

Sony A7r II And Ikelite A7r II Field Review

By Phil Rudin

Ikelite Underwater Systems is a USA based company which has expended its distribution network to cover most areas of the world during its fifty-three years in business. Ikelite has a large and loyal customer base built on a foundation of excellent customer support and product reliability. During DEMA 2013 Ikelite debuted a new housing with a unique port system for the Canon EOS 100D/SL1 DSLR which I reviewed in issue #78 of UWPMAG.com. At DEMA 2014 Ikelite debuted a new line of mirrorless camera housings featuring the same port system which I reviewed in issue #85 of UWPMAG.com using an Olympus E-M5 II housing. At DEMA in November 2015 Ikelite once again introduced a complete line of housings for the Sony Alpha A7 II, A7R II and A7S II Full-Frame mirrorless cameras. This line of mirrorless housings uses the current DSLR ports and extensions and features full TTL support for Ikelite's complete line of DS strobes. New lighter ports are also being added to the product line and a lighter and thinner back plate is being developed

for shallow water applications like surf photography.

Sony Alpha A7R II camera

Sony's new flagship Alpha A7R II is the fifth in the lineup of Sony full frame mirrorless cameras and the second to include sensor based in-body image-stabilization or (IBIS). Sony debuted the first Alpha A7, A7R & A7S cameras during 2013 and they became the first mirrorless interchangeable lens cameras to feature a full-frame (36 X 24 mm) image sensor with a body the size of the current Olympus E-M1 & E-M5 II mirrorless cameras. Sony has made it quite clear that they intend to challenge Canon and Nikon in the pro and "Pro-Sumer" markets by focusing heavily on their full-frame lineup of mirrorless cameras.

The Sony A7R II is the first camera in the Alpha line to offer 5-axis sensor-based image-stabilization on a full-frame 42.4 MP CMOS sensor. The rugged new weather-sealed Sony A7R II magnesium alloy body includes an



enlarged grip making the camera body easier to hold with any lens, it has no AA filter, a five frames per second rate in raw with focus tracking, 399 phase detection AF on-sensor focus points covering 45% of the total image area. 4K (UHD) video in full frame and super 35 mm modes, 4K video recording to the single SD card at 100Mbps in XAVC S, S-log video recording, a very large high-res (2.35 million pix) OLED EVF with fast refresh



rate, a silent electronic shutter setting and much more.

The custom buttons are well laid out and any number of functions can be assigned to better assist with your photo needs. Image capture is brilliantly displayed with a 3-inch tilting LCD with 1.23 million dots. Unlike many of Sony's new cameras including the Sony A6300 Sony's A7R II includes a battery charger and two NP-FW50 lithium-ion batteries.

Battery life is an issue with all mirrorless cameras compared to DSLR's not using an EVF. To help mitigate this issue with the A7R II I have assigned control of the EVF to the C1 button on the camera. This allows me to use the LCD screen to preserve battery power and switch to EVF only when it is needed. The only time I have had an issue with battery power shooting stills is when I have been using the 90 mm macro lens which requires more power when focusing with constant EVF operation. I am able to do two tank dives with the Sony 16-35mm zoom shooting upwards of 400 images without concern for battery life.

For video and still shooters using Ikelite housings, optional battery packs from after market vendors can be fitted into the Ikelite Alpha 7 & 7 II housings lines. These battery packs can provide from three to four additional hours of run time while shooting video and increase captures significantly when shooting stills.

Sony's currently offers fifteen FE (full frame) lenses and five Zeiss FE mount lens with at least four more coming during 2016. Many of these lenses are weather sealed and of the highest build quality. Current indications are that the new Sony G-Master line of lenses will be setting a new benchmark for image quality. In addition to the



Hawksbill Turtle, Sony A7R II, Rokinon 12mm, ISO-160, F/9, 1/250th, Ikelite A7R II housing, Ikelite eight inch dome port, Ikelite DS-161 strobes in TTL with dome diffusers.

