

Tamron 17-28mm F/2.8 lens

by Phil Rudin

Tamron, a Japanese company first began developing precision optical equipment over seventy years ago. In 1953 they began sales of Wide Vision Binoculars and later moved to manufacturing lenses for SLR cameras. Today they make a verity of lenses for DSLR's, Mirrorless cameras, Camcorder lenses, Surveillance camera lenses, Camera modules, Automotive camera lenses and more. Anyone who has been around the camera market is aware of the excellent reputation Tamron has had for years in the camera lens industry.

In February of 2018 Tamron announced the 28-75mm F/2.8 Di III RXD lens for Sony full frame cameras. This lens has superb optical performance, weather-sealing, is light weight, compact and competitively priced. This lens became an immediate success within the Sony Alpha community winning several design awards in its first year.

In June of 2019 Tamron followed up on the success of the 28-75mm F/2.8 by announcing the 17-28mm F/2.8 Di III RXD which is the subject of this review.

In October of 2019 Tamron

announced three fixed focus lenses for Sony full frame mirrorless cameras, the 35mm F2.8 Di III OSM M1:2, 24mm F2.8 Di III OSM M1:2 and 20mm F2.8 Di III OSM M1:2. All three of these fixed lenses have a 67mm filter thread and all three focus to 1:2 or twice life size with the shortest minimum focus distance being 10.92cm (4.3 inches) for the wide 20mm lens.

I have not noticed these three lenses listed on any housing manufactures port charts to date. I suspect all three lenses would work well with dome ports in the dome 170mm to 200mm size range. Since they all focus to twice life size I suspect they may focus inside the port so that the 1:2 magnification advantage would be hard to reach without banging the port glass into the subject. I may at some point be able to test one of these lenses but as of this writing I have not yet seen these Tamron lenses.

In October of 2020 Tamron announced the Tamron 70-180mm F/2.8 Di III VXD. All six of the lenses listed above have the same 67mm filter thread, whether-sealing, excellent auto focus motors, premium



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Tamron 17-28mm F/2.8 left, Sony FE 16-35mm F/4 right, both zoomed wide, both with Nauticam gears, Sony A7R IV bodies. Notice the extension at the 16mm on the Sony v. the Tamron at 17mm.

optics and excellent size and weight versus the computation.

Land photographers covet what is commonly referred to as the holy trinity of lenses. This is the 16-35mm F/2.8, 24-70mm F/2.8 and 70-200mm F/2.8. For Sony users the 16-35mm is often replaced with the 12-24mm F/2.8. I have chosen the Tamron 17-28mm F/2.8, Tamron 28-75mm F/2.8 and Tamron 70-180mm F/2.8 as my holy trinity of travel photography lenses based on size, optical performance and cost.

By losing one millimeter on the wide end and 20mm on the long end the total cost of the three lenses is about \$2977.00 US retail, versus the Sony lenses at \$6994.00 retail and \$7794.00 if you swap for the 12-24mm F/2.8.

Tamron 17-28mm F/2.8 Di III RXD

The Tamron 17-28mm F/2.8 Di III RXD is a versatile wide angle zoom for underwater photography

with a retail price of \$899.00 in the US.

The angle of view ranges between 103 to 75 degrees coverage with a 19 cm (7.48”) minimum focus distance and a max reproduction ratio of 1:5.2. By comparison the \$1349.00 Sony 16-35mm F/4 has a minimum focus distance of 28cm (11.02”) and 0.09x max magnification. The \$2198.00 Sony 16-35mm F/2.8 has the same minimum distance and magnification as the F/4 lens.

The Tamron lens has 13 elements in eleven groups with XLD and LD elements to greatly reduce color fringing, improved clarity, color accuracy and reduce chromatic aberration. Individual elements also have a Broad-Band Anti-Reflective coating to reduce ghosting, flare, and improve color fidelity when working in strong lighting conditions like shooting upward angles underwater.

The RXD in the lens description stands for Rapid eXtra-silent stepping Drive or auto focus motors that deliver quite, quick and smooth focusing performance for both stills and videos. Manual focus override is compatible with the Sony direct MF function.

The lens has nine rounded diaphragm blades which contributes to bokeh quality especially at high aperture numbers in the F/13 to F/16 range. By comparison the Sony 16-35mm F/4 has seven diaphragm blades while the Sony F/2.8 version has eleven.

