

Maintenance & Care

Check the o-rings with a magnifying glass for tears and scratches. When cleaning the camera equipment, make sure you have a clean and well organized working space



Ports/domes made of acrylic glass are easy to polish, but only on the outside. Never touch the inside, not even to polish



Dependable and well functioning camera equipment is the foundation of good pictures. This article gives you some hints and tips on how to maintain your equipment in flawless condition.

Some of the most important parts of your camera equipment are the o-rings. Without watertight o-rings there won't be any underwater photography. It

doesn't matter if they are made of neoprene, silicon or viton, they need to be in perfect shape.

Keep it clean

On every dive, the o-rings are strained by extreme forces as they are pressed against the grooving on the underwater housing, including water and the particles it contains. It is therefore just a matter of time before so many particles are left around the seals, that the camera housing starts to leak. To

Text by Kurt Amsler
Translated by Arnold Weisz
Photos by Kurt Amsler



Checking the TTL- function is vital. Just flash the camera. If the strobe flashes immediately and then recharges without delay, it's ok

In addition to the large o-rings on i.e. the lids, there are smaller but no less important o-rings on all bushings. These I recommend to be serviced about every 100 hours (underwater). This is usually only possible on more advanced camera housings. On simpler camera housings of synthetic material (except Sea & Sea) this is not possible.

Strobes/flashes

Your strobe/flash devices also need to have their o-rings serviced and cleaned. The pilot lamp is ideal for testing the apparatus. Test all flash settings. The recharge time should of course be longest by the strongest setting. All other settings should allow for quicker recharging. The TTL is best tested when you point the strobe directly into the lens and fire it. If the strobe flashes, but the pilot lamp doesn't come on, you have a circuit contact problem. The reason for such problems are often lack of maintenance. If the contact has

Maintenance

grease, moisture, or is oxidized, you will get a short, which will affect the controlling mechanism of the TTL. Always clean the contacts with alcohol, and keep a spare cable with you. Nothing is worse than finding the 'perfect shot' and then the strobe fails. To avoid such mishaps you should always test the batteries before entering the water. Battery testers are cheap and easy to buy. Some camera manufacturers inform you about the batteries' charge rates, but often just one flash can separate a red from the green light.

After diving

After every dive, you should always rinse the housings in fresh water. When you come home from a dive trip, you should always soak the housing/strobes 30 minutes in water containing white vinegar (about a teaspoon per litre). This is to dissolve all salt crystals. Then, repeat this twice without the vinegar for 30 minutes. After you have rinsed it off for the last

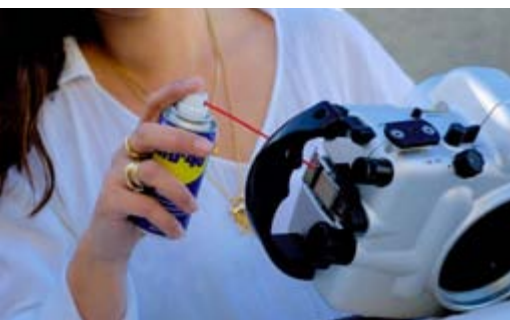
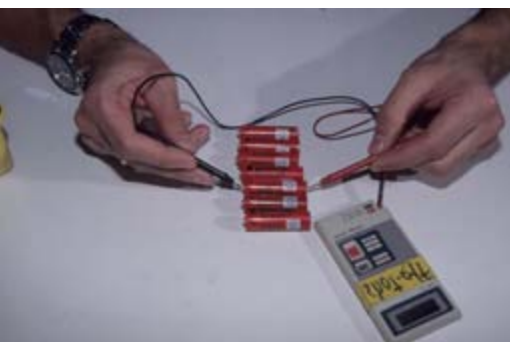


prevent this, you need to clean all the o-rings after every film-, memory card or battery change. Additionally, you have to grease the o-rings. Don't use any sharp objects to remove the o-rings. Use your fingernails. Have a close look at the o-ring, clean it with a paper towel. Never use cotton Q-tips, as they leave behind an 'anti-grease' surface, which eventually can lead to leaks.

on the silicone o-ring you risk that they are not flexible enough, which may lead to leakages. o-rings made from neoprene or viton can be greased with all kinds of grease, but silicone o-rings should only be greased with the grease that is recommended by the manufacturer. Otherwise, you may deteriorate the quality.