Sony FE lens line the Sony APS-C E mount lenses can also be used in conjunction with the cropped setting on the A7R II for both stills and video.

In addition, several other lens manufactures are making direct mount auto focus and manual lenses for the Sony FE mirrorless cameras. Lens adapters like the metabones, Sigma and others have also



Diver entering the bridge of Felipe Xicotencati (C-53), Sony A7R II, Rokinon 12mm, ISO-320, F/9, 1/250th, Ikelite A7R II housing, Ikelite eight inch dome port, Ikelite DS-161 strobes in TTL with dome diffusers.

opened up the ability to use Canon, Nikon, Sigma and many other lenses with full AF and/or manual control as well. Many photographers have made the move from Canon or added the Sony Alpha A7R II body to their bag and still use their complete line of

Canon lenses with an adapter.

Most photographers when they hear the word mirrorless camera naturally assume that this equates to a much smaller and lighter overall underwater camera system compare to like quality DSLR camera systems. This is not entirely the case with the Sony A7r II system and should not be the only consideration when moving to a this full frame camera.

While the 42.4MP A7R II body at 625G (22.05oz) and 126.9x95.7x60.3mm(5.0x3.8x2.4 inches) is smaller than the Canon 50.6MP 5Ds R body at 845G (29.81oz) and 152x117x76mm(6x4.6x3 inches) or the slightly heavier Nikon D810 the differences in systems for the most part ends there. While mirrorless systems like M43 are able to incorporate much smaller lenses this is not the case with quality 35mm full frame camera lenses.

Larger sensors mean bigger lenses with heavier glass to cover the larger full frame sensors. This is a simple issue of physics and while some mirrorless lenses for full frame can be designed a bit smaller than DSLR lenses those used for U/W photography remain about the same size and price as their full frame DSLR counterparts. As an example with the Sony A7R II I shoot with the Sony 16-35mm F/4 zoom and Sony 90mm F/2.8 macro about 90% of my time underwater. The 16-35mm on release in 2015 retailed at \$1348.00USD, weights 518G (18.27oz) and is 78x98.5mm (3.07x3.88 inches) while the Canon 16-35mm F/4L lens on release in 2014 retailed at \$1199.00USD, weight 615G (1.35lb) and is 82.6x112.8mm (3.25x4.44 inches) not a great deal of difference. The Sony 90mm F/2.8 on release in 2015 retailed for \$1098.00USD weight 602G (1.32lb) and 79x130.5mm (3.11x5.14 inches)



Dive Guide Marco Steiner, Ponderosa Cenote, Sony A7R II, Sony 16-35mm zoom at 16mm, ISO-800, F/5.6, 1/200th, Ikelite A7R II housing, Ikelite eight inch dome port, Ikelite DS-161 strobes in TTL with dome diffusers.

while the Canon 100mm F/2.8L on release in 2009 retailed for \$1050.00USD weight 625G (1.38lb) and 77.7x122.9mm (3.06x4.84 inches). Again not much difference between these lenses which both focus at



Aquatic plants at Nichte Ha Cenote, Sony A7R II, Sony 16-35mm zoom at 16mm, ISO-250, F/14, 1/250th, Ikelite A7R II housing, Ikelite eight inch dome port, Ikelite DS-161 strobes in TTL with dome diffusers.

1:1.

Underwater housings are not hugely different either and I can best describe the Ikelite Alpha A7R II housing as a “tweener” sitting between



Anemone, Sony A7R II, Sony 16-35mm zoom at 16mm, ISO-125, F/14, 1/250th, Ikelite A7R II housing, Ikelite eight inch dome port, Ikelite DS-161 strobes in TTL with dome diffusers.



