



nce you have decided to give underwater photography a try, the next logical step is to purchase a camera. You want it to be compact, simple to use and to require low maintenance, yet be capable of reliable results. Actually, there has never been a better time to begin taking underwater pictures, because there are more choices than ever before; excellent

cameras that provide surprising quality at a surprisingly economical price.

To help you in your search for an underwater camera, we've put together a guide that will not only explain some useful photo terminology, but will also show you a good sampling of the easy-to-use, "point and shoot" cameras available. For more information, be sure to contact your local dive store and camera retailer.

DIVING'S POINT & SHOOT CAMERAS

BY JACK AND SUE DRAFAHL

BASIC PHOTO TERMINOLOGY

FOCUS FREE

While this really isn't a technical term, what it means is that you do not have to focus the camera. A point and shoot camera is focused at a fixed specific distance from the camera, and images are sharpest at that focus point and for some distance before and beyond it (this would be called the "depth of field," i.e. the total range of distance that will be in focus). If you get too close or too far away from the focus point, your pictures will be out of focus. This range of distance will be indicated either on the camera or in the instruction guide, or a closest and farthest acceptable range may be shown.

APERTURES AND F/STOPS

The amount of light that comes through the lens with these cameras will be solely controlled by the size of the lens opening, called the aperture. The larger the opening, the more light comes through the lens and hits the film. Some cameras have one fixed aperture size, while others have adjustable aperture settings. Each aperture size is given an assigned value, called an f/stop. Large f/stop values, such as f/22, indicate a small opening, while small f/stop values, such as f/3.5, indicate a large opening.

An adjustable aperture gives you more flexibility as you learn underwater photography; it means you can open the aperture up to take pictures in less light, or close it down to take pictures in brighter conditions.

SHUTTER SPEED

The shutter speed is the measurement, in seconds (or, usually, in fractions of a second), of how long the aperture remains open when a picture is taken. The point and shoot cameras presented here are similar in that they have fixed shutter speeds.

FILM AND DX

Color film comes in two general types, transparency (slide) film and print film. Print film is far easier to use because of its wide latitude, i.e. the range of light intensity it can be exposed to and still produce an acceptable image; slide film has little latitude.

Film is measured in ISO, referred to as the film speed. The higher the ISO, the "faster" the film and the less light is required for a proper exposure, and vice versa. Slower films, on the other hand, generally are more crisp (the "grain" is more fine) and have more color intensity. This means in bright, shallow conditions, you might use an ISO 100 or 200 film; if you are going deep or it is otherwise rather dark, you might choose a faster film, such as ISO 400.

Most cameras will be able to read the ISO of the film automatically, through a coding process referred to as DX. This will allow the camera to adjust its flash to accommodate the different films' light needs. Some cameras may also show an acceptable ISO range, which will be indicated on the camera or in the instructions.

ACCESSORIES

Once you understand the basic functions of the camera, you should also see what is available to enhance your future capabilities with the system. Does it have a close-up lens to allow photos of small things, or a wide-angle lens to allow pictures of larger subjects while being able to remain close to them? Does it have a sports finder, which allows you to aim the camera more easily, or a carrying case or additional strobe? These accessories may be important if you think you will want to advance your photographic technique beyond the basics.

AQUATICA MINI SPORT



Camera type: Precision cast, non-corrodible aluminum alloy housing for the Vivitar BV-40 35 mm camera

Lens: 28 mm, f/8

Focus: Focus-free, three feet to infinity

Shutter speed: 1/100

Built-in flash: Yes

Viewfinder: Built-in

Film speed: ISO 100-400 auto DX coding

Film advance: Motorized advance and rewind

Power source: 2 AA Alkaline batteries

Depth rating: 330 feet

Suggested retail price: Housing and camera \$279.95

Accessories: Close-Up Kit, Strobe Light, Handle and Tray

Complete system: \$489.95

Aqua Vision Systems, Inc.: (514) 737-9481

IKELITE AQUASHOT 3

Housing type: Polycarbonate housing for 35 mm single-use disposable cameras. Lenses not specified (all are fixed aperture).

Cameras accepted: Kodak, Fuji or Ikelite AquaSnap single-use 35 mm flash cameras; or Kodak single-use Funsaver APS camera

Focus: Focus-free, 3-6 feet

Shutter speed: Not specified

Built-in flash: Yes

Sportsfinder: Included

Film advance: Manual advance

Depth rating: 125 feet

Suggested retail price: \$90 (includes one Aquasnap camera)

Accessories: Macro Kit, Water Correction Lens,

Substrobe AQ/S, Travel Bag

Complete system: \$280



IKELITE AQUASHOT 3E



Housing type: Polycarbonate housing for reloadable camera

Camera accepted: Uses reloadable Fuji Endeavor APS camera

Lens: Not specified (fixed aperture)

