provides greater sensitivity and accuracy of the target light levels. Also, it avoids sensor errors caused from ambient light that is near the optic.

This feature is so important because in the "automatic" mode the sensor relays the target light information directly to the BCO Microcontroller, which is programmed to automatically adjust the illumination of the LED. This feature allows the BCO reticle to be properly illuminated even when the user and target are in dissimilar light. More importantly, as an operator is on the move, the BCO will continuously adjust automatically. For example, light levels extremely vary from dark alleys, buildings, or just simply walking down the street. In today's urban warfare, when a nanosecond can make a difference, there's no time to search for a poorly illuminated reticle or make manual illumination adjustments.



### BCO Microcontroller:

The BCO Microcontroller is the brain of the operating system. It holds a custom program that controls all of the electronic features. Unique to the industry, the BCO Microcontroller is capable of being re-flashed with alternative programs via a sealed flash port on the back side of the battery housing. This port can also be used to attach accessories, such as a momentary remote tape switch.

### Vibration Motion Sensor:

With any battery operated system, "battery life" is always a concern. The vibration motion sensor is designed to conserve battery life by putting the electronics in "sleep" mode if vibration or motion is not detected after two hours. This was designed to preserve battery life if the system was put away and / or mistakenly left on. Also, the SIC button was programmed, so that if the button was pressed in a carrying case or storage rack, the system would automatically shut itself down after three (3) seconds. The BCO has an average battery life of 2000hrs. nominally with a minimum of 720hrs. on max brightness. In "sleep" mode, the battery has a life expectancy of over 13,000hrs.

#### Housing Designed to Accept Accessories:

When designing the BCO housing, we kept the idea of versatility in the forefront of the design. This basic concept pushed us to add multiple areas for mounting "add-on" accessories. For starters, the OD of the eye-housing is a machined 30mm diameter surface with a 2mm groove for locking on dust covers or an assortment of other accessories. Also, two mounting bosses are placed on top of the housing for attaching additional accessories. On the objective end, we added a 42mm x 3mm OD groove and threaded the ID for added versatility for accessories, such as anti-reflection devices, dust covers, and/or laser filters. These features and others are depicted in the diagram below.

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