The Tamron lens is 73x99mm (2.87 x 3.9”) 420 g (14.82 oz) with the 67mm filter thread while the Sony 16-35mm F/4 is 78x98.5mm (3.07x3.88”) 518 g (18.27 oz) with a 72mm filter thread. The Sony 16-35mm F/2.8 is 88.5 x 121.6mm (3.48x4.49”) 680 g (1.5 lbs) with an 82mm filter size.

**Sea & Sea
Internal
Correction Lens
left, 67mm to
77mm Step-up
lens right.**



As a footnote I would add that the Sony holy trinity uses two different filter sizes while all three of my Tamron lenses use the same 67mm thread size also used with the Tamron 35, 24 and 20mm lenses. I didn’t think this was a big issue until a recent trip I made to North Carolina to photograph water falls. I had, one graduated ND filter and one circular polarizing filter plus a few other toys. The ease of switching filters between lenses and not constantly trying to find step-up/down rings was a time saver.

Sea and Sea Internal Correction Lens (now discontinued)

Lots of readers have ask me about using the SEA & SEA internal correction lenses which was available in 77 and 82 mm sizes. These lenses are “convex meniscus lenses” designed to suppress field curvature at the edges and corners of image.

We all know that very wide rectilinear lenses used behind dome ports particularly on full frame cameras result in soft corners and that the smaller the port the worse the problem becomes all else being equal.

With the internal correction lenses Sea and Sea reports effective image values of two f-stops of light. This means that if at



Abundant Aquatic Plant Life surrounding the edges of Ichetucknee Springs State Park, Fort White, Florida, Sony A7R IV, Tamron 17-28mm F/2.8 at 17mm, Nauticam housing, Nauticam 230mm dome port, S&S ICL, Two Inon Z-330 flashes, ISO-400, F/11, 1/250th Sec.



North Florida Spring Diving at it best.

17mm behind a 230mm port I am getting what I feel is adequate corner sharpness at F/13 I should be able to get exactly the same corner sharpness two stops wider open (say F/9 or F/10) using the S&S correction lens.

The S&S system chart for the correction lenses is quite short with no recent updates. The chart is confined to Canon and Nikon lenses for both FF and APS-C lenses.

The S&S correction lens was designed for the S&S fisheye dome port 240. On the S&S web site the port chart for Sony A7III/IV housings do not include the S&S correction lens

with any port configuration nor do they include the S&S Universal Dome Port 210 / AR introduced at DEMA well over a year ago. They also don't indicate if the lens will work with fixed lenses as well as zoom lenses.

The only lens I own that actually has the 77mm filter thread for the S&S ICL that I own is the Zeiss Batis 18mm F/2.8 for Sony. I have used the correction lens on the Zeiss 18mm with both 180mm and 230mm ports and I can see the improvement in the corners.

The S&S ICL should not be mistaken for the often misunderstood



addition of a closeup lens of +2 or +4 diopter to a zoom lens. The use of C/U lenses has been carried over from the film days when older zooms only focused to about 45cm (1.5 ft). The C/U lens allowed the older zoom lenses to then focus on the virtual image inside the dome port for sharp focus. The C/U lenses are still recommended for some longer lenses like a 24-70mm zoom but are of little use with wider angle zooms like 14-24, 16-35 or the Tamron 17-28mm.

Using the S&S ICL on the 67mm Tamron or Sony F/4 72mm lens requires a step-up rings while

the Sony F/2.8 lens is 82mm so it is able to use the larger 82mm S&S lens directly. Bottom line is that the S&S lens works as advertised and I got about a two stop advantage with the 230mm port and about one to one and a half stops with the 180mm port.

The S&S internal correction lens retails for \$399US in both 77mm & 82mm. Combined the Tamron 17-28mm F/2.8 lens and the 77mm S&S ICL Retail for around \$1300.00 US which is still about fifty bucks less than the Sony 16-35mm F/4. If you can find the S&S ICL new or in the used market it is a sort of poor mans Water Contact Optic for those already using the zoom lens and port combination.

The alternative to the S&S ICL are Water Contact Optics like the Nauticam WWL-1/1B, WACP and WACP-2. These optics all provide better corners with the proper camera lens. The F/stop advantage with these optics can exceed four stops or F/13 down to around F/5.6 maintaining like corners.

