

RGBBlue RMGF-1 Screen Magnifier

by Phil Rudin

AOI Japan Co. Ltd. is a company that you may have associate with the line of Acrylic and glass dome ports for Olympus mirrorless housings systems. AOI distributes products in Asia, Europe, Oceania and The Americas.

What you may not know is that AOI also produce the RGBBlue line of video lights, Spot Beam lights, Twin beam lights and the very useful Screen Magnifier system which is the subject of this review.

The RMGF-1 Screen Magnifier (Screen-shaped image magnifier) is designed for use in harsh underwater environments. Above water when light rays pass through a convex lens they spread, making the subject appear larger than actual life size. Underwater the same refractive indexes of light rays is much smaller which restricts magnification. RGBBlue has developed an image magnifier using the light condensing lens technology developed for the System 01 and 02 underwater lighting systems.

The magnifier is a large four inch screen designed to enhance the image size when looking into the LCD on the camera back. The magnifier provides optimal magnification of 2X when placed at the correct distance from the LCD screen.

For those familiar with enlarged optical viewfinders for DSLR cameras and Mirrorless camera electronic viewfinders (EVF) you are aware that diopter adjustments can be made to enhance overall image size and quality through the viewfinder. With the LCD screen the only way to optimize the image based on the viewers vision is to

move the housing in and out until the image looks sharp. The RGBBlue magnifier allows better vision into the LCD allowing you to better see and fine tune the subject you are trying to photograph.

The RMGF-1 Screen Magnifier is made with an acrylic lens and ABS resin frame. The magnifier ships with a neoprene carrying case and coil strap which can be attached to the housing to prevent loss. Without the case and coil strap the magnifier weights 37 grams, 5 grams underwater.

The RGBBlue Magnifier can also be used off camera as a magnifying glass to help find small subjects while shooting super macro. The magnifier ships with a ABS resin grip and wing screw to attach the grip to the screen. It can be used with the coil cord attached to the BCD or with a wrist strap as I did. This allowed me to see the fine detail in subjects much smaller than life size and would be excellent for critter observers as well as macro photographers. I found that just letting the magnifier dangle from my wrist while not in use never interfered my camera system while shooting macro subjects.

To mount the magnifier to any housing RGBBlue offers an optional RFLA-1 Ultracompact Micro Flex Arm system. This system is designed to mount on the housing cold shoe or to any number of other mounting points based on the housing design being used. I used the magnifier with both Ikelite and Acquapazza housings by using a threaded mounting point on the housings.

The magnifier is very well designed for the





Without Screen Magnifier



With Screen Magnifier



*The above comparison photos are not composite image but real photos.

small consumer compact camera housings. You can remove or install additional arm sections depending on the size of the housings and your needs. The mounting system also has a cold shoe for mounting a video light, focusing light or other accessory.

The Micro Flex Arm system is made of aluminum and has mini O-rings on the ball heads just like the standard ball head lighting support system which have been used for

years. Once the Micro Flex Arm is adjusted to your liking it will stay securely in place unless you want to move it.

RGBBlue also offers an optional RMGF-HD1 silicone rubber hood for the screen magnifier. I found the hood to be very useful especially while shooting macro or wide angle in shallower water where ambient light makes the LCD screen harder to see. The hood weighs 67 grams on land



and 13 grams underwater.

In use I found that the screen enlarged the view of the LCD with little to no loss of image quality. The LCD screens offered on current cameras vary in size, magnification and resolution so results will vary a bit between different camera manufacturers and camera models. I had no issues with the screen moving while in use but this could also vary depending on how strong the current may be.

I tend to use the EVF with an optical magnifier on my personal housing system for all of my macro work so for me the screen would be more useful for wide angle with the LCD and particularly for fast moving subjects. Panning while looking into an optical viewfinder is not the most ideal way to shoot fast action subjects like sailfish, sharks bait ball action and more. I also found that the magnifier works equally well with LCD screens in the 3:2 or 4:3 format.

As a magnifying optic for spotting small subjects it is a winner

especially for those with diminished vision. I was able to see the detail in small nudibranchs not possible with my aging eyes.

The US pricing supplied by Backscatter Underwater Video and Photo the US RGBBlue distributor. Screen and grip \$98.00, Micro Flex Arm \$158.00 and Hood \$16.00. I would also like to thank Yoshinori Kuno from RGBBlue with the equipment and technical support.

You can obtain further information in English and Japanese at RGBBlue.jp

Phil Rudin

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