Nurse Shark, Sony A7R II, Sony 16-35mm zoom at 16mm, ISO-125, F/14, 1/250th, Ikelite A7R II housing, Ikelite eight inch dome port, Ikelite DS-161 strobes in TTL with dome diffusers.

most mirrorless housings and like quality DSLR housings. An example would be these Ikelite housings the Sony A6300 housing (APS-C mirrorless) weight 1430G(3.1lb) at 160x191x132mm(6.3x7.5x5.2 inches) Sony Alpha A7RII weight 2269G(5.0lb) at 230x180x150mm(9.1x7.1x6.1 inches) and the Canon 5Ds/5Ds R housing at 2400G(5.4lb) at 250x175x165mm(10x6.9x6.5 inches), all without tray and handles. So the

difference between the DSLR housing and the Sony housing is noticeable a greater difference is evident with the A6300 housing which accommodates smaller lenses and ports. All things being equal I had no more difficulty packing the Ikelite A7R II housing into my ThinkTank roller-bag and carrying it onto an airplane than I did when I tested the Ikelite Olympus E-M5 II housing and carried it on a flight to the same location.

Ikelite Alpha A7R II Housing and Port System

One of the nice advantages of the Ikelite A7 II, A7R II and A7S II lineup is that all of the camera bodies use the same magnesium alloy frame with almost identical button placement so one housing can be used with all three cameras with only slight modification. Ikelite recently announced a line of housings for the older Sony Alpha A7, A7R and A7S cameras which are

NOT compatible with the Alpha A7 II series housings. One of the major advantages of the Alpha A7R II over the original A7R is that the excellent specs for both video and stills allow you to use only one camera body and housing for two completely different tasks. The addition of 1/250 of a second flash sync and full electronic shutter are also welcome improvements along with the much improved auto focus system.

The Ikelite Alpha A7R II

housing is a completely new design featuring an opaque gray ABS-PC polycarbonate material for the front section of the housing with a transparent DSLR style polycarbonate housing back. This attractive gray housing color matches the Ikelite DS strobe line and drew lots of attention from other divers and photographers during my two weeks of testing.

The new color also shades the camera and provides extra protection from the sun during long boat rides. This is the first Sony Alpha A7 II housing I am aware of that supports TTL for the complete Sony A7 II series line of cameras when paired with Ikelite DS series TTL strobes. A direct electronic connection with Ikelite's single or dual sync cables is required for the TTL connectivity. Each housing has an integrated TTL encoding specific to the camera model which is tuned to Sony's exposure protocol.

The circuitry is sealed in a unit below the camera tray and includes a switch for TTL or manual use. The TTL unit is powered by Ikelite DS strobes and requires no maintenance or additional battery. Exposure compensation in TTL mode is also supported using the cameras built-in controls which can be accessed in several ways and assigned to different function buttons to suit the users needs. Other TTL strobes from

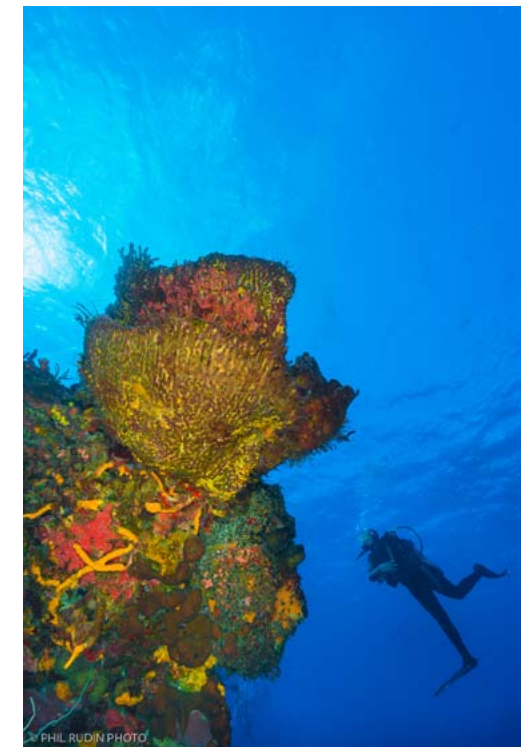


Nictes Ha Cenote, Sony A7R II, Sony FE 90mm Macro, ISO-125, F/8, 1/250th, Ikelite A7R II housing, Ikelite Macro port, Ikelite DS-161 strobes in TTL with dome diffusers.

