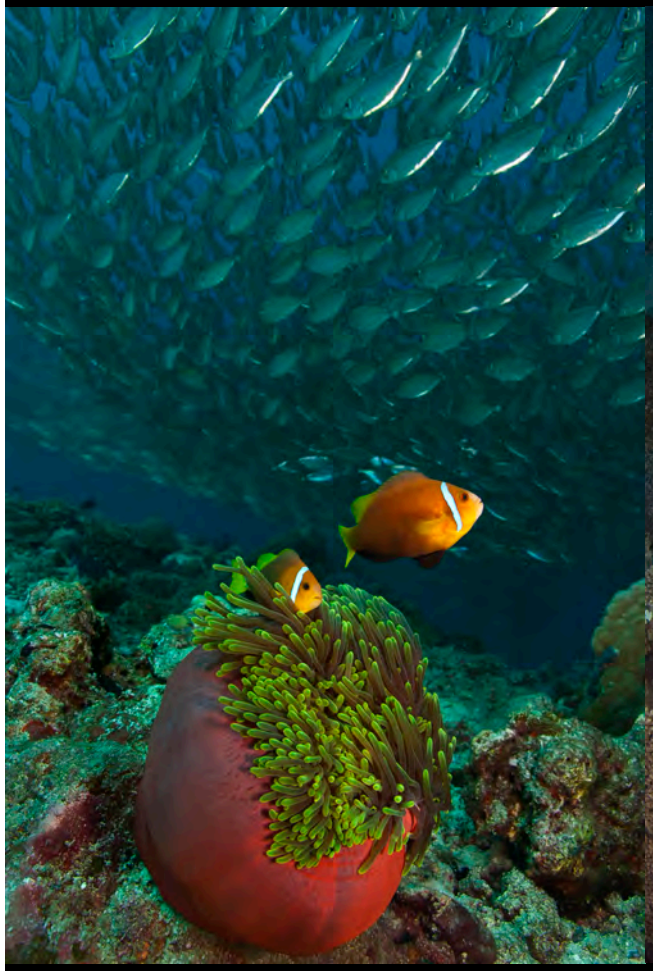
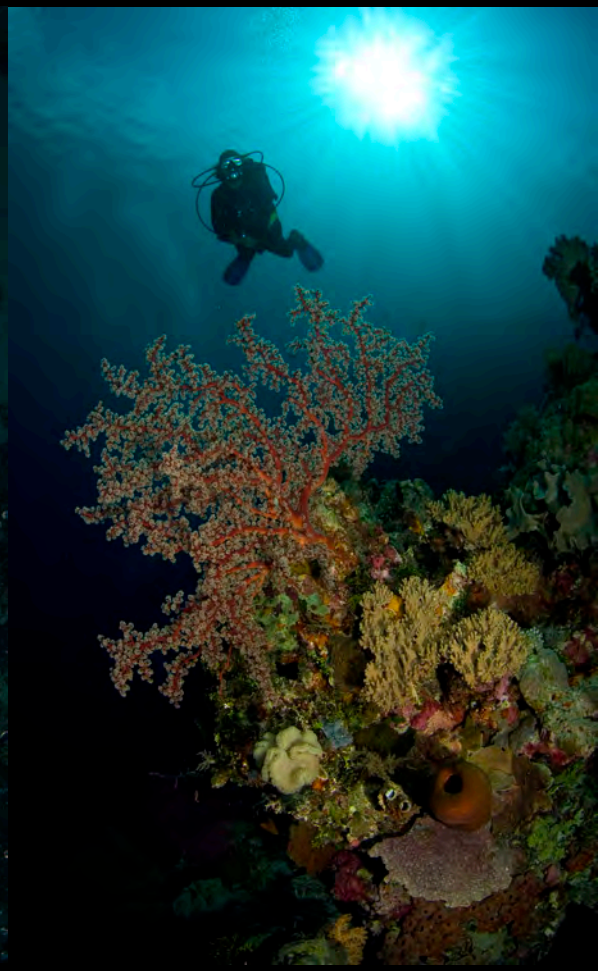
Basic Principles of Strobe Positioning

OPTICAL OCEAN SALES, LLC

UNDERWATER PHOTOGRAPHY PRODUCTS





Lighting and strobe positioning are arguably the major factors in capturing the rich colors and textures of the underwater realm. There are many different theories and techniques as to how best to creatively light a subject.

The goal of the following is to give a simple starting point for new photographers to work from.

