

Scubalamp MS20

by Phil Rudin

Light shaping devices have been around for about as long as photographers have been making images. As underwater photographers we have used the position of the sun to create interesting lighting effects, a verity of diffusers to widen and soften strobe lighting, multiple strobes can control shadows, highlights, contrast, color, depth and more.

Another technique underwater photographers have taken right from the studio photographers toolbox is the use of snoots for shaping and directing light onto a subject. Most snoots have a cylindrical or conically (cone) shaped light reflector which fits over a strobe to produce a focused light beam directed onto the subject.

The snoot creates a column of light which will allow you to separate a subject from its background or place a very narrow sliver of light on an element of your subject like its eye or mouth. We most often see snoots used for macro photography but snoots can also work well for some close focus wide angle situations.

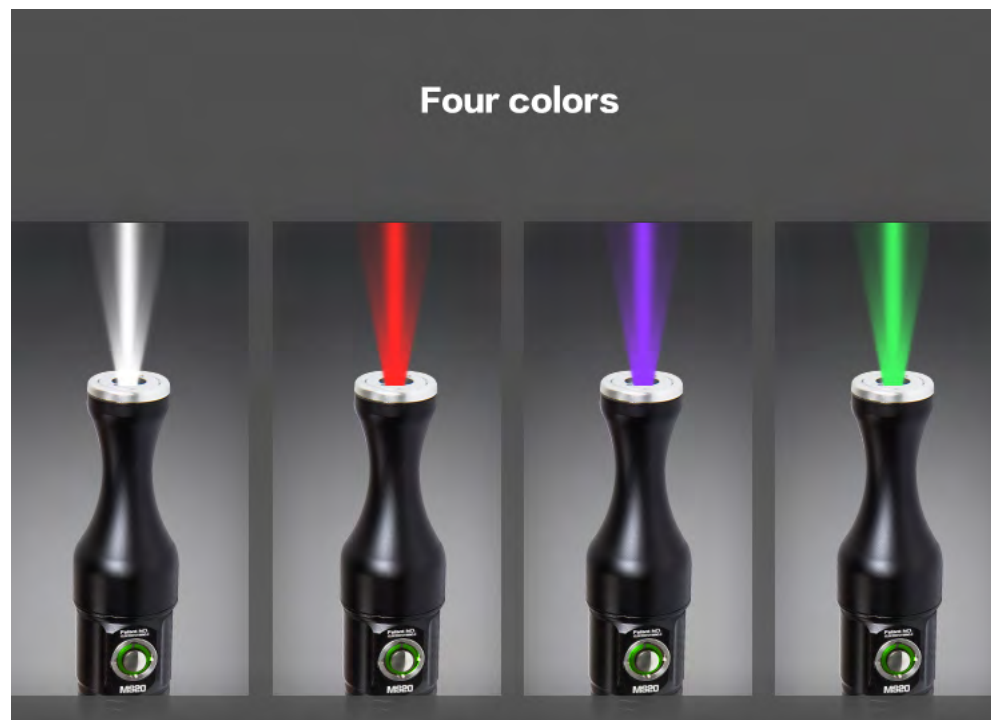
I began using snoots made from a white plastic funnel and taped to my strobe more than thirty years ago in my film days. This was a

very frustrating endeavor because it was hard to tell where the snoot was pointed and without the instant feedback of live review you never knew if you got the shot you wanted.

With modern digital equipment using snoots can still be a bit frustrating but is far more productive than the thirty-six exposures from the film days. Most modern strobes have an LED focusing light which will allow you to aim the narrow light beam much more accurately onto the subject.

The use of snoots has become so popular in underwater photography that several types of snoots are now commercially available and many more home made versions can be found on the internet. Most commercially sold snoots are two distinct types. Those where the light is transmitted through a hollow tube and those where the light is transmitted through a bundle of fiber optic cables.

With the hollow type of snoot different size tubes can be added to widen or narrow the light beam. Color filters can be added and the light cone can be moved closer to or further away from the subject to change the shape of the light. Moving the light





closer to the subject hardens the edges of the light beam and moving the light back softens the edges.