Focus: Focus-free, 3-6 feet

Shutter speed: Not specified

Built-in flash: Yes

Sportsfinder: Included

Film advance: Motor drive film advance and rewind

Depth rating: 125 feet

Suggested retail price: \$100 or \$150 with Fuji Endeavor 10 camera

Accessories: Macro Kit, Water Correction Lens,

Substrobe AQ/S, Travel Bag

Complete system with camera: \$340

Ikelite Underwater Systems: (317) 923-4523;

www.ikelite.com

(ALL SPECIFICATIONS PROVIDED BY MANUFACTURERS)



BONICA SNAPPER

Camera type: 35 mm inner camera with polycarbonate housing

Len: 34 mm, f/8

Focus: Focus-free, three feet to infinity

Shutter speed: 1/125 second

Built-in flash: Yes

Sportsfinder: Included

Film speed: ISO 100-400 auto DX coding

Film advance: Automatic motorized advance and motorized rewind

Power source: 2 AA Alkaline batteries

Depth rating: 150 feet

Suggested retail price: \$149

Accessories: Close-Up Kit, Neon Strobe Light, Carrying Case

Complete system: \$499

Bonica Precision Inc.: (800) 220-8463;

www.bonica-precision.com

SEALIFE REEFMASTER AC

Camera type: 35 mm inner camera with hard Deep Dive Shell

Lens: Triple element, 35 mm, f/3.5 (fixed aperture)

Focus: Focus-free, four feet to infinity

Shutter speed: 1/140 second

Built-in flash: Yes, color correcting

Sportsfinder: Included

Film speed: ISO 100-200 auto DX coding

Film advance: Automatic advance and rewind

Power source: 2 AA Alkaline batteries

Depth rating: 164 feet

Suggested retail price: \$189

Accessories: 3X Close-Up Lens, Carrying Case

Complete kit: \$249; **external flash:** \$199



SEALIFE REEFMASTER CL



Camera type: 35 mm inner camera with Lexan housing

Lens: Triple element, 35 mm, f/3.5 (fixed aperture)

Focus: Focus-free, 3.5 feet to infinity

Shutter speed: 1/125 second

Built-in flash: Yes

Sportsfinder: Included

Film speed: ISO 200 auto DX coding

Film advance: Automatic advance

Power source: 2 AA Alkaline batteries

Depth rating: 164 feet

Suggested retail price: \$169

Accessories: 3X Close-Up Lens, Carrying Case

Pioneer Research: (800) 257-7742

www.pioneer-research.com

EPOQUE ET-100 PLUS

Camera type: 35 mm amphibious camera with high-impact plastic exterior
Lens: 34 mm, f/16-f/3.5 (adjustable aperture)
Focus: Focus-free, 2.6 feet to infinity
Shutter speed: 1/125 second
Built-in flash: Yes
Viewfinder: Built-in; sportsfinder is optional accessory
Film speed: ISO 100-400 auto DX coding
Film advance: Motorized advance and rewind
Power source: 2 AA Alkaline batteries
Depth rating: 150 feet
Suggested retail price: \$179
Package price: \$249 includes camera, Sportsfinder and Pelican case
Accessories: Sportsfinder, Close-Up Lens, Filters, External Strobe
RTS Inc: (516) 242-6801



SEA & SEA MX-5

Camera type: 35 mm amphibious camera with clear ABS molded polycarbonate exterior
Lens: Triple element, 28 mm lens, f/6.5 (fixed aperture)
Focus: Focus-free, 2.3-5.6 feet
Shutter speed: 1/100 second
Built-in flash: Yes
Sportsfinder: Flip up sportsfinder doubles as lens protector
Film speed: ISO 100 or 400 auto DX coding
Film advance: Automatic load, advance and rewind
Power source: 2 AA Alkaline batteries
Depth rating: 100 feet
Suggested retail price: Not available at press time



SEA & SEA MX-10

Camera type: Amphibious 35 mm camera with ABS molded polycarbonate exterior
Lens: Four element, 32 mm, f/4.5- f/22 (adjustable aperture)
Focus: Focus-free, four feet to infinity
Shutter speed: 1/100 second
Built-in flash: Yes, with two aperture settings (f/4.5 or f/11)
Viewfinder: Built-in
Film speed: ISO 100 or 400 auto DX coding
Film advance: Automatic load, advance and rewind
Power source: 2 AA Alkaline batteries
Depth rating: 150 feet
Suggested retail price: \$429
Accessories: Close-Up Lens, Macro Lens, 20 mm Lens, Lens Caddy, YS-40A Strobe
Complete kit includes camera and YS-40A Strobe: \$699.95
Sea & Sea Underwater Photography USA: (800) 732-7999; www.seaandsea.com



Now that you have done your research, the next step is to go out and get an underwater camera of your own. Then, go diving and give it your best shot. You'll find underwater photography to be so fun it's addictive, and you'll see your photos improving each dive.

You may find you'll want to improve your knowledge by taking a photo course at your local dive center or through one of the very enjoyable programs that combine dive vacations and photo instruction. You may also eventually want to learn about more sophisticated cameras that can extend the range and quality of your photographs. Regardless, once you start taking pictures underwater, you'll have discovered one of diving's most enjoyable activities.