SkySurfer V

Giant Red-Dot Finder

NIGHT & DAY DESIGN

Solar Finder and Day & Night Red Dot Finder

Congratulations for purchasing a SkySurfer V Red Dot Finder. Originally this product had a military function, hence it is built like a tank. We have reworked and optimzed it for astronomical uses. Among the most important improvements are:

- The optical body and all adjustments are waterresistant, fogproof and shockproof
- With both jump covers flipped open, the unit works as a terrestrial as well as an **astronomical Red Dot Finder** for straight through aiming with both eyes open, featuring a sharp 2 MOA red dot with 11 brightness set points. The three lower light settings are intended for night work against the sky.
- With both jump-covers closed, the unit works as a safe daylight **solar finder**, projecting the solar disc through a 1.5 MOA (minutes of arc) pinhole onto a 40 mm wide rear 2 MOA reticle. The reticle is applied onto a yellow UV-blocker for added safety against accidental straight viewing. The projected solar image can be centered onto the reticle without looking straight through the finder. The 0.7mm center hole to work as moisture release when closed after use.

SkySurfer V as Solar Finder

- Nocturnal Red Dot Size: 2 Minutes of arc (2 MOA), provides a most distinctive „vanishing point“. Daylight Red Dot Size: 3 Minutes of arc (3 MOA)
- To not loose stars, the view though the SkySurfer V visor is **markedly brighter** compared to regular gunsight RDFs.
- **11 variable illumination settings:** three bright settings for daylight use and eight much dimmer for nighttime use, so that no stars will be outshone. Cheaper RDFs used for guns are much too bright to hunt stars at night.
- All lenses and optical windows of the SkySurfer V are **fully multicoated** for maximum starlight throughput
- Ready out of the box: Extension tubes and jump covers readily mounted
- **35 mm deep added dewshields** on either side prevent fogging of the lenses and work as a perfect straylight shield.
- **70 mm elevation** of Universal Red Dot Mount enables effortless aiming – even when mounted onto the optical tube of a Newtonian telescope (most low profile red dot aiming devices don‘t provide enough „face-space“ between telescope and finder.

Long distance to the telescope – perfect even for Newtonians

Scope of Delivery & Controls

① – SkySurfer V (optical body)
Fits directly onto 11mm Weaver micro gunrails. When reversing the clamping brackets, the SkySurfer V directly fits onto all standard rails of Weaver and Picatinny (20 mm)

② – 35 mm dew shields with 47 mm outer diameter

③ – Baader Universal Red Dot Mount #245 7010

④ – Baader Standard Base #245 7000

⑤ – Front Jump Cover #295 7311
with 0,7 mm solar finder through hole

⑥ – Back Jump Cover #295 7312
with reticle and UV/IR blocking filter

⑦ – 11-step dimmer / on/off-switch. Inside: battery compartment

⑧ – Setting screws for altitude and azimuth,
unter black protecting screw caps

⑨ – Fixing screws for Baader Universal Red Dot Mount

Installation

Before the first use of the SkySurfer V, you only have to connect it to the Red Dot Mount, which is done in a few steps.

1. Check whether the two 35 mm long dewcaps are screwed to the ends of the SkySurfer.
2. For testing purposes, open the two spring covers ⑤, ⑥ – both should open downwards.
3. Attach the Red Dot Mount ③ to the viewfinder with the two fixing screws ⑨.
4. Attach the Baader standard base ④ as a viewfinder shoe to your telescope. If your telescope already has a suitable mount (Celestron, Skywatcher, Vixen, Bresser), you can use the existing viewfinder shoe instead.
5. Slide the Red Dot Mount into the Standard Base and hand-tighten the fastening screw.
6. Open the front cover and turn on the viewfinder with the 11-step dimmer. If necessary, insert the battery as described on the last page.

Adjusting the Finder

Point your telescope at a distant object. A tower or a prominent mountain on the horizon is ideal. Center it at first in a low power eyepiece, then switch to higher magnification.

Now turn on the SkySurfer V by turning the dimmer. Look at the target with both eyes open, and at the same time position the preferred eye so that it looks through the the Sky-Surfer V. This is one of the reasons why this aiming tool is so very effective. With a little practice you will effortlessly target your objects with both eyes at the same time - and see a virtual red dot to appear as it it were present in both eyes. In this way the brightness and visual performance of dual eye observation is fully retained. Set the dimmer to level 11 for the maximum brightness; at night you can also switch to a weaker brightness, so that the star will not be outshone. The weakest brightnesses may not be visible at daylight – this way, the red dot will not outshine the stars. Similar-looking RDFs which are designed for weapons are much too bright for use at night and will destroy your dark adaptation.

The adjusting screws ⑧ for azimuth and elevation are hidden under covers that you can unscrew easily. You need a flat screwdriver or a small coin to adjust the position. You can then move the position of the beam spot with the adjustment screws in steps of one minute of arc (or 45 minutes of arc for a full rotation) until you see it above the object that you see in the telescope. Only adjust the viewfinder, not the telescope!

Check the adjustment occasionally, especially if you detach the viewfinder for transport.

Turn the light off after use by setting the dimmer to 0. At the brightest level, the battery will last approximately 300 hours, on the lowest level ca. 4000 hours.

Use as Solar Finder

Before pointing the telescope at the Sun, make sure that both jump covers are closed and locked in their position. Fix all necessary solar filters to your telescope, and remove or cover other finderscopes. **Please follow the safety instructions for observing the sun with your telescope.** Safe solar filters can be found at astrosolar.com.

The front jump cover has got a small hole with 0.7 mm diameter through which the sunlight may enter. The back jump cover has got a yellow, UV-blocking ground glass with a reticle.

When you close the jump covers, you will see a bright spot of light when the viewfinder is precisely aligned with the sun. This spot can even be seen from the side. It is neither necessary nor recommended to look straight from behind at the finder and bring your eye on one line with Sun and finder.

Now center the bright spot of the Sun in the middle of the reticle. When adjusting the finder, you only move the luminous spot itself inside the tube, but not the barrel of SkySurfer V itself. Therefore, it may be that the spot of sunlight does not appear exactly in the center of the crosshair. If you use the supplied Baader standard base, you can align it for some degrees parallel to the tube during installation. You can also make a mark on the crosshair to remember where to position the image of the sun.

Make sure that the front lens of the telescope and every other optic which is pointed at the sun is covered wih a safe solar filter, e.g. made of AstroSolar® Film.

Always switch off the SkySurfer V when you do not need it. If the battery is empty, you do not have to end your observation night immediately: You can use the tube as a long sighting tube and aim for your targets even when the battery is empty. The required CR-2032 battery (e.g. also for hearing aids) is available from specialist dealers or on Baader-Planetarium.com with article number #2457555.

To replace the lithium battery, unscrew the cover of the on/off switch (right picture). Use a 10-cent coin and hold the knob in position.

Please follow the safety instructions included with your telescope for observing the Sun.

Safe solar filters can be found at www.astrosolar.com.

www.baader-planetarium.com

BAADER PLANETARIUM GMBH

Zur Sternwarte 4 • D-82291 Mammendorf • Tel. +49 (0) 8145 / 8089-0 • Fax +49 (0) 8145 / 8089-105

Baader-Planetarium.com • kontakt@baader-planetarium.de • Celestron-Deutschland.de