

DIGITAL PHOTOGRAPHY

skills °

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PACKING FOR DIGITAL I'VE SEEN IT ALL BEFORE. AND I'VE DONE IT MYSELF. YOU EMBARK ON A DIVE TRIP, AT GREAT COST, ONLY TO FIND ON ARRIVAL THAT YOU'VE LEFT BEHIND A SMALL BUT VITAL COMPONENT. I'LL NEVER FORGET SITTING IN A FIVE STAR HOTEL IN MAURITIUS, BADLY JET LAGGED, TRYING TO FIGURE OUT WHY MY STROBE ARM JOINTS WEREN'T IN THE CASE. RECENTLY I WAS TALKING TO A GUY WHO WENT ON A LONG COMPLICATED SHOOT FOR NATIONAL GEOGRAPHIC, LEAVING BEHIND AN ENTIRE CASE OF STROBES. SO WHAT CAN YOU DO TO ENSURE A STRESS FREE DIVE TRIP?

LISTING TO PORT Simple. Make a list, then use it. I've a dive trip list on my laptop which covers everything from drysuits to underwear, cameras to toothpicks, shampoo to antibiotics. Obviously the best time to start your list is well before you need it. Make yourself a cup of coffee (or similar brain stimulant) sit yourself down with a pad or computer and start to visualise. Visualise yourself ready to step off the back of the *Febrina* in Kimbe Bay. What are you wearing, from feet up? Fins, boots, lycra suit, weightbelt, BC, etc. Jot down everything you are wearing or carrying including gauges and other dangly bits. Then imagine what other things you'd need before and after the dive. Towel, hat, sunscreen, sunglasses, insect repellent, stubby holder, etc. Then visualise the non-dive stuff you'll need before you get there and after. Passport, money, clothing, toiletries, etc. Write it all down in groups; dive stuff, personal stuff, travel stuff.

Then attack the camera side of things. Again, you'll need to visualise your camera set up as you do the long stride off the back of the boat. What does your kit contain? What other things do you need to put it all together and prep it; o-ring grease, cleaning



Kelvin Aitken is a Melbourne-based professional photographer and diver passionate about the big blue and the big sea creatures to be found out there. He's dived from the Arctic to the extremes of the South Pacific and if there's a new marine dive adventure to be experienced or invented, he's always the first to put up his hand. He's also dived the southeastern Australian continental shelf and photographed shark species nobody knew would be found out there. Kelvin is a BBC Wildlife Photographer of the Year marine category winner and his unique work is on www.marinethemes.com

products, tools, repair items, spares, batteries, chargers, etc. Then think of all the other things you may need; power board, power adapters, rubber bands (don't leave home without rubber bands, a bit of gaffer tape, a spot of bluetack and some zip lock bags), back up discs, etc. Your travel and packing list will grow at a massive rate then taper off, but it will never finish. You'll always find something new to add or old stuff to delete. All my film related items are now gone, electronic doodads now feature heavily on my list. Give your list a practice run on your next club or personal dive day. You'll find that you'll need a slightly different version of your list for tropical, temperate and icy dive destinations. A lycra suit and water absorption packs may be no use in Antarctica (or Hobart for that matter) but you'd better have them packed for your trip on the *Febrina*.

A recent problem that will effect your list, or your implementation of it when packing, is the restrictions of air travel. Since the infamous September 11 attacks, airlines have gleefully used the opportunity to implement strict excess baggage restrictions and carry-on baggage restrictions. They don't want you to carry less but they do want you to pay for it. I've recently had my hand luggage weighed on both domestic and international flights. This tended to be a problem in the past only on small local 'puddle jumper' airlines but now, in an effort to maximise profits, you'll find your excess baggage bill may outstrip your ticket price. What this means is that you will need to pare down items which may impact on your baggage weight. For example, instead of packing 10 packs of AA batteries you'll find it cheaper to either buy them at your destination (if you have the time and opportunity) or switch to rechargeable batteries. Modern charging and battery technology enable you to use one charger in any country with varying voltage rates. All you need is the appropriate plug adaptor. To check what you need, try www.kropla.com which has all sorts of interesting information including a world electric guide and phone guide. If you're using large strobes such as Ikelite, Sea & Sea or similar, you can get the fantastic Ikelite Smart Charger which will charge a number of battery pack configurations, will not overcharge the packs and does its job very quickly. It is a touch bulky but very light weight.

Other weighty items such as some tools can also be left out for air travel. Large screwdrivers, wrenches, electric soldering irons, etc will usually be available on your liveaboard dive boat or at your dive resort. If your housing requires special tools you should include those, but there may be lighter alternatives. For example, if you need 4 or 5 allen keys, a single screw handle which takes small interchangeable tool tips is a much lighter and more compact alternative. That way you can have one handle which has all your allen key tips plus a phillips head and normal slot screwdriver head or two. But check before you leave that such a device can reach all of your allen key bolts. As mentioned previously, practice your packing and gear selection on local dives. Pack everything as you would for an air trip and assemble on location. That way, any deficiency will make itself known in a less expensive manner.

