

Athena ARF Ring Flash

by Phil Rudin

If you are a fan of prime time TV programming then you have probably seen a ring flash in action during the C.S.I. crime dramas, America's Next Top Model episodes and other less well known series. The ring flash was originally introduced in 1952 for use as a dental photography tool and has a circular (360 degree) flash tube which fits around the camera lens. The ring flash has gained popularity among nature photographers for macro/close-up use and has become an invaluable tool for portrait and fashion photographers shooting stills or using fluorescent "ring lights" for video. While only a few underwater equipment manufacturers like Athena, Inon (quad-flash) and UK-Germany have released a ring flash they remain an extremely useful tool for underwater macro and close-up photography.

Why use a ring flash?

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 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, coming from opposite directions in relation to the lens and main subject. Light coming from two different directions is unnatural be it produced by a ring flash or multi-flash-heads. I frequently use my ring flash with an additional fill strobe/strobes or white plastic slates to reflect light much like bounce light reflectors used by portrait photographers. In fact macro/close-up photography is portrait photography involving fish/critters rather than people. The main reason we use that second strobe is to reduce the harsh shadows created by the first strobe and when the strobes are being fired in TTL, as many are the lighting becomes quite balanced on both sides

(Right) Olympus E-3, Olympus 50 mm macro+ 2X tele converter, ISO-100, 1/250th, f/16.



of the subject. The ring flash is a convenient way to light close subjects for several reasons. First we all know that in any type of photography not every tool works for every situation, so let's examine some of the upsides to using a ring flash for macro/close-up photography. The reduced size and complexity of the system is one of the key advantages of the ring flash. 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 forty-seven 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 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. Because the ring flash has a narrower beam angle than most strobes stray light is significantly reduced resulting in a reduction of backscatter. The ring flash creates a circle of light with a dark doughnut cone in the center. As long as your subject is beyond the doughnut hole (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 eliminate backscatter I find



Olympus E-3, Olympus 50 mm macro+ 2X tele converter, ISO-100, 1/250th, f/29.

noticeably less with the ring flash over dual strobes when used within three to fifteen inches (8 to 38 centimeters) of the subject. The ring flash can also create a luminance within opaque subjects not found with dual strobes.

The Athena ARF Ring Flash System

Athena Co.Ltd, Japan recently introduced its third generation ring flash the ARF-ring & micro flash system to replace their six year old Athena ARF-10 ring flash unit. The Athena ring flash, can only be fired fiber optically, has an 80 degree beam angle, 5,500K color temperature, ten power settings in manual, is depth rated to 75m (246 ft) and contains a target light. The ring flash has three components, the power unit, the ring flash head and the fiber optic sync cord. The ARF-01 power unit is a rebranded Sea & Sea YS-01 DS-TTL strobe head, the flash tube has been replaced with a five



pin Nikonos style female bulkhead. Power comes from four AA batteries contained in a water tight compartment on the rear of the power unit. The O-ring sealed battery cap unlocks with a counter-clockwise turn to replace the batteries. A variety of batteries can be used but I prefer the nickel-metal hydride type for fastest recycle times and easy of use world wide. Below the battery compartment is a mode switch and the light level control dial. The mode switch turns clockwise and has four settings, on/off, manual digital pre-flash, manual non pre-flash and DS-TTL. In the center of the on/off switch is the target light switch which is pushed in for on and off use. The power dial works in manual mode to increase or reduce power and in DS-TTL like a +/- EV controller. On the bottom of the power unit is a ready confirmation lamp which shows red for ready and green to confirm that DS-TTL has been achieved. Under the ready lamp is a stainless steel reinforced mounting point with a standard Sea & Sea fixing bolt to secure the power unit to a variety of accessory balls. On front of the power unit under the Nikonos bulkhead is the fiber optic cable socket



Olympus E-3, Olympus 50 mm macro+ 2X tele converter, ISO-200, 1/250th, f/29.

(slave sensor), the LED target light and a fiber optic cable socket for adding additional strobes. The flash head is a doughnut shaped marine grade aluminum unit containing a 360 degree flash tube with a 67 mm threaded light diffusing element on the front. The ring flash head is connected to the power unit with a coiled cord mounted in the side of the flash



Olympus E-330, Olympus 50 mm macro, ISO-100, 1/160th, f/18.

head. This cord has the five pin Nikonos male bulkhead connector which is O-ring sealed when mounted to the power unit. The new unit allows the ring flash head to be interchanged with one or two small macro flash heads that use a straight flash tube and mount to the sides of the macro port. The ring flash head has a 67 mm screw plate on the rear that can be threaded into many macro ports and adapters with the 67 mm thread. Athena also offers port caps with a 67 mm thread center which secure to the front of a variety of macro ports and come in standard sizes from 94 to 104 mm in diameter to fit many port styles. Once mounted to the macro port the ring flash head allows macro lenses with the 35 mm equivalent of about a 70 mm lens or longer. Lenses that sit too far back in the port or are too wide will vignette when shot through the center 67 mm ring flash head. Close-up lenses like the Inon UCL-165 M67 can be mounted to the front of the ring flash head to increase magnification. Sea

& Sea type fiber-optic cables are used to connect the power head to the housing. Recycle times are quick and a fresh set of batteries will outlast the camera's battery in most cases. The unit has more than enough power for exposures in the F/32 range and has an MSRP of around \$1389.00/€1010.00.

Conclusion

As a macro/close-up tool the Athena ring flash is a powerful addition for any serious underwater photographer. The lighting is soft and quite natural looking making colors pop and allowing the subject to be isolated from its background. The entire flash system takes up very little space when traveling and I often carry it in addition to my twin lighting system. This system allows you to explore new lighting techniques not possible with larger twin lighting systems. Like all strobes the Athena ring flash can produce specular highlights (catch-light) most often seen on very shiny objects and in the eyes of animals and people. These rounded highlights can be reduced or avoided by moving around your subject so that outgoing light is not reflected directly back into the lens.

Phil Rudin

philrudin@me.com

tropicalone@bellsouth.net

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