Basic Glossary

Housing: The metal or plastic housing your camera goes into to be taken underwater.

Housing Port: The glass or acrylic fronted tube or dome on the front of your Housing. It is what your camera lens captures images through.

There are typically two types of ports.

A. **Flat Port**: Used for shooting medium to small subjects, sometimes referred to as a Macro Port. It typically looks like a tube with a flat piece of glass at the front.
B. **Dome Port**: As the name refers this port is Domed and used for Medium to Wide Angle subjects.

Handle: Some underwater housings have handles attached to them for easier use. Smaller housings sometimes do not.

Tray: For those Housings that do not have attached handles a tray and handle can be attached for more secure manipulation of the system. The tray typically is screwed into holes in the bottom of the housing where you would attach a tripod on a “dry-land” camera.

Strobe: Flash unit that lights subjects underwater. Strobes can be of many sizes, shapes and levels of light output. (Note: Those just starting out commonly buy the best camera and housing they can afford and have little funds left for lighting. It could be argued that great strobes will do more for your images than a great housing.)

Strobe Arm: Metal arm of different lengths that connect strobe to camera housing. Strobe arms typically have a round “ball head” on each end giving them a dumb-bell appearance. May also have a flat “YS” style spade mount for strobes or lights to mount directly to.

Sync Cord: Cord that allows the camera to fire the strobe. There are two types.

A. Electronic Sync Cord: uses the camera's strobe/hot shoe to send a signal to the strobe to fire.
B. Optical Sync Cord: uses the light from the camera's on board flash to fire the strobe. These are becoming the industry standard.

Clamp: Typically butterfly shaped device that joins strobe arms, strobes or light mounts together.

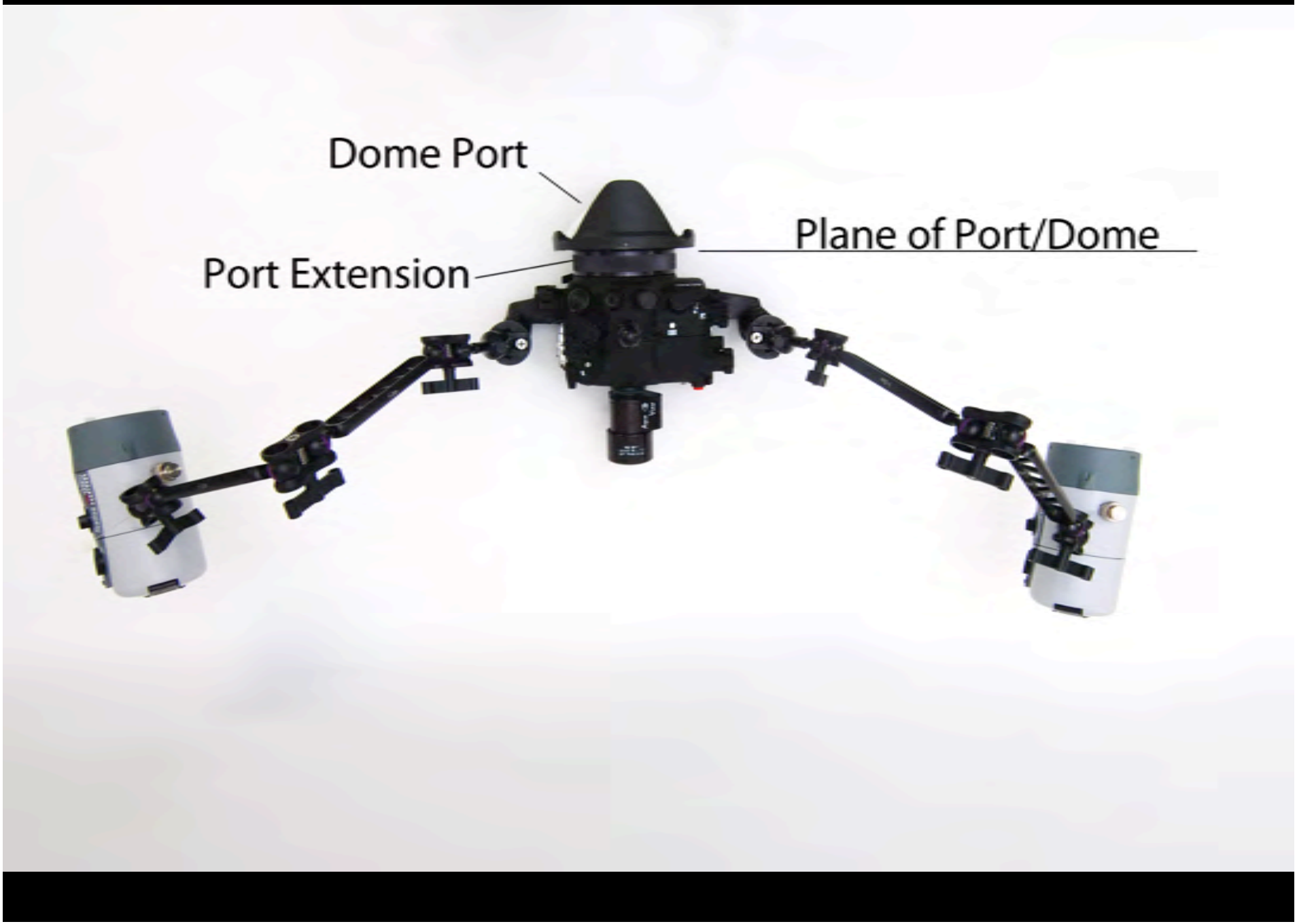
Macro Photography: Images of small subjects often less than 2 inches long. Anything smaller than 4-5 inches long would be considered macro photography.