Greasing O-rings

Again, and again the questions arises about how much grease should be applied to the o-rings. The whole point of greasing the o-rings is to make it easier for them to slide into place as an increase in water pressure starts to work on the camera housing. Using neoprene and viton o-rings, only apply silicone sparsely. The o-ring may shine slightly, but there shouldn't be any visible grease on them. The silicone o-rings need three times as much grease, as they seem to absorb the grease. If you don't apply enough grease



Working batteries are essential. Cleaning tools: WD-40 spray and cleaning tissues



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time and dried it, you should apply all parts (metal, screws, shafts and bushings) with the anticorrosion formula WD-40. Remove all o-rings made of neoprene or viton and store separately. This prevents them from losing their shapes. Then, remove all batteries. Non-removable batteries should be charged. It is best if your charger has a trickle charge setting. Even though some divers feel that this kind of maintenance is time and labor intensive, it will be worth your while—and your camera will not give up when you have the 'perfect shot' in your frame.

Practical tips for maintenance and care:

- On a regular basis, clean all the o-rings after every film, memory card or battery change.
- The anti-corrosion formula WD-40 is perfect for protection of your equipment. Spray it on all metal parts to avoid salt depositing.
- Rinse your housing after every saltwater dive with freshwater. If you are not going to use the housing within the near future, soak the housing in freshwater to dissolve all salt crystals.



Maintenance

If you get at leak, nothing helps. Return to the surface and save the equipment

- Especially the humid and salty air near the ocean quickly affects the contact points and batteries on your equipment. Clean the contacts with either sandpaper or cleaning spray. You can also use an eraser.
- To keep a good working connection between the camera and strobe, regularly clean the contact points with alcohol. Often grease from the o-ring will get into the cables or contact points breaking the electric flow.
- To avoid surprises during a dive, always test the strobe, the zoom rings, and the shutter to assure faultless operation.
- Small scratches on acrylic ports can easily be polished off. On glass ports on the other hand, this is not possible. To avoid such scratches, always protect your domes/ports with a neoprene protector.
- To avoid a "memory effect" and to maintain long-life for your batteries, you should only recharge them when they are almost empty. Modern battery charges often come with a discharge function.
- To ensure that your batteries have sufficient power before you enter the water, you should always test them.
- Keep all your maintenance tools like silicone grease, o-rings, battery charger, battery tester, etc, in a small waterproof case when you travel.

Clean the contacts with a tissue and some alcohol

For workshop information, please visit Amsler's website at: Photosub.com ■

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ET DE CHRISTIAN ESTROSI,
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FSD-1100

Fantasea has released the FSD-1100 Housing for Canon's PowerShot SD1100 IS / IXUS 80 IS camera. Composed of durable injection molded polycarbonate, the compact, lightweight design offers full function controls along with double o-ring seals on all command control buttons. Other features include a radial o-ring main seal, new flash diffuser design, LCD screen glare protection, stainless steel buckles and a 46mm threaded port ring, suitable for a wide variety of filters and accessory lenses. The robust design allows for use in depths of up to 60m. A one-year free D.E.P.P flood insurance policy is also included. www.fantasea.com ■

Gates EX1

Constructed with "Bulletproof" machined aluminum and a black type III 'hard' anodize finish, the Gates EX1 housing for the Sony PMW-EX1 is engineered for discriminating professionals. From marine research and military to TV and movie productions, Gates housings are tasked with critical projects the world over. In addition to providing a perfect grip, the adjustable handles enable fingertip access to more than 20 different functions. Flexible trim weights can be added or removed for ideal buoyancy and control. Precision ports, along with the optional EM43 high-resolution monitor, afford the sharpest HD images. Each housing comes with a 2-year renewable warranty. www.gateshousings.com ■



