Weefine 1000 & 3000 Ring Lights

by Phil Rudin

Any fan of prime time television has probably seen a ring flash in action during programs like the C.S.I. crime dramas, America's Next Top Model and other well known series. The ring flash was originally introduced around 1952 as a dental photography tool but quickly spread to other disciplines of photography.

The ring flash has since gained popularity among nature photographers for macro/close-up use and has also become an invaluable tool for portrait and fashion photographers. The ring flash originally had a circular (360 degree) flash tube which fitted around the camera lens for shooting stills. Fast forward and today's ring lights include flash tubes, LED ring lights, fiber optic ring lights and constant source fluorescent ring lights used extensively in commercial videos like the "Easy Breeze Beautiful Cover Girl" adverts. The circular shaped specular highlights in the eyes of the models is a dead giveaway that a ring light was used.

Years ago a limited number of underwater equipment manufactures released variations of the ring flash. Athena Co. still list the ARF-ring flash on its web site. This is a product I reviewed in the N/D 2010 issue of UWPMAG, Inon long ago discontinued its quad-flash which required a custom macro port and UK-Germany had a version.

Why use a ring Light?

Most nature and portrait photographers enjoy the diffused and shadowless lighting created by an overcast day, so what would make artificially diffused strobe lighting any different? The bulk of the lighting load in underwater macro and close-up photography is carried by one or more strobes used at a distance of less than two feet (0.6 meters) from the main subject.

If canvassed most shooters would prefer two strobes over one directed from opposite sides of the lens and main subject. I frequently use my ring light with an additional strobe and/ or a white plastic slates to reflect light from a different direction. Portrait photographers often use one or more reflectors for the same purpose. In fact macro/close-up photography is portrait photography involving fish and other critters rather than people.

While having two light sources coming from different directions may seem unnatural the reason we use the second strobe is to reduce the harsh shadows created by the key strobe (most often the left strobe). When the strobes are being fired in TTL the camera program attempts to balanced the lighting on both sides of the subject making the light flat and even across the entire frame. This is not always a good thing because it may cause the subject to lack depth that shadows create in the image.

The ring light is a convenient way to light close subjects for several reasons. We all know that in any type of photography not every tool works for every situation so lets examine some of the up sides to using a ring light for macro/close-up photography.

First the reduced size and complexity of the system is one of the key advantages of the ring light. It allows you to get your camera system and light source into places larger strobes can't go. After looking at tens of thousands of macro images in my fifty plus years of being involved with diving it has become quite evident that most macro images are shot in the landscape (horizontal) orientation. While this is not a bad thing it occurs to me that many of these subjects, like Seahorses, would have been more compositionally pleasing had they been captured in the portrait (vertical) orientation.

My observations and experience with multi-strobe lighting systems is that going vertical presents problems many photographers don't wish to be bothered with. Because the ring flash is so light weight and compact it can be used with a single hand and shifted from landscape to portrait orientation with ease. This compact size also allows you to get your macro lens low and on the same horizontal plane as your subject so that you are at eye level or below.

For shooting verticals I have removed the left grip from many housings to be able to get the housing lower in relation to the subject. Because the ring light has a narrower beam angle than most strobes stray light is significantly reduced resulting

in a reduction of backscatter. The ring light creates a cone of light with a dark doughnut hole in the center. As long as your subject is beyond the doughnut hole (about 80 mm/3 inches or so) it is exposed to a softer and more controllable light source than a conventional twin strobe systems. The doughnut hole in front of the lens is what helps to reduce backscatter in front of your subject.

While no system can totally eliminated backscatter I find noticeably less using the ring light over dual strobes. The ring light is most useful within about three to eighteen inches (8 to 45 centimeters) from the subject beyond this distance dual strobes are much more effective. The ring flash with its flash tube can also create a luminance within opaque subjects not found with dual strobes.

Juvenile Spotted Drum, Nauticam NA-EM1 II Housing, Olympus EM1 II, Olympus 60mm macro lens, Weefine Ring Light 1000, ISO-400, F/5.6, 1/250th sec

In using ring lights with fiber optics or LED lights I have not found the degree of luminance found with flash tubes.

Weefine 1000 & 3000 Ring Lights

Weefine underwater equipment is manufactured in China and distributed world wide. Weefine produces underwater lighting, housings, lenses, cameras, accessories and more for the retail diving market. The test equipment I used for this review was provided by Kraken Sports a Canadian company based in N. London, Ontario. Kraken distributes Weefine and Kraken branded products throughout North America. They provided both the Weefine 1000 and 3000 lumens ring lights for this review.

Peter Rowlands did a full review of the Weefine 1000 ring light in UWP issue #96 so I will not spend a lot of

Sharptail Eel, Nauticam NA-EM1 II Housing, Olympus EM1 II, Olympus 60mm macro lens, Weefine Ring Light 3000 Flash, ISO-250, F/9, 1/250th sec

Comb Jelly, Black Water Dive, Olympus EM1 II, Olympus 30mm macro, Nauticam NA-EM1II housing, Weefine Ring Light 3000 Flash, ISO-320, F/8, 1/250th sec

time on that ring light other than to point out the differences between the two. Both ring lights look practically identical and use a circular pattern of LCD lights which circle the macro lens. Both use the standard 67mm threads common with most current interchangeable macro ports and with many consumer compact housings. The ring light simply threads onto the housing port and you are ready to go.