Field testing the Tamron 17-28mm F/2.8

During this review I used the Tamron 17-28mm F/2.8 lens with and without the S&S ICL to access its value. I also shot with the Nauticam 180mm dome port and



(Left) Red cushion sea star or West Indies sea star (Oreaster reticulatus). Spawning. Blue Heron Bridge, Florida, Sony A7R IV, Tamron 17-28mm F/2.8 at 28mm, Nauticam housing, Nauticam 180mm dome port, S&S ICL, Two Inon Z-330 flashes, ISO-200, F/10, 1/125th Sec.

(Right) Adult Gray Angelfish, Blue Heron Bridge, Florida, Sony A7R IV, Tamron 17-28mm F/2.8 at 17mm, Nauticam housing, Nauticam 180mm dome port, S&S ICL, Two Inon Z-330 flashes, ISO-200, F/7.1, 1/250th Sec.



Zen Underwater 230mm dome port using the N120 40mm extension for both. The Nauticam chart of course recommends the 230mm port for optimum results over the acrylic 8.5 inch and 180mm ports.

The Tamron can also be used with the WACP-2 covering the full zoom range with a FOV of 123-85 degrees on full frame. The 230mm port is a great fit and I had no issues with getting expectable corner sharpness without the S&S ICL at F/11 or higher.

With the 180mm port the S&S ICL is critical for better corners if you shoot below about F/14. All images for this review were taken with the

Sony A7r IV 61MP camera. If you are using one of the Sony cameras in the 12-24MP range results should be excellent as well except for the same corner issues.

Larger megapixel cameras like the Sony A7R IV capture lens flaws more noticeably than lower MP cameras so beware and chose wisely. I find the Tamron 17-28mm F/2.8 up to the challenge of the 61MP sensor and performance is clearly better than with the Sony FE 16-35mm F/4 that I have been using for years. I have not used the Sony FE 16-35mm F/2.8 enough to render my verdict with that lens but I suspect they are very close. I also didn't really miss the extra 1mm

on the wide end and on the short end 28mm is fine for me because I never really used the extra magnification past 28mm on the 16-35.

My test housing was the discontinued Nauticam NA-A7IV housing which I own not the newer NA-a2020 version for the A7R IV and A9 II. I also used two Nauticam 50x250mm carbon fiber arms and two 200mm double ball arms with Nauticam clamps.

For flash I used my two trusty Inon Z-330 set to manual power and fired with Nauticam fiber optic cords using the Nauticam manual flash trigger. With this configuration

the housing is a bit on the buoyant side with the 230mm port and to my liking with the 180mm port. In fresh water both systems are easy to use, in saltwater the 230 turns up a little too much for my liking and I may drop the float arms.

To test corner sharpness I used both ports with and without the S&S ICL and used apertures between F/5.6 and F/16 adjusting for proper exposure using ISO and shutter speed changes.



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Scorpionfish, Blue Heron Bridge, Florida, Sony A7R IV, Tamron 17-28mm F/2.8 at 26mm, Nauticam housing, Nauticam 180mm dome port, S&S ICL, Two Inon Z-330 flashes, ISO-80, F/14, 1/250th Sec.