Inon, Nikonos and Sea & Sea can also be used with Ikelite electronic sync connections but only in manual exposure modes.

The housing includes an aluminum tray, left-hand quick release rubberized grip with mounting threads for an optional right grip, port opening cover which locks in place using the four point port locking system, a waterproof bulkhead cap to protect the strobe cord socket when not in use, a micro fiber cleaning cloth, silicone O-ring lube, a one year warranty and

two universal zoom/focus gears. The first gear expands up to 2.8 inches in diameter and the second expanded to 3.3 inches. These gears come with neoprene pads of differences thicknesses which have a sticky side. The sticky pads are mounted to the inside of the gear depending on the diameter of the lens in use and then just slide over the lens focus/zoom ring being secured in place by four small springs. The sticky pads help prevent any damage to the lens and bridge the gap between different



Diver over sponge, Sony A7R II, Sony 16-35mm zoom at 16mm, ISO-125, F/11, 1/60th, Ikelite A7R II housing, Ikelite eight inch dome port, Ikelite DS-161 strobes in TTL with dome diffusers.

diameter lenses. These two gears can be used to cover a wide range of both Sony FE and third party lenses, the ikelite.com web site has a complete lens chart which is continually being updated as new lenses are released.

For the purpose of full disclosure I have reviewed dozens and dozens of cameras, housings, ports, strobes and U/W photo accessories which

I do not own for Underwater Photography magazine and several other publications. For this review I used a Sony Alpha A7R II and three lenses which I do personally own, in fact the Sony A7R II is my go to camera for both underwater and top side photography.

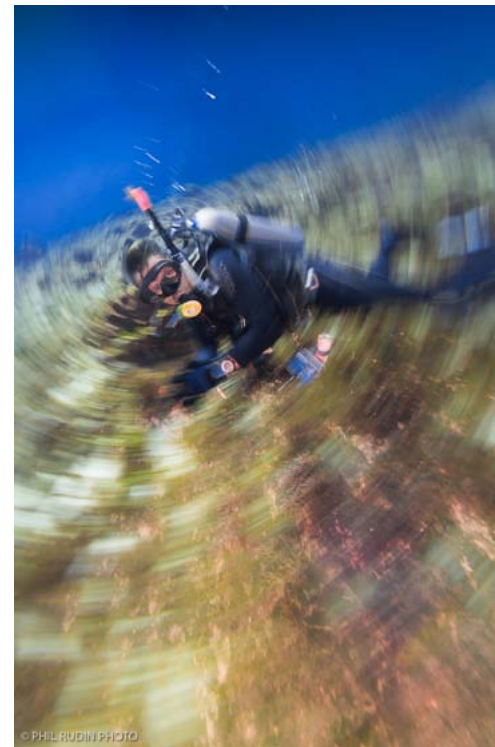
For my review I used three lenses the Sony FE 90mm F/2.8 macro G OSS, the Sony Vario-Tessar T* FE 16-35mm F/4 ZA OSS and the all manual Rokinon 12mm F/2.8 ED AS IF NCS Fisheye for Sony E-mount full frame. All three lenses are quite good and were able to handle the higher resolution Alpha A7R II (42.4 MP) sensor with outstanding results. The 90 mm macro is without question the sharpest macro lens I have ever used with any camera. Other lenses including the Sony FE 28mm with fisheye converter, Canon 8-15mm fisheye zoom and 100mm macros with adapter, Sigma 15mm fisheye with adapter and many more are all supported by Ikelite.