In addition to the variable continuous light settings the 3000 version can also fire like a strobe light using a standard fiber optic cord which you may already own. The most noticeable difference between these ring lights is the size of the battery compartment. The 3000 uses the larger 26650 lithium battery included with the unit while the 1000 uses the smaller 18650 battery also included. Both lights have a ninety degree beam angle underwater and color temperatures in the 5000-5500 kelvin range.

Both lights have a continuous light mode with power levels of 100%, 75%, 50% and 25%. Using full power the 1000 gives you 1000 lumens and the 3000 maxes out at 1800 lumens. With the 3000 set to strobe mode the maximum power is 3000 lumens. The 1000 has a single on/off button on top of the battery compartment which is also used to control the power levels. The 3000 has two buttons on top of the battery compartment used to control on/off, power levels, strobe lighting and red and blue lighting in addition to the white lighting. The red and blue lighting can be used as a continuous source or with the strobe mode.

The 3000 model is depth rated to 100m/330ft while the 1000 model is rated to 60m/198ft. Burn time at 100% (1800 lumens) power for the 3000 in

continuous is 45 minutes and with a burst mode (300 lumens flash SOS) lasting 5 hours. In strobe light mode battery life is approximately 12 hours. Burn time for the 1000 at full power is one hour and can also be achieved using AAA batteries in a special battery holder. The MSRP in US dollars is $375.00 for the 3000 and $229.00 for the 1000.

Field Testing Both Units

Let me say right up front that for the $150.00 US or so difference I found the 3000 to be the more versatile tool for both video and still shooting.

To get the strobe ready for use put a fully charged battery into the battery compartment tube and then thread the dual O-ring sealed tube into the ring light. To trigger the flash you insert one end of the fiber optic cable into the mounting point on the ring light battery compartment and the other end into the mounting point on the housing. I have both an Nauticam LCD flash trigger and an accessory flash to trigger external strobes. I found that the LCD trigger was to weak to trigger the Ring Light 3000. With the accessory strobe set to half power I had no trouble getting the ring light to fire.

Using the push buttons on both lights was quite easy even while black water diving because they are illuminated and easy to use even with heavy gloves. With the 1000 you push the button and hold to turn the light on and then push again to lower to the required power level. To turn the light off just push and hold until the light goes out. With the 3000 you push and hold both buttons to turn on and once the light is on one or both of the buttons are used to control other features including the flashing SOS signal. Once the strobe function is powered up the ring light stays on low power working as a focus

Nudibranch, Nauticam NA-EM1 II Housing, Olympus EM1 II, Olympus 60mm macro lens, Weefine Ring Light 3000 Flash, ISO-320, F/7.1, 1/250th sec

light. The color of light can also be set to red or blue rather than white. I used the strobe function on the Weefine 3000 with the red and blue lights but found the light to be rather underpowered for still photography. I do however think the red/blue may be useful for creative video.

For shooting stills in strobe mode the battery life was excellent. I made 1:45 to 2 hour black water dives and had plenty of battery life left for a second or third dive without a recharge. I found the same to be true making three hour macro dives at the Blue Heron Bridge. Using the 1000 as a focusing light at 75% power for black water dives also left me with plenty of battery power.

Shooting the 1000 for stills with macro lenses in the (35mm equivalent) range of 60mm and 120mm I was using ISO values of 400 to 600 at mid range f-values of F/5.6 to F/11 with the 60mm and

Octopus Eye, Nauticam NA-EM1 II Housing, Olympus EM1 II, Olympus 60mm macro lens, Weefine Ring Light 3000 Flash, ISO-250, F/9, 1/250th sec

needed ISO values of 400 to 1000 at F/5.6 to F/11 with the 120mm. With the 3000 in strobes mode I was shooting the same lenses at ISO 200 to 320 from F/5.6 to F16 for the 60mm and ISO 200 to 320 for the 120mm at F/5.6 to F/14. I rarely shoot macro above ISO-320 and found the constant light source of the Weefine 1000 to dim for stills. Using a continuous light source for macro also frightened

off many of the shy fish I was trying to photograph.

My take on the Weefine 1000 is that it is well suited to close focus (within about 12 inches or less, 30 cm) macro video and for occasionally shooting macro stills. The 1000 was quite useful as a focusing light for black water dives and I have included a black water still of a light colored subject taken at ISO-200 at F/7.1 with the 1000.

The Weefine 3000 provides an ample amount of light for small sensor cameras in strobe mode when shooting macro/closeup and in continuous light mode for macro/closeup video. Because smaller senses cameras have greater depth of field at lower F/stops the Weefine 3000 will be well suited to consumer compacts and sub full frame sensors. Full-frame sensors cameras require higher F/numbers in the F/13 to F/22 range for best DOF in macro/closeup. As a result ISO will need to be pushed higher for acceptable results. For my tastes the color temperature from both ring lights was excellent needing little tweaking in post.