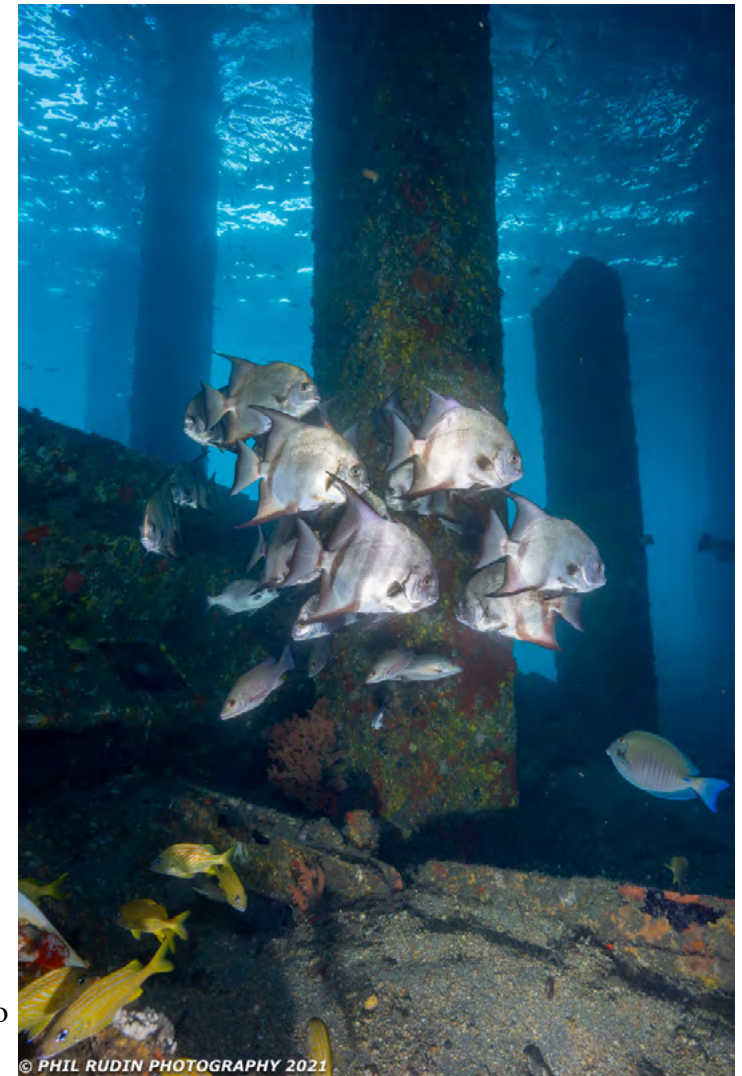
The Tamron lens has a very short zoom of less than a quarter turn from the 17mm end to the 28mm end. I found this very useful when zooming for composition and I am sure video users will also like the smooth movement through the zoom range.

I was shooting the A7R IV camera in manual mode with auto focus set to single shot in drive mode, AF-C in focus mode and tracking expanded flexible spot (medium) in focus area. I manually adjust ISO, aperture and shutter speed on the fly as I have done for decades. The better

the auto focus has gotten on the Sony cameras since my A7 II test the more I have moved between using EVF and LCD for composition.

While I love my 45 degree optical finder with the EVF for most macro the LCD has become quite accurate for wide shots particularly if I am using face and eye detection for humans. This setting is dialed into the camera after being enabled in the menu and only activates when a human is detected so you don't need to switch back and forth when shooting wide.

Atlantic Spadefish under the low Blue Heron Bridge, Florida, Sony A7R IV, Tamron 17-28mm F/2.8 at 17mm, Nauticam housing, Nauticam 180mm dome port, S&S ICL, Two Inon Z-330 flashes, ISO-320, F/8, 1/125th Sec.