The Sony FE 16-35mm zoom produced sharp images using the Ikelite modular eight inch acrylic port and lens extension. I found best results with the 16-35 zoom fell in the F/5.6 to F/16 range. I have found that large acrylic ports tend to reflect the front of the lens back onto the sensor in direct sun light near the surface a bit more consistently

than optical glass ports. This was the case using the Ikelite port at or near the surface in bright overhead sunlight with both the 16-35 zoom and the Rokinon 12mm fisheye. For best results with the Rokinon 12mm I used Ikelite's shortest extension rather than the recommended Sony 16-35mm port extension. To use the all manual Rokinon 12mm I installed the smaller of the two included Ikelite gears for focusing the lens and set the aperture at between F/8 and F/11 prior to closing the housing. This lens has excellent depth of field at F/8 on the full frame sensor and I controlled exposure using shutter speed and ISO to balance lighting.

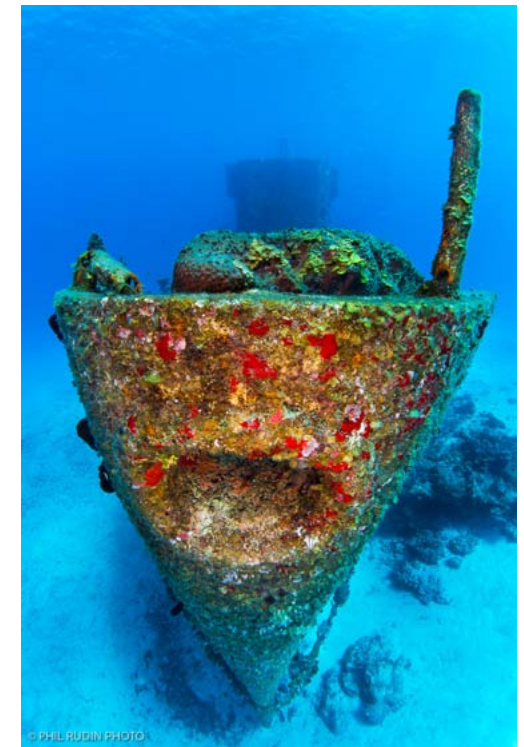
The Ikelite eight inch dome with both the 16-35 zoom and 12mm fisheye has a tendency to turn dome port up once in the water while it remained slightly negative overall with the configuration I was using. Over time this can become fatiguing to the wrist while holding the entire system with one hand. This has been a common problem with many systems I have tested using ports in the 170 mm and up range.

To install both wide angle lenses the camera first needs to be mounted inside the housing. This requires that you mount the assembled camera onto the camera tray using the provided tripod screw and slide the camera into the mounting plate. Be aware



Dive Master, Sony A7R II, Rokinon 12mm, ISO-50, F/9, 1/15th, Ikelite A7R II housing, Ikelite eight inch dome port, Ikelite DS-161 strobes in TTL with dome diffusers, Rear curtain shutter, spinning housing during exposure for swirl effect .

that the mounting plate has no lock so the best way to prevent the camera from moving is to point the front of the housing with the port side down until the housing is fully closed. The hotshoe then needs to be pushed ALL the way forward into the camera mount and secured using the rotary



-Felipe Xicotencati (C-53) bow section, Sony A7R II, Rokinon 12mm, ISO-200, F/9, 1/250th, Ikelite A7R II housing, Ikelite eight inch dome port, Ikelite DS-161 strobes in TTL with dome diffusers.

lock.

Once this is done the three lid-snaps can be secured using even pressure on all three at the same time for an even seal of the rear O-ring. Once the housing is closed the camera will not move and the lens and port can be mounted from the front. I keep

the front cap on the camera until I am ready to mount the lens to prevent the rather large sensor from collecting any dust bunnies. Make sure that the gear is properly mounted to the lens before it is installed on the camera again to prevent dust or worse from entering the camera body. Once the lens is mounted and the gear sleeve is aligned rotate the zoom control on the left hand side of the housing to be sure the sleeve is rotating properly. When the port is installed over the lens and pushed into place it will hold the zoom sleeve in place after the four port locks are depressed and locked in place.

