

DIGITAL PHOTOGRAPHY

+ DUMP A BIG HOUSED CAMERA ON A DIVE BOAT AND YOU'RE UP FOR A BUNCH OF QUESTIONS FROM CURIOUS DIVERS. SOME QUESTIONS HAVE ANSWERS RANGING FROM "DUNNO" TO "THIS IS EXACTLY WHAT TO DO". LET'S LOOK AT SOME OF THE MORE COMMON QUESTIONS AND ANSWERS.

: KELVIN AITKEN ©2008 www.marinethemes.com

1 What housing should I get?

This is fairly easy. If it's a 'point and shoot' compact camera then generally your camera manufacturer will make one (or will buy them in from a third party) to suit your camera. Unfortunately with new camera models coming out every week you will probably find that your housing will only fit one particular model of camera so once you get a housing you'll be stuck with it for as long as the camera is doing it's job.

Housings for these types of cameras are cheap (compared to the metal housings for digital SLR camera bodies) so it's not a huge investment. They're almost always made of clear perspex, are light in weight and will allow you to access all the controls. But do take care of them. They will crack or have bits break off if you dump your tank on them, bang them against the side of the boat or treat them roughly. They also don't like sitting in the sun or travelling by air when fully sealed. The seals are designed to resist pressure from the outside, not internally, which can happen if the housing heats up in the sun or goes airborne. Take out the main O-ring seal when travelling and place two great big colourful rubber bands around the housing so that you know that the housing is not sealed. Obviously you would replace the seal before diving, during your pre-dive housing preparation.

For digital SLR cameras you'll usually buy from a third party, as opposed to buying one from the camera manufacturer. There are a number of companies that make metal (and sometimes perspex) housings for particular camera models. You may be fortunate enough to get one that will allow you to upgrade to the latest camera body in the same range as some camera model upgrades may only change internal features, leaving the controls in the same position.

Despite the advertising hype, the quality of the housings do vary between

manufacturers. Some are beautifully engineered, others less so. If a housing manufacturer has been in business for more than 10 years then they are doing something right. Things to check are:

a: How heavy is it? Not just the housing but all the bits and pieces, such as ports, focus/zoom rings, extension tubes, etc. With airlines checking and charging for every gram over the limit, a heavy system will inflict all sorts of ongoing costs.

b: How well is it engineered? Are the controls smooth and accurate? Remember that often you may be poking buttons and pulling levers with bulky gloves on. Is it well finished to avoid corrosion problems down the track?

c: Do they make extension tubes matched to your wide angle lenses (even if you don't have any yet)?

d: How are the ergonomics? Do all of the controls work correctly? Can you get at the main controls (shutter release, shutter speed control, aperture control) without taking your hands off the handles? (And yes, it definitely should have handles.)

e: Can you see the entire screen through the viewfinder?

f: Does it come with strobe bulkhead connectors to suit the strobes you have?

g: Does it have an audible moisture alarm? Unlike transparent perspex housings, metal housings hide any minor leaks so you cannot pick up those first few drops trickling inside. A moisture alarm will alert you to any minor problems before they become major problems.

Often the only way to check the above is to attend a dive convention with manufacturers showing their wares. In fact, to get a better idea of how good a



Metal housings are more expensive but will cater for the upper end of digital SLR cameras. They're more robust but are still subject to cracks if you bang them around too much. Check that all controls are accessible. Take particular note if the shutter release, shutter speed and aperture controls are accessible without removing your hands from the handles. You may find that you have to purchase an additional viewfinder attachment to see the entire viewfinder without having to move your head/eye around.

housing is you really have to use one in the field. While that may not be practical, you can always talk to those that have your camera model housed. There are a number of forums and blogs around that allow you to ask all your questions. Just be aware that there are a large number of armchair divers out there, so get a range of input before making any decisions to spend your hard earned cash.

2 We were on the same dive together so why are your photos (or anyone else's) so much better than mine?

While a good camera system is important, it's not the end of all things. The single most important thing you can do to improve your shots is to go out and take photos. Hundreds of them.