TRAVEL PROTECTION Protecting your expensive camera investment takes two forms – physical protection and insurance. If you have a small point-and-shoot digital camera with a compact housing (usually around the dimensions of a brick or 1/2 litre carton of milk) then you'll probably choose to pack them into your hand luggage. However, even then your backpack or bag may get a few hits, especially when Nigel Knucklehead decides to squeeze in 'just one more' hard edged bag into your overhead storage. Enter the miracle of bubble wrap – a single protective wrap of bubbly plastic stuff will go a long way in protecting your gear and it is reusable. Or hack up that old wetsuit and glue up a custom made 'sock'. Sonar Wetsuits have custom made protective covers for me in the past which look a lot more professional and won't break the bank.

Larger SLR housings may break down into smaller components by removing handles and splitting the housing. Even so, when you add a camera body and at least one or three lenses, your carry-on may not take the whole housing system, especially if the airline is doing carry-on luggage checks. Having said that, I've had a housing (without ports and handles), two camera bodies and various lenses, a laptop and more squeezed into a Lowe Pro backpack which worked out OK but obviously this will not pass if someone asks to check your carry-on. I've also carried a complete housing as a separate piece of carry-on baggage. Not ideal housing transport but you'll generally get away with it if push comes to shove.

However if you have an SLR housing you'll most probably need to purchase a hard case to pack your entire unit as this will include the housing, wide port, macro port, macro/wide extension rings, strobe arms, strobes, batteries, charger, tools,

etc. I use Pelican cases as they come with a lifetime warranty and they do work. If you break a clip or handle they'll replace it no matter how old the case. There are other brands which do the same job. The only problems I've had with hard cases is that they're slippery when stacking one on another (yes, I've had one hurtle off a luggage trailer at great speed because of this) and they're usually sealed so pressure changes can cause crushing. The solution to these issues is to slap a few strips of gaffer tape across the cases on both sides to provide a less slippery surface and to remove the air vent screw. Don't just loosen it, take it right out. You can put it back later to make the case



Life can get complicated. Making a list of all your gear will enable you to keep track of what to pack and what to leave out.



Lighten your baggage load by paring down on weighty objects. A multi-use handle can hold allen key, screw driver and phillips bits. Total weight is much less than all of the normal tools.

watertight if you think your boat is going to sink. Pelican cases come in various sizes. The smaller ones can take an entire compact digital camera and housing; the larger cases will take an entire SLR kit including strobes and accessories. Just remember that there are weight limits to individual pieces of luggage, 32kg in Australia and 50lb in the USA.

One thing you must conscientiously do every time you fly is make sure all waterproof containers are vented. Camera housings are designed to take lots of pressure but not from inside. If you have a sealed housing and you take it up 10 km it's obviously going to pop a seal – air embolisms and Boyle's law apply to housings as well. This can damage your housing, perspex housings may even crack, or an O-ring may be forced out of its seat guaranteeing a flood on your first dive.

Sealed items in checked baggage can explode. Ensure that on each sealed item, be that a torch, camera housing, sealed camera case, etc, there's an opening to allow air to equalise. Remove a port, take out an O-ring, open a seal. Just make sure you reseal before your first dive. I strongly recommend that you do a full housing O-ring lube and check before your first dive. Don't rely on any pre-trip assembly. Allow plenty of time to assemble your housing, strobes, torches, etc before your first dive. Rushing on housing prep is an invitation to disaster. I'm experienced enough now to know that an extra day (or more) at your destination before an important trip is a valuable investment. It gives you time to sort all your gear, re-hydrate and settle into dive mode, catch up on lost sleep and reset your body clock if jet lag is involved. Keep in mind that it takes about a day to adapt for each two hours of time change. There'd be nothing worse than a full camera flood and a case of the bends to ruin a perfectly good dive trip on the *Coolidge!*

When it comes to insurance, make sure you

read the fine print. Are you covered for water damage? Loss or damage in another country? Don't just rely on your house and contents insurance. The most contentious issue with insurance is not checking that you're covered for what you think you are covered. Personally I don't insure any of my camera equipment. As a professional photographer my premiums are automatically double or triple yours. I could buy an entire outfit each year with the premiums I'd have to pay for overseas cover so I take the regular floods and losses in stride. So far I am well and truly ahead.

DUSTY AND DIRTY One of the few disadvantages of digital over film is the accumulation of dirty bits on your sensor. It really is annoying to find soft dark fluffy bits and blobs on your digital files caused by dust or lint settling on your camera's sensor chip. Dust spots on your sensor show up more obviously in evenly toned light to mid toned areas such as blue sky, open blue water or light coloured areas such as white coral or areas of skin. SLR cameras are particularly prone to this because you're often exposing the chip to the open air when you change lenses. Also, while the latest zoom lenses may be semi-sealed, older zooms act like a squeeze box, sucking and blowing air in and out of your camera body as the internal lens elements move back and forth. With the air comes dirt, dust, skin flakes, moisture and other unmentionables. Due to the electrical current pulsing through your camera's sensor, any floaty stuff is immediately attracted to that delicate electronic playground behind the lens. Left for long enough, these little bits happily and contentedly build up an adhesion on the sensor that takes a jack hammer to break.