Many U/W photographers I know travel with multiple strobes, some for different situations like macro and wide angle or just as backups. The Weefine ring lights are small enough and light enough to carry in a jacket pocket. The robust construction allows them to be packed in just about anything. As a backup or prime macro strobe they make an excellent travel choice. As always remove the Weefine battery and pack separately before travel.

Each ring light is packaged with a battery, battery charger, spare O-rings, a small tool used to tighten the ring light to the port and instructions.

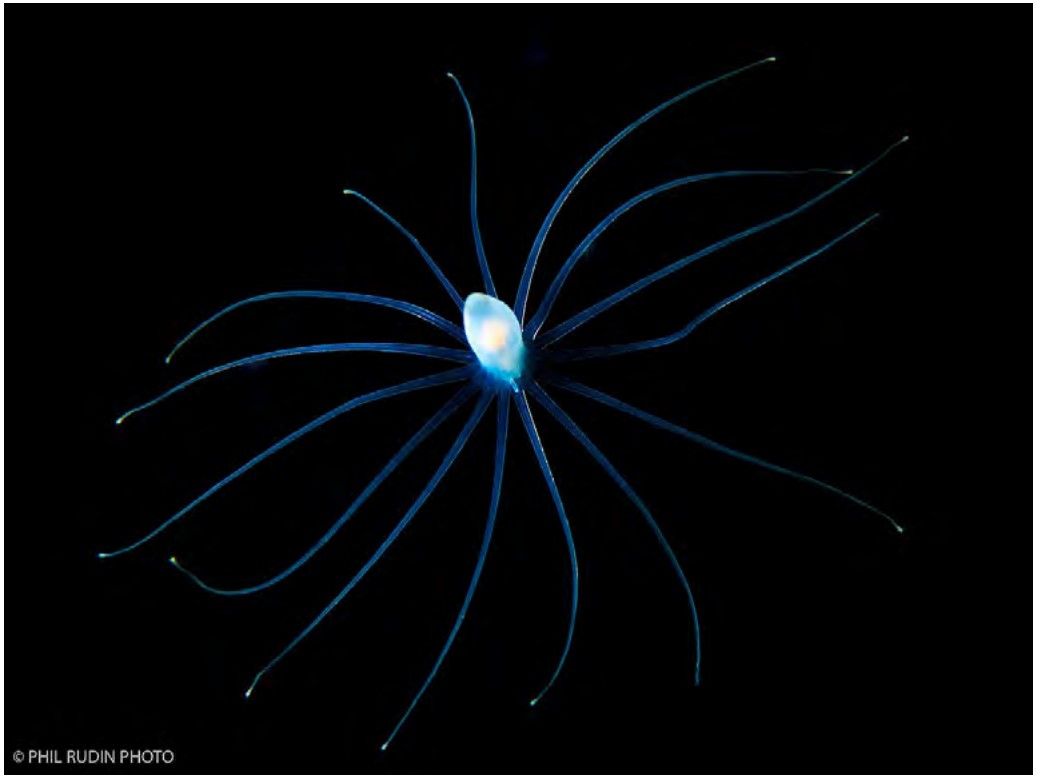
I would once again thank Doug Taleski, President of Kraken Sports, for loaning use the equipment for this review. Most of the reviews I do for UWPMAG.com are using borrowed equipment and without the help of the many equipment manufactures these reviews would not be possible.

Phil Rudin

www.krakensports.ca

www.uwcamerastore.com

Leach Headshield Slug, Nauticam NA-EM1 II Housing, Olympus EM1 II, Olympus 60mm macro lens, Weefine Ring Light 1000, ISO-1600, F/7.1, 1/250th sec



Larval Stage Sea Anemone, Black Water Dive, Olympus EM1 II, Olympus 30mm macro, Nauticam NA-EM1II housing, Weefine Ring Light 1000, ISO-200, F/7.1, 1/250th sec

Don't settle for 2nd best

Film - No Filter No White Balance

Digital - No Filter Manual White Balance

Magic Filter Manual White Balance

Digital cameras have opened up new possibilities to underwater photographers. For available light photography manual white balance is an invaluable tool for restoring colours. But when you use it without a filter you are not making the most of the technique. You're doing all the hard work without reaping the full rewards. These three photos are all taken of the same wreck in the Red Sea. The left hand image was taken on slide film, which rendered the scene completely blue. The middle image is taken with a digital SLR without a filter, using manual white balance. The white balance has brought out some of the colour of the wreck, but it has also sucked all the blue out of the water behind the wreck, making it almost grey. The right hand image is taken with the same digital camera and lens, but this time using an original Magic Filter. The filter attenuates blue light meaning that the colours of the wreck are brought out and it stands out from the background water, which is recorded as an accurate blue.

www.magic-filters.com