Be aware that some lenses (including the 90mm macro) have a push/pull focus ring near the front of the lens which is pushed forward for auto focus. If you bump the focus ring into the manual focus possession while mounting the port the AF will not work so be sure to test AF before going into the water along with test firing the strobes. The 90mm macro modular port system I used has three sections, the flat port, an extension ring and the base mount which seals to the housing. All are thread together before being mounted to the housing. The system includes a strap wrench to disassemble these components which I found more than a bit frustrating for one person to hold and use. I would highly recommend Ikelite's one piece

5505.5 flat port for use with the 90mm macro to avoid aggravation. Ikelite flat ports do not come with a 67mm thread for accessory closeup lenses but a verity of after market mounts are available.

During my review I used two Ikelite DS-161 strobes with four Ikelite seven inch double ball arms, an Ikelite TTL dual sync cord and two Ikelite dome diffusers. The dome diffusers widen and soften lighting much like a small soft box for land photography. The dome diffusers worked well for both wide angle and macro shots. With the dome diffusers their was about a half of a stop of light loss which was not noticeable when using TTL for exposures. I left the strobes set on TTL during my entire two weeks of diving first in the Cenotes of the Yucatan and then the wonderful reefs of Cozumel Mexico. I find Ikelite's DS-161 TTL strobes to be among the best in the industry and they did not disappoint when used with Sony's Alpha A7R II camera and lenses.

I found the controls on the Ikelite housing quite ergonomic and intuitive. I shot using the LCD screen for focus and playback during my review period and found focus to be accurate in most cases using the LCD. I prefer using the Sony A7R II's excellent electronic viewfinder but I did not have an accessory enlarging viewfinder for



Ikelite system with eight inch dome port and dome diffusers.

my review and the pickup finder that ships with the housing does not do justice to the large EVF. I would recommend adding an optional Ikelite 45 or 180 degree optical viewfinder to the housing if you intend to use the EVF frequently. My biggest gripe with the housing is the lack of a back focus button control lever like the one used for the front shutter. Over the years I have programmed back focus as my main shooting configuration for high end cameras both above and below water. A back focus control

level is include on the new Ikelite Sony A6300 housing and it should also be included on the A7 II series housings. The back focus button can be controlled using a push button but the level style control is much more effective for me.

In the water I found the housing to be quite easy to maneuver and I felt in full control using one hand to hold the housing. The zoom/focus control is smooth and easy to reach with one finger. I controlled most setting changes like +/-EV strobe



Nicte Ha Cenote, Sony A7R II, Sony FE 90mm Macro, ISO-125, F/8, 1/250th, Ikelite A7R II housing, Ikelite Macro port, Ikelite DS-161 strobes in TTL with dome diffusers.

control and ISO from the large control display on the LCD accessed through the Fn button. This system makes the control changes very easy to see and it is easy to navigate through a number of control functions using the arrow buttons. For shutter speed and aperture control I used the front and rear control wheels. The housing back plate has a very nice screen shade that sticks out about an inch from the LCD and prevents ambient light from affecting the view of the LCD. A complete housing manual describing all of the controls can be found on the

Ikelite.com web site in the housing information area.

Image quality with this system is impressive at any ISO setting you would normally use underwater and resolution from the 42.4MP sensor allows a wide margin for cropping. What high res full frame cameras do not allow is any margin for error with focus and depth of field. Any mistakes in focus will be obvious in the high res image and no amount of post processing will correct the problem. I am not a video shooter so you will need to look elsewhere for reviews of



Downtown Playa Del Carmen Mexico.

video performance using this camera.

If you are seeking the very best in image quality and a full frame sensor camera with quality lenses is within your budget the Sony Alpha A7R II camera should be at or near the top of your wish list. All of the Ikelite Alpha A7 II and Alpha A7 series housings retail in the US for \$1500.00USD, the eight inch port is \$400.00USD and the macro port 5505.5 is \$200.00USD, port extensions are in the \$150.00 to \$200.00 range depending on the lens being used. The Ikelite system is attractively priced and a great value considering the \$3200.00USD price of

the camera body alone. Thanks to the Ikelite team for their assistance with the underwater equipment used for this review.



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