Nikon unveils the 12.1 megapixel D700 digital SLR

Utilizing the same FX format CMOS sensor as the flagship D3, this 12-megapixel camera boasts features such as a built-in flash, Nikon's first self-cleaning system for the FX-format sensor, and a top ISO of 25,600. Especially notable for the underwater photographer is the large viewfinder. The five frames per second shooting speed can be boosted to eight with the addition of an external battery pack. Nikon's 51-point auto focus system coupled with two Live View shooting modes enables photographers to frame shots using the three-inch high-resolution LCD monitor. In addition, employment of Nikon's Picture Control System enables image adjustment to a series of preset parameters including Standard, Neutral, Vivid and Monochrome. These presets also allow easy image sharpening, tone compensation, brightness, overall tone and saturation. There is already a lot of speculation as to whether the D700 will fit into D300 housings. The D700 retails for US\$2,999. ■



Ikelite substrobe

A new and improved version of the popular D-125 strobe introduced in 2001, the Substrobe DS-160 is compatible with all Ikelite TTL systems and cameras ranging from Nikonos systems to the latest digital models. When utilized in either manual or TTL mode, recycle times are virtually instantaneous when fired at fractional power and a speedy 1.5 sec from full discharge. In manual mode, ten powers in half-stop increments allow for precise control over exposure. With minimal drain on the strobe's battery, the powerful 5-watt LED modeling light is ideal for focusing assistance or night diving. The concentrated beam automatically turns off and on when the strobe fires. Also included is a rechargeable NiMH battery pack, flash diffuser, and standard mount with through-bolt. The Smart Charger is available separately. An optional mount with 2.5cm diameter ball allows the attachment of the strobe to a TLC or Ultralight arm system. List price is \$840.00. www.ikelite.com ■

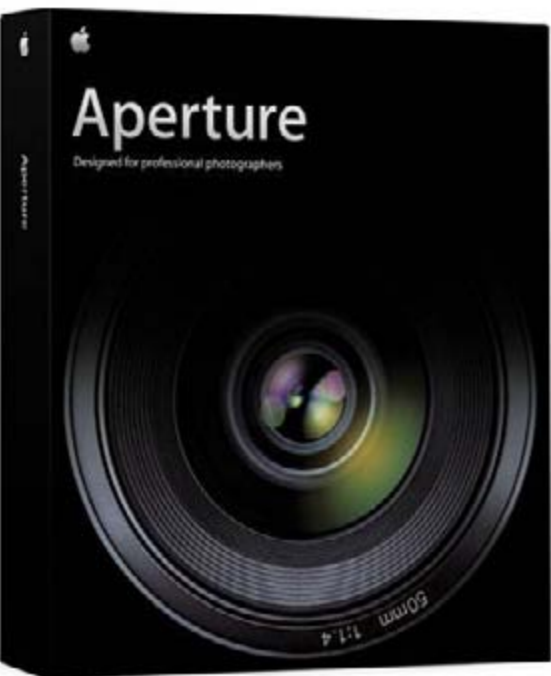
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New Aperture

With dozens of image editing and export plug-ins, automations and scripts, and third-party book and web themes available, Aperture's capabilities can be easily extended to access an entire industry's worth of imaging expertise without ever leaving Aperture. The page breaks down the add-ons into four categories. Image Editing Plug-ins adds a variety of specialized tools for noise reduction, selective adjustments, lens correction and much more. With Export Plug-ins, send photos to Facebook and photo sharing websites directly from Aperture. Automations & Scripts turn complex multi-step tasks into one-click operations that extend existing Aperture features and allow straightforward integration into a workflow that includes other applications such as Keynote, Mail or InDesign. Finally, Extras features third-party web and book themes offering a variety of creative design options that allow greater flexibility when presenting your photos in print and on the web. ■



Ikelite WP-80 Wide Angle Port

WP-80 Wide Angle Port is an interesting option for select Ikelite video housings. This represents the premium end of Ikelite wide-angle options and delivers the ultimate in resolving power, particularly important in high-definition applications. www.ikelite.com ■



Zillion housing

Japanese manufacturer Zillion has released a housing for Canon's EOS 450D. Named the ZAP-KissX2 (the 450D is named the Kiss X2 in Japan) is available in a wide assortment of colors and is brimming with features including AF frame select and Zoom, exposure compensation, metering select, easy direct/white balance select, AF mode select, playback and manual focus dial. The ABS resin/Acrylic resin/stainless steel construction is rated to depths up to 60m. Optical fiber cable connectors for strobes are built in. www.11.ocn.ne.jp/~zillion ■