A harder edged light beam will reduce “spill” (stray light) from getting onto parts of the photograph where you don’t want the light to be. While the soft edge light beam creates a smoother transition across the photograph from light to shadow which is preferable for many critter portraits as it is with people portraits shot in the studio.

Fiber optic snoots are made from a bundle of fiber optic cables that are held in place over the flash tube(s) on your strobe. When the strobe is fired the light is transmitted through the fiber optic bundles and onto the subject.

With fiber optic snoots the size and shape of the light beam can be changed by adding different size narrowing tips to the light emitting end of the fiber optic cables. Fiber optic snoots are flexible which allows them to be more easily shaped to your needs and because they are smaller in size they will fit into a smaller space.

Many fiber optic snoots are also made with two separate fiber optic bundles which can be mounted onto one strobe head. This style of snoot allows you to light both sides of your subject or create any



number of lighting ratios. As an example you can light both of the subjects eyes without lighting the entire animal, a very cool effect.

I met with Raymond Bro and Steven Lim from Scubalamp at DEMA in November 2018 and they gave me a demo Scubalamp MS20 snoot light for review. Scubalamp Underwater Photography Equipment (scubalamp.com) headquarters and factory are located in China. Scubalamp also has offices in Singapore and Taiwan with distribution throughout most of Europe, Asia and Australia with limited distribution in the Americas.

The product line focuses on lighting for recreational diving, technical diving, underwater photography and video. The product line includes a verity of photography and video lights, dive lights, ambient light filters, camera trays, support arms, float arms, support hardware, batteries, chargers and much more. One of the many unique products sold by Scubalamp is the MS20 four color snoot.

Unlike the other snoots described above the Scubalamp MS20 is a bright continuous light which uses a CREE XP-L HI LED with a projected



Octopus Eye Detail, Sony A6400, Zeiss Touit 50mm F/2.8 macro, Ikelite Housing, Scubalamp MS20 (BLUE), auto ISO-1600, F/13, 1/160th sec.

lifespan of up to 50,000 hours. The MS20 has two sections the light head with the on/off color select switch and the rear battery compartment.

Both sections are made from high-grade aviation aluminum alloy with type III hard anodization for maximum corrosion resistance.

The working voltage for the unit is 2.7 to 4.5 volts using one compatible 18650 battery which is included along with the battery charger.

The MS20 has a five degree round beam which covers an area of approximately 30mm at a distance of 100mm from the subject. The MS20 is 1200 lumens with white, red, violet and green color choices. The patented on/off/color select switch allows you too easily switch between colors with a one finger push.

The battery compartment is threaded and has two O-rings for added security. Simply unscrew the battery compartment, insert a charged battery and reattach. Be sure to grease the main O-rings as part of the regular maintenance along with a through rinse after use in saltwater.

Once a charged battery is installed the light switch will glow green indicating that the battery has a charge. Push the switch once and the white light comes on, push again and the red light comes on followed by violet, green then off. Once the MS20 is turned off the green glow on the switch will extinguish. The MS20 is threaded on the bottom to except the included YS ball adapter or a wide verity of other mounting options.

The MS20 is 19cm long, 29mm at the light end and 34mm at the battery end. Depth rated to 100 meters I found the MS20 to be very robust and very easy to travel with.

Because my MS20 was a demo I am not sure how many times the battery may have been charged or used, as a result burn times could vary a bit. I tested the battery life by turning the light on with a fully charged battery in a bucket of water and then cycled through the different colors.

After one hour and forty-five minutes the glowing green light on the switch went from green



to amber allowing letting me know the battery had about half power left. If the amber light comes on while using the white or red light and you switch to a violet or green the glowing green light comes back on indicating extended battery life with those two colors.

Using violet or green extends the run time to two hours and twenty-five minutes before the amber light turns back on again, at five hours and thirty-five minutes the amber light switched to red. At around four hours the light intensity begins to slowly decrease and at six hours the white light is still on but is at about 20% of the original intensity.