Wide Angle Photography: Images of medium to large subjects. Can range from the typical angel fish to a massive ship wreck.

CFWA: **Close focus wide angle.** Typically employees the use of lenses 10mm to 20mm. The goal is to have your subject very close to take advantage of your strobes while showing the setting the subject is in. Example would be the "standard shot" of a diver looking at a fan, on the reef with the surface above and the sun ball shining through the surface.

Strobe Flare/Hot Spot: This happens when a combination of strobe placement and power causes a Hot Spot or Flare to appear in your image. A reduction in power and or moving the strobe "back" can eliminate this problem

Common Part Names


Dome Port
Plane of Port/Dome
Port Extension

Wide Angle Strobe Position to avoid "flares" at sides of images.

- When shooting wide angle with strobes at higher settings "flares" or "hot spots" can show up in the sides of the image. This is due to the camera picking up the light from the strobe.

- When shooting very large subjects with strobes at maximum power, the strobes need to be positioned behind the ***Plane of the Dome***. Better yet, behind the plane of the housing to avoid "flares" or "hot spots" on the edges of image.

- Note that even with strobe arms at maximum extension strobes should still be pivoted away from the housing to minimize backscatter.

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Pivoting Strobes “In” and “Out”

- **Image #1** is the “In” position
- **Image #2** is the “straight” or “parallel” position
- **Image #3** is the “Out” position

Note: with all three positions the face of the strobe is kept behind the plane of the Dome to avoid “hot spots” in the right and left edges of your image.

Two Strobe Macro Set-up

- When shooting macro with two strobes align the strobes parallel to the port. Pointing straight forward to begin with.
- Strobes can be pivoted in (towards the port) to increase light on subject.
- Strobes can be pivoted out (away from the port) to decrease light on subject.

- Shadows give more dramatic effects. Strobes can be moved vertically and horizontally to create shadows.

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One Strobe Macro Set-Up

- The closer the subject is to the front of the housing port the closer the strobe is positioned to the port.

- A good starting point is with the strobe centered directly over the port as in image #1.

Single Strobe Wide Angle

- Keeping the strobe pointing straight forward, as the distance between the port and the subject increases extend the strobe away from the housing.

- The strobe can be moved vertically to light the subject from “above” in a more natural manner.