Please - never, ever attempt to clean your sensor. Send your camera to a professional with experience and training in sensor cleaning. Of course you'll ignore this warning, so let's see how you can minimise the damage. Most SLR cameras have a sensor cleaning mode. This only means that it locks up the mirror and opens any shutter or cover over the sensor allowing you access while the sensor is shut off from any electrical activity. (Exposing an active sensor, such as by activating the shutter when in 'bulb' mode with the lens off, can cause major damage to the light sensitive components!) With the sensor available to your probing, you can then begin causing massive damage to the sensor by rubbing it with a gritty tissue, blasting it with canned air and giving it a good 'huff' and rub with your 'clean' hanky. If you



Even if you're hand carrying, protection is needed. A hard waterproof case will offer the best physical security for your expensive camera gear.



Any light even toned subject, such as sky, open water or even the white side of your dive boat, will highlight dust on your sensor. Use a blower brush or give it to a professional. It is much cheaper than damaging your delicate electronic bits and pieces.

must do any of those things, don't tell me. I don't want to know.

Your sensor is a mass of tiny electrical light sensitive diodes or pixels. They'll be covered by a clear piece of optical glass or plastic. It's this cover that you'll be attempting to clean. The best method to clean your sensor, or more accurately, the sensor's cover, is to use a blower brush. Not canned air. Canned air contains liquid propellants which will just give your sensor a nice sticky coating to pick up all the dust that it missed the first time. Also, they provide a very strong blast of air which can sand-blast the surface or force dust and moisture (or any chemical propellant) between the glass cover and the sensors. When that happens the only solution is to pay lots and lots of money to have the sensor stripped and cleaned in a sterile environment. In other words, dump the camera and buy a new one. A gentle puff or three from a blower brush will remove any loose surface dust. Hold your camera upside down to allow gravity to aid in removing the swirling dust particles you have just disturbed. Never touch the sensor. Do not blow on the sensor. Do not cough, sneeze or breathe on the sensor. Did I mention using a trained professional to do this for you?

Close up your camera, attach a lens and take a test shot of a white piece of paper or blue sky. Open the resulting test shot on your computer. Enlarge to 100% and scroll around the image. Any remaining dust spots will be evident. Repeat the cleaning again, if necessary. If, after three or four attempts, the spots remain, you'll need to use a liquid cleaner. Again, did I mention using a trained professional technician to do this for you?

The best cleaning products I've seen and used are those made by Photographic Solutions Inc (www.photosol.com). Having said that, you won't be able to import the liquid cleaner due to it being a fire hazard. You may find a camera store with something similar. See the side links for camera repair and cleaning. Cleaning with a liquid is risky due to the highly probable event



Imagine yourself striding off the back of your dive boat. What gear do you need to be dive ready and what do you need to support your adventure?



Some situations are just waiting to mess with your camera. You don't need a flying whale. Any salt or dust saturated air, such as the back of a dive boat, will be sucked into your camera next time you pull off a lens, effectively forming a slight vacuum in front of your delicate sensor and dragging in all sorts of unmentionables.

of using too much so that some slips in between the sensor and the protective cover. Again, I repeat that you should get a trained professional to clean your sensor if a blower brush does not solve your dust problems.

If you have a camera without interchangeable lenses you'll have far fewer problems with dust as the camera is semi-sealed so is less prone to the dust-attracting activity of lens mounting and unmounting. On the other hand, any major dust problem can only be solved by sending it to a you-know-what to have it cleaned. Owners of SLR cameras can minimise dust problems by changing lenses in a clean environment. In practice this is rather difficult. When that whale is about to breach next to the boat, you don't think about dust as you frantically switch from a 300mm lens to a wide zoom. The fine coating of salt spray on the sensor is a small price to pay for a photo of an airborne 30 tonne whale!

VERY USEFUL LINKS

- Sensor cleaning:** www.photosol.com
- www.bushwalking.org.au/FAQ/FAQ_Photography.htm#CCD
- Camera repairs:** www.camera-clinic.com www.andersoncamera.com.au
- International Electrical Info:** www.kropla.com
- Lowe Pro camera bags** www.lowpro.com
- Ikelite Smart Charger:** www.capebyronimports.com.au/ikeliteprod.htm www.ikelite.com
- Pelican Cases:** www.casesbypelican.com www.carryitcases.com.au
- Insurance:** <http://www.photoinsurance.com.au>
- Qantas baggage:** www.qantas.com.au/info/flying/beforeYouTravel/baggageCarryOn www.qantas.com.au/info/flying/beforeYouTravel/baggageChecked www.qantas.com.au/info/flying/beforeYouTravel/baggageAddCollection
- Neoprene products:** www.sonarwetsuits.com.au/