A recent study revealed that to be a good violinist you need to dedicate 10,000 hours to practice, no matter how 'talented' you are. In my experience, talented people tend to breeze along then give up when things get tough. Talent doesn't have anything to do with success without hard work. So go out and take 10,000 photos and learn from your mistakes. Chances are that the 'good' photographer is not any better than anyone else. They just have lots of practice under their belt so they know what will work and

what will not work in a given situation. They are probably hopeless at all sorts of things, including having no knowledge of playing the violin. But I bet even they would sound like an expert with 10,000 hours of practice.

3 My photos look great on the camera LCD screen but the prints look terrible. What am I doing wrong?

Well, the list of answers here can be pretty long. A good place to start is to look at the exposure. I was recently sent a batch of photos from someone who wanted some feedback on their technique. A quick look at the exposure information in my image browser showed that all were shot on auto exposure with available light. Every image was shot with the aperture fully open with slow shutter speeds (1/30th second or less). While the images 'came out', they were worthless. A quick check of the actual image file in Photoshop showed them all to be blurred by camera and subject motion with the depth of field measuring just a few millimetres.

Your LCD screen is rather small so is not very good at showing up such important faults. When the image is enlarged on a computer screen or printed on photographic paper, most of the faults will also appear. These includes colour balance and exposure. The LCD screens on the the backs of cameras are not an accurate judge of the final image file. About all they're good for is ensuring that the shutter actually fired. Where LCD screens are a great asset is when you view the exposure information and histogram, which is a good habit to start. You can even check this during your dive and not have to wait until you are home in front of your computer.

Once you've downloaded all the files, open them in your photo



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



There are a huge number of compact perspex housings available for many small 'point and shoot' digital cameras. A search of the internet using your camera model as a search term will quickly let you know if a housing is available for a particular camera model.



You might get away with this for a while but these small perspex housings can be destroyed fairly quickly. If you take care how you handle them they'll last for many years. Avoid knocking and banging them about and protect the front element from scratches. This researcher obviously has other things on his mind.

on the wall or in your dive log? If it is a simple need then a simple camera and housing will do the job. You might get away with spending a few hundred dollars all up. If you want to make big prints for the wall, wow your friends at the dive club, then maybe a camera with a higher megapixel rating and a decent lens will get you by. If you want to enter the cut throat world of commercial work, either as an artist or commercial seller of images, then you will need much better equipment, such as a high end digital SLR camera with quality digital lenses, dual strobes, a sturdy metal housing, and all the bells and whistles in the computer department.

So my answer to this question would be to think about what you want as an end product and make your decision based on your needs and budget. Frankly, modern digital cameras produce a great result. Frightening at times. When you consider that the average mobile phone has a digital camera far superior to the first \$50,000 digital cameras, then the main factor is not technology but what you want to do with it.

5 How can I stop people stealing my photos?

That one is simple. Once you've taken your photos, copy them onto a disc and put them in a bank safe deposit box and never use them for anything at all. Obviously that's impractical. But let's face it, with Facebook, Flickr, Google and modern computers, the chances of your image being used without your permission is almost guaranteed.

There are a few things you can do to protect your images. First, never upload an original image file at full resolution. Always downsize your photos to 72 dpi. That way any use will be restricted to display on computer screens as attempting to print off such a file won't look

editor and zoom in to 100% magnification. At that level each pixel in the image will be equal to one pixel on the screen which will give you the best view of the sharpness of the file. Remember that ALL digital files will need some unsharp masking or sharpening to be the best they can. If you're working from RAW files (which you should be) then exposure, colour balance and colour saturation adjustments will always improve your image.

As mentioned above, practice will make perfect – in both shooting and editing. With focus/sharpness, you may be able to zoom into the image file using your camera's LCD screen to check that all is well. It will never look perfectly sharp, due to the limitations of the small screen, but with a bit of practice you'll be able to tell when something is sharp enough or when you need to give it another go. If you're making your own prints, you may need to study up on printing profiles and colour management. It may sound daunting but an hour of reading on the web will get you up and running and solve most of your printing issues.

4 Which camera should I buy?

I have no idea. No more than which car you should buy, where you should live, what job you should have and who you should marry. OK, a camera is a lot less serious but the real answer to all of the above is: 'it depends'. It depends on what you want to do. As a basic guideline, think about these factors:

What do you want to do with the photos? Do you want a simple photo to email to friends, record the dive, stick a print



Practice, practice, practice. You may snag a winner now and then but without constant practice you'll never be consistently successful with your image captures. If the conditions are not optimal, that's no excuse to leave your camera behind. Shooting under all conditions in all seasons will make you better in the long run.