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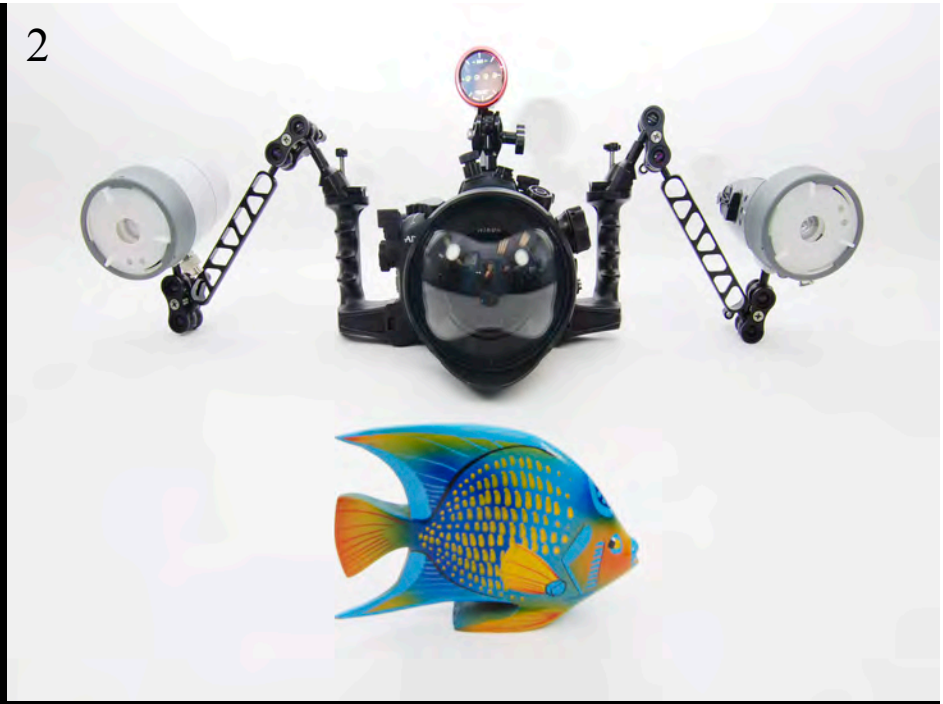

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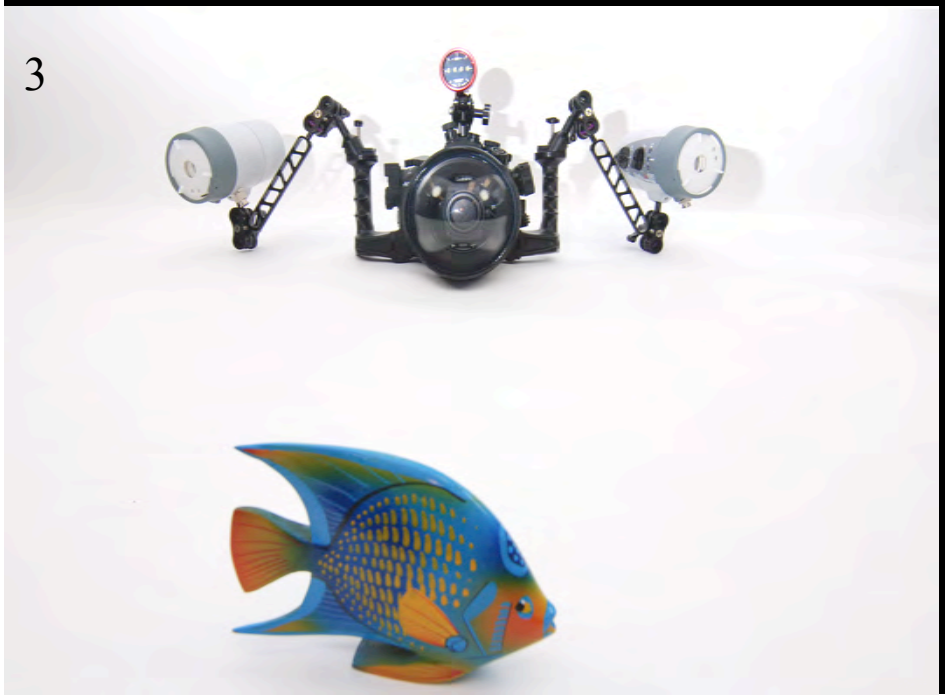

Two Strobes:
Using One Strobe Arm Per Side

- Strobe arms do not move.
- Strobe's face should be behind the plane of the dome port.
- Strobe pivots out, away from port, as the distance to subject increases.
- Image 1: Macro
- Image 2: Medium
- Image 3: Wide Angle

Two Strobes: Medium to Wide Angle

- The closer the subject is to the port the closer the strobes should be to the handles.

- The farther the subject is from the port the farther the strobes move away from the handles.

- The farther from the handles the strobes are positioned, the higher they typically move vertically. In this image the strobes are about at the maximum height recommended.

Two Strobes: Wide Angle, Vertical Subjects

- Strobe positioning good for shooting walls, wrecks and very vertical landscapes.
- Strobe position useful for CFWA shots.
- In both examples the bottom strobe is positioned to light the main subject that should be within 1 meter of the photographer and in the “bottom” of the frame.