A fully drained battery (over six hours of run time) will take about eight hours to fully recharge. Run times may very slightly depending on the age of the battery, battery manufacturer, ambient temperature and other factors.

Field Testing the MS20

One of the first things that excited me about testing the Scubalamp MS20 snoot was the ability to easily use the light off camera and to have a constant light source that I could effortlessly move around the subject to optimize results.



Hermit Crab, Sony A6400, Zeiss Touit 50mm F/2.8 macro, Ikelite Housing, Scubalamp MS20 (BLUE), auto ISO-400, F/16, 1/160th sec.

For my review I added a standard ball head and attached the MS20 to two different small tripods. This arrangement allowed me to get the light head very close to the subject without disturbing the subjects surroundings. This method of lighting works well for static or slow moving subjects like

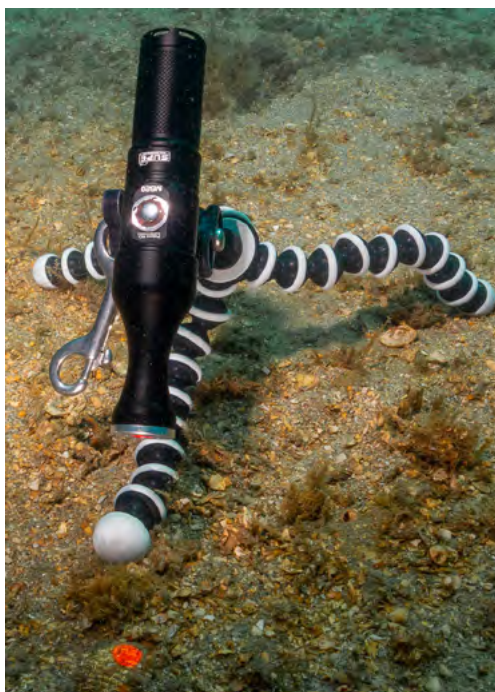
crabs, octopus, nudibranch, frogfish and a verity of other subjects.

When using any snoot subject selection is very important to the photo process. Finding the correct subject to light with a five degree beam can be challenging and being able to setup the tripod without doing any damage to marine life can also be problematic.

For me leaving the environment the way I found it is more important than any photograph. Many macro areas may not be suitable for using a tripod so the MS20 can also be mounted direct to the housing using any number of mounting options like standard strobe arms, cold shoe mounts and more.

Proper subject selection is also required for each color of light, not all subjects worked with the four different light colors. With subjects that have white or light colored appendages the colored lights will over power these lighter areas and may look too intense. Personal taste and how the images are processed in post will also vary between photographers because the colored lights alter reality to an extent.

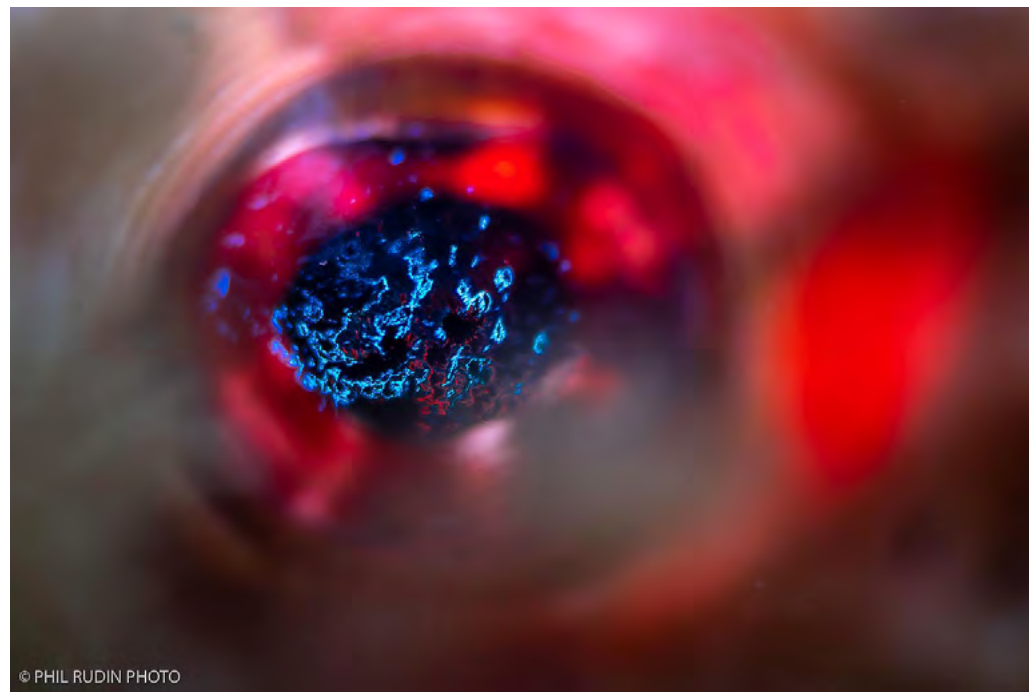
I shot most of my images with the MS20 on two small tripods, one with rigid legs and one with flexible legs. My preference was for the tripod with the rigid lens which were about six inches long. The light head to