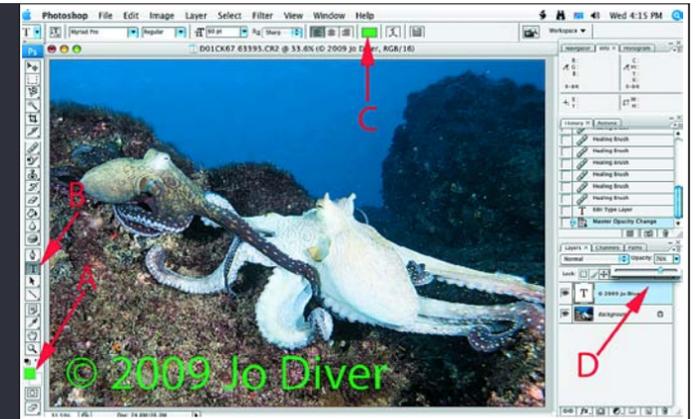
good. If you're concerned by copyright issues, then adding a watermark and/or copyright message to the image can help or at least make it difficult for anyone wanting to swipe the file. A good idea is to always add copyright information to the IPTC files of all images as a first step. You can make an Action in Photoshop to do this to all image files or add them to your RAW files. The data is stored in a separate 'sidecar' file so you should save and backup all RAW files with their sidecar xmp file as well. Then if the file turns up in a newspaper or magazine you can prove ownership and send a nice fat invoice!

Just as you'll never beat all those telemarketing calls, junk mail, or taxes, you can never guarantee that someone will not misuse your images, but you can limit the damage by taking basic precautions.

6 Where's the best place to dive?

This usually means, "where would you go to get the best photos to win a competition?" Your own backyard is a great place to start. All 'exotic' locations are someone's backyard so why not start with your own? A seadragon is an exotic

Adding a watermark in Photoshop is easy. I chose a lurid colour with the colour swatch (A) then selected the Text Tool (B). The colour I chose also shows up in the text options bar (C). If it's not the same, just click on it and select your colour. With the text tool selected, click on the image and start writing. On a Mac, the copyright symbol is created by typing in Option-G on the keyboard. Windows users have to hold down the Alt key then type in '0169'. You can also tone it down by adjusting the opacity of the text layer (D).



critter that people travel from the Americas or Europe to see, but you have them all along the temperate coast of Australia. Anemonefish? Common as dirt in tropical areas. Marlin, sharks, whales, dolphins? Those sorts of animals can be quite common offshore, they're just not seen very often at the local 'Turtle Reef' dive spot.

That said, there are places on the planet where critters do converge. The islands of the eastern Pacific are great hot spots (Galapagos, Cocos, Malpelo, etc) for big fish, sharks and pelagics. For colour, nothing beats the soft corals of northeastern Fiji Islands (Taveuni and surrounds), for small rare critters such as mimic octopus, anglerfish, etc, nothing beats the diversity of Asian basin from Papua New Guinea through Indonesia to Thailand.

If you really want to blow the socks off your dive buddies at the next club meeting, go to Tasmania or sell a kidney and dive in the Arctic or Antarctica. But really, there are so many amazing critters just down at the local beach, all you have to do is look.

7 Can you fix my camera?

No. But whatever your camera problem is, you can start with turning it off, remove the battery and memory card. If it's an SLR, then remove the lens as well. Put the lens back on, put in a new battery (or recharge the one you just removed), put in a new, empty, formatted memory card and try again.

If that doesn't solve your problems, then send it off to a qualified camera doctor.

> LINKS

Camera reviews:
<http://www.dpreview.com>
Access to underwater camera community:
<http://www.wetpixel.com>
<http://www.underwaterphotography.com>
<http://www.diveoz.com.au>
Camera repairs:
<http://members.optusnet.com.au/~w.c.rogers>

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It may look good on the LCD screen but without a bit of practice you may be fooled into thinking that all is perfect. To get an idea of what a sharp image looks like, open your files on your computer and find an image that is tack-sharp and another that's out of focus. Load them onto another card and insert it back into your camera. Select one of the images and zoom in (if your camera has that control) and see what a sharp image looks like. It will probably look a bit soft due to screen limitations but much sharper compared to the out-of-focus image.