DoF Calculator	
Values for Calculation	
Film Format	Canon DSLR
Focal Length	50 mm
Aperture	f/5
Distance	5 m
Depth Of Field	
Focus Distance	5.00 m
Near Limit	4.20 m
Far Limit	6.17 m
Total DoF	1.97 m
Hyperfocal Distance	26.16 m

New Depth-of-Field Calculator for iPhone

A new native application for the iPhone promises to help photographers take control of DoF (Depth of Field). The application is a DoF (Depth-of-Field) calculator, which allows you to calculate the depth of field of your pictures in advance of the next photo shoot. After you have set all required settings (camera, focal length, aperture, subject distance), the DoF Calculator calculates all the required information (near limit, far limit, depth of field, hyperfocal distance, depth of field in front of the subject as well as behind the subject, circle of confusion), which you can use for your perfect picture.

The DoF Calculator is available now through iTunes for US\$7.99 ■

Seatool

The new Seatool housing for the Canon Rebel XTi packs a lot of features into its compact size. The smallest and lightest underwater digital SLR system on the market, the XTi underwater housing fits the ultra compact Canon Rebel XTi camera like a glove. Loaded with full SLR features such as TTL, fast focusing, no shutter delay and a large LCD monitor, the camera delivers beautiful crisp images with minimal noise. For the traveller seeking a high-end yet lightweight carry-on system, the Canon Rebel Xti fits the bill. Price US\$2,299.00 www.backscatter.com ■



ULTRAccompact

The Ikelite ULTRAccompact digital housing for the Coolpix L18 is indeed compact and cool; it slips into your pocket to carry along on any adventure. Housing measures only 15.2 x 11 x 8.6 cm (6" x 4.4" x 3.4") including controls and port. Camera and housing together weigh under 0.66kg (1.5 lbs) above water and are nearly neutral underwater. All camera controls are fully functional through the housing and depth rated to 60m (200ft). Includes USB Cable, Audio and Video Cable, Strap, two AA Alkaline Batteries, and the Nikon Software Suite for Coolpix. www.ikelite.com ■



Underwater Australasia Photo Competition 2007-08 Winners

The annual *Underwater.com.au* photo competition is over, the judges have spoken, and we are ready to announce the winners of the fourth annual underwater australasia photo competition. As in every year, we have selected two winners each month until June 2008—one in the Open Category and one in the Novice Category.

Text by Tim Hochgrebe

3rd prize,
Novice category:
Larry Medenilla
with a incredibly
lit *Chromodoris* at
Anilao, Philippines

1st Prize,
Open category:
Matt Tworkowski
with a great
atmospheric
shot of stingless
jellyfish at the jellyfish lake, Palau, Micronesia

Thanks to all of you who contributed to this amazing competition. The quality of entries was even better this year, and we are looking forward to a great 2008-09 competition. If you didn't win this year, don't despair—continue to dive, take photos and submit them to us.

The prizes for our fourth annual competition were absolutely AMAZING! Thanks to all the sponsors of this competition.

We have seen over a thousand fantastic entries over the last year, and the winners of the 12 monthly competitions were in the finals to compete for very exciting prizes including a week dive trip for two at Lotus Hotels

and Resorts with the choice of Villa Almarik, Gili Trawangan, Lombok or Bali; a custom made dry suit from Apollo; a Taka live-aboard trip from Cairns; and a dive trip for two to the Tutukaka coast, New Zealand, with Poor Knights Divers in New Zealand.

A VERY big thanks to the judges, who included legendary underwater photographer Michael Aw and contemporary underwater artist Richard Vevers from Underwater Australia, as well as of course us, the underwater team.

Okay, now to the winners of the 2007-08 competition—drum roll please... ■





1st Prize, Novice category:
Larry Medenilla, with his super-close-up of
a Pygmy seahorse from Anilao, Philippines



2nd Prize, Novice category:
Caelum Mero, with *Take me to your
leader*, Point Franklin, Victoria, Australia

Photo Competition Winners



3rd Prize,
Open category:
Linda Johnston,
with a magically
mirrored juvenile
Orbicular Batfish
at Raja Ampat,
Indonesia



2nd Prize, Open
category: Peter
Hitchins from South
West Rocks, with
the ultimate shot of
Grey Nurse Sharks
in Fish Rock Cave