subject distance was from about 20 to 100 millimeters producing a circle of light from about 5mm to about 30mm in diameter.

The closer the light comes to the subject the greater the light intensity becomes as would be expected. The white light was more intense at a given distance v. the red, violet and the green which appeared to be the least intense for a given distance. I used three different camera bodies and two different macro lenses for this review.

I shot the new Sony A6400 (reviewed in this issue) with the excellent Zeiss Touit 50mm F/2.8 macro in an Ikelite housing and Sony



Scorpionfish Eye Detail, Sony A7 III, Sony FE 90mm F/2.8 macro, Nauticam NA-A7R III housing, Scubalamp MS20 snoot (RED), ISO-100, F/3.2, 1/200th sec.

A7 III and A7R III cameras with the outstanding Sony FE 90mm F/2.8 macro lens in a Nauticam NA-A7R III housing.

I experimented with a verity of camera settings first using all manual settings for ISO, F/stop and shutter speed. Later I switched to the Sony's excellent auto ISO with the limits set between ISO-100 and ISO-6400. This method auto selects the ISO based on the chosen F/stop and shutter speed with the camera in manual mode. I also used negative exposure condensation to reduce ambient light

since the MS20 was my only light source other than ambient light. The auto ISO worked very well with the chosen shutter speed and F/numbers giving me the exposures I was looking for.

With white light the exposure compensation was set to zero for a more even overall exposure. I also used F/2.8 and F/3.2 with both lenses to capture subjects with very limited depth of field using the colored lights to accent just the in-focus areas of the subject for a more abstract image.

Since the MS20 is a continuous



Yellowline Arrow Crab, Sony A7 III, Sony FE 90mm F/2.8 macro, Nauticam NA-A7R III housing, Scubalamp MS20 snoot (RED), ISO-100, F/13, 1/80th sec.

for unusual captures. The MS20 is an excellent tool for those die hard macro photographer who are always looking at new ideas for expanding their creative work. The MS20 can be used as a stand alone light source or in conjunction with other light sources like strobes and snoots.

The Scubalamp MS20 four color snoot retails for around 298.00Euro, A\$399.00, \$330.00USD check with your retailer for more information on pricing. I would like to once again thank the entire Scubalamp.com team for allowing me to use the test unit for this review. Also checkout the entire Scubalamp line at scubalamp.com and at [scubalamp](https://www.facebook.com/scubalamp) on facebook.com

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www.scubalamp.com



light source exposures could also be controlled by raising and lowering shutter speed to allow more or less light into the camera. When shooting macro with strobes shutter speed has little effect on the exposure because the strobe provides almost 100% of the exposure. Exceptions would be when slowing the shutter and taking an upward angle to open the blue water background or to blur subject motion.

Using a tool like the Scubalamp MS20 snoot light allows the creative juices to flow and the imagination to run wild with the possibilities

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