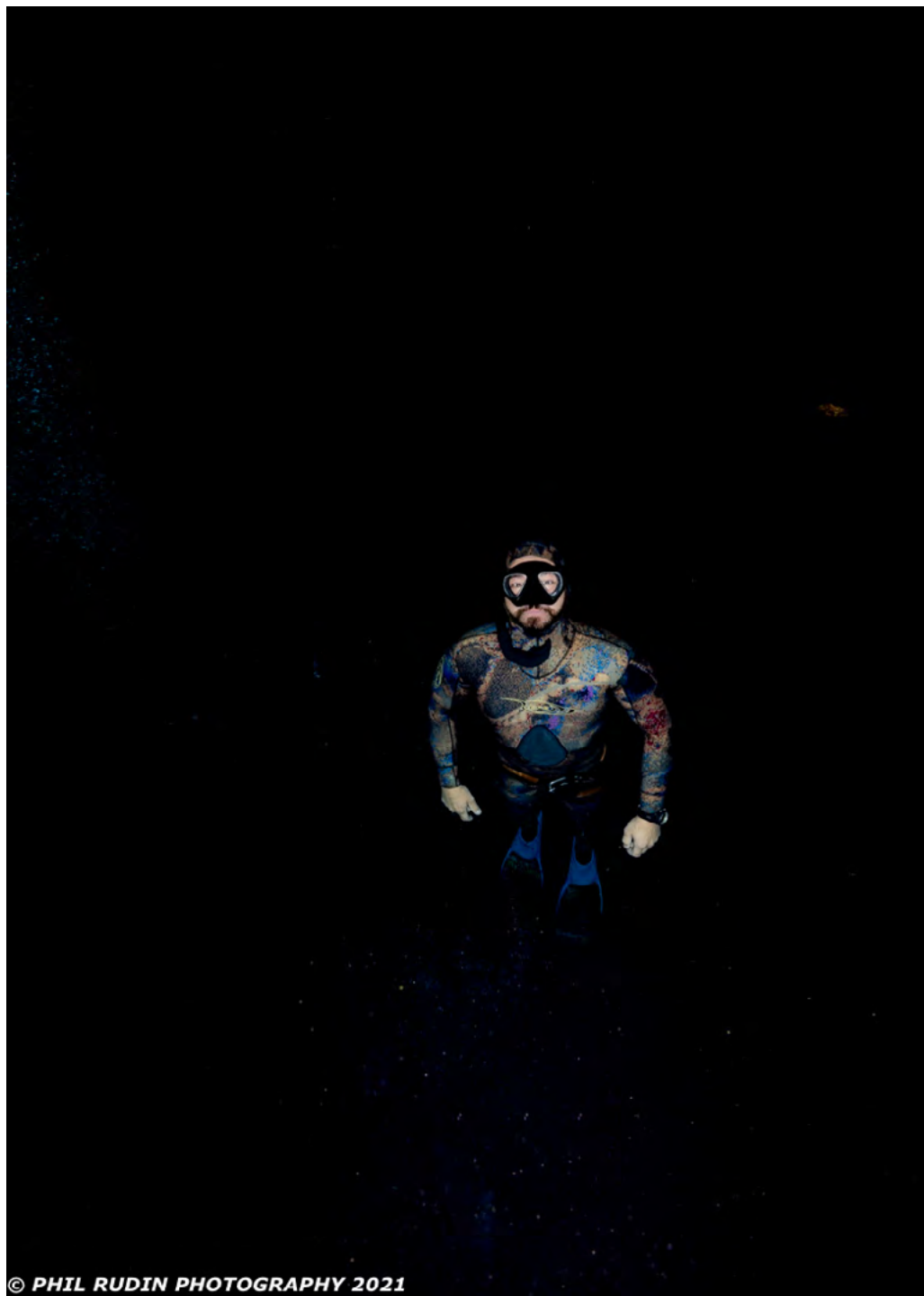
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With the Tamron 17-28mm and the 5.5 stops IBIS system you can take shots with excellent focus down to about 1/15th sec. with slow moving subjects.

Most of the time I am shooting more in the 1/30th to 1/250th range but it is nice to be able to drag the shutter from time to time and know you will be getting good results.

Auto focus speed with the Tamron lens is impressive keeping up with any of the premium Sony

wide lenses I have used. The focus tracking locks on and easily sticks to the focus point even while moving the focus point around the frame. Fast and accurate AF has been my experience with the other Tamron lenses I own as well.



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The attached photo of the free diver coming out of near zero visibility was taken using the LCD and just pointing the camera at the motion I was seeing as the diver began to emerged. The face and eye detection tracking went directly to the divers face as I depressed the shutter without me being able to assess if he was in focus. The result is a tack sharp photo taken in extremely low lighting conditions with a rapidly moving subject tracking directly at the camera.

The rendering of the many colors in the IFFE camouflage wetsuit is also remarkable and at 200% or 300% you can easily see the separation in the divers eye lashes. The Tamron 17-28mm F/2.8 is an exceptional value

at \$899.00US and a lens I can highly recommend.

Nauticam offers support for the Tamron 17-28mm with the STE1728-Z zoom gear and STE1728-F focus gear which each sell for \$207.00US. I would like to thank NauticamUSA and Zen Underwater for assisting with tech support for this review and recommend going to nauticam.com and zenunderwater.com for further information and current pricing for the equipment used in this review.

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Instagram

www.uwpmag.com

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Magic filters are now available in 3 options. Original Magic for use in blue water with DSLR and compact cameras with Manual White Balance, Auto-Magic for compact cameras in automatic point and shoot mode. GreenWater Magic for use in green water with DSLR and compact cameras with Manual White Balance. Prices start at just £22.

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