

Canon HFS30 HD Video Camera with Light & Motion Bluefin S30 Housing & SOLA 1200 LED Lights

Standard Operating Procedure (SOP)



EPA Region 10 Dive Team

Store this document in black digital video pelican in dive locker
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BEFORE YOU LEAVE THE DIVE LOCKER

2 Days Before:

Charge ALL batteries: Charge all batteries in main black pelican (1 of 2)

- **Camera:** Charge 2 extended capacity into 7.4v 1520mAh lithium (1 is a spare), use camera's basic charger via camera itself and Pearstone compact charger. Check battery status on each battery. Charge both extended life batteries before a dive operation (approx 4-6 hours).
- **Housing:** Charge the 4 (AA) NiMH batteries in monitor back for 12-14 hours. Also charge the 4 spare (AA) NiMH batteries as well. There is a dedicated blue 4 (AA) charger in the pelican for this.
- **Lights:** Charge each of the SOLO Video1200 Light pods with supplied Lion smart charger for 150 minutes or more for full charge, 60 minutes for 75%.

Check SDXC Card. Ensure that both 64GB SDXC chips are installed, cleared and initialized for recording in slots A and B. Close SD slot door. There is no tape in this camera.



Mic Cable



Monitor Battery

1 Day Before:

1. **Check condition of both o-rings** between housing body & housing back plate.
2. **Check camera's video and still settings** are set to "Dual Mode" on the right side of the housing set the switch to the green dual shot mode, not "M".
3. **Set camera's clock and sync with GPS device (ONLY for projects when using GPS Raft).** Take Garmin 60csx and camera outside, get a fix, then take a photo of the GPS clock. This provides needed information for geolocating photos.
4. **Verify all 3 housing cables** are plugged into corresponding locations (see blue tape on cables for each; AV, Remote, and Narration MIC). Ensure to orient the narration mic cable to not snag or scrap pot plug on the housing as the camera slides by the plug. Also make sure the narration cable is not in front of the lens interfering with the video. Face LCD viewfinder outward (see photo on last page).
5. **Slide tray into main housing assembly until latch lock slides into place; you may need to manually push latch down to secure tray in place.** Now install housing rear back plate onto main housing assembly. Use two hands to rotate each compression **clip slowly and evenly** until clips click into place. Ensure spring-loaded sliding locks located below the clips spring into place
6. Attach lights to snake-like black flexible light stands located in black pelican (POP INTO PLACE), then attach to camera's body (TWIST LOCK)
7. Take a short test video & picture to see if the camera is configured properly, SDXC memory cards are blank, and lights function properly when activated (see operation section). **It is OK to test LED light pods out of the water. BEWARE: THEY ARE VERY BRIGHT**

AT THE DIVE SITE

Testing for Leaks:

Submerge camera (in housing) in cooler and check for leaks, make certain that housing rear back plate, cables, and lens, are snugly and securely connected.

Operation: (with camera in housing)

Turn on: Press the ON button for about half a second and release.

Taking video:

Press the red (ON/Mode) button on rear back plate. Camera and monitor will turn on and is ready for recording. The Record button is the white solid circle button on right grip. This is how you start and stop recording. The other buttons on the grips are explained below in the "Controls" section below. **CHECK THAT THE RED LIGHT (record light on LCD) IS NOT ON ACCIDENTALLY WHILE DIVING. BUTTON IS SENSITIVE.**

Taking still pictures:

Press the "Photo" button (it's a picture of camera) on the left grip. The camera button must be held down until the picture is auto focused, then taken. The LCD screen flashes to confirm photo. This takes 1-2 seconds.

Navigating Menu:

Leave the camera in the "Dual Shot" that it is in. It is not possible to change mode without removing the camera from the housing.

Powering Down:

Press AND HOLD "ON/MODE" button for 3 seconds on the back of the camera housing.

ABORT DIVE IMMEDIATELY AND SAFELY IF ANY OF THE FOLLOWING ARE OBSERVED:

- Moisture Alarm Led flashes red/green
- Camera ceases operation or lights abruptly turn off
- Housing hatches appear loose
- Droplets are visible on any housing port.

Controls:

Left Smart Grip Controls

- Far - Moves focus point further from camcorder.
- Near - Moves focus point closer to camcorder.
- Photo - Records still video capture to Memory Stick (in either mode).
- Light - After initial power up from battery pod, cycles Elite Lights through three output levels. Press and hold for three seconds to turn lights off.
- Photo Dis. - Non-operational

Right Smart Grip Controls

- Tele - Zooms camcorder to telephoto.
- Wide - Zooms camcorder to wide angle.
- Rec - Toggles camcorder between record/standby.
- AF/MF- Not used in "Dual Shot" mode

Rear Plate

- ON/Mode - Turns the camcorder one quick push and off (hold for 3 seconds)
- REC - Status light; doesn't work, this is always green
- Moisture Alarm - Led will flash red/green and housing will beep if moisture is detected inside the housing. Note: During camera power up phase or when installing rear plate, moisture alarm will beep and flash indicating a diagnostic check.

Housing Left Side

- Photo - To take a photo hold this down for about 1 second
- All others- Not used in "Dual Shot" Mode
- Lights- Controlled by switch on light pods individually

NORMAL CLEANING PROCEDURES

Immediately After Diving:

Soak the camera (in housing) in FW (If unavailable, use seawater) on the dive platform. Soak in between dives and before cleaning to prevent salt crystal formation.

In Dive Locker:

1. Rinse camera to remove dirt & saltwater if not done at the dive site. Press all the buttons on housing to free up any residual salt water to prevent crystallization while either running fresh water over the unit or soaking it. Place on towel to dry
2. O-ring Care & Maintenance:
 - The sealing system used on the rear plate incorporates two O-rings. This is the most critical area of the housing for maintenance and should be inspected after every dive. In addition inspect and clean the lens O-ring as well/remove, dry.
 - Make sure the O-rings and the mating surface on the inside of the main housing are free of grit, hair, lint and anything that could potentially breach the O-ring seal. To remove O-rings, use finger pressure OR a paper clip rounded end to lift the O-ring out of the groove.
 - Clean the groove with a lint free swab or the folded edge of a paper towel.
 - Apply thin layer of O-ring grease to all O-rings

Storing Notes:

Store housing and travel case in a dry location the first 24 hours after a dive. Leave the rear back plate on the housing, but not latched to allow for air circulation. This can be accomplished by aligning and partially connecting the rear back plate to the housing, **but only rotate latch locks a quarter turn**. Similarly, leave travel case lid about two inches open. Store with lens removed from housing. Slide the tray (with camera attached) into housing until locked into place. Detach monitor and lights, let dry and place in black pelican. Store with battery pods attached to housing, but make sure to rinse and clean with cotton swabs if necessary any dirt or debris that may be lodged underneath housing. Place battery pod hatches in a bag during storage. Allow any residual water to evaporate from the travel case prior to storing the housing.

Flooded Housing First Aid:

- Shake the housing & camera over a paper towel to see if water drops are still present.
- Wash any saltwater out of the camera with fresh water, preferably distilled. Avoid the electronics unless they were flooded. **DO NOT USE alcohol or silicone.**
- Dry with a towel and then carefully use a hair dryer.

Relevant configuration settings:

Video:

- Record to Memory Card A then B
- Recording Mode MXP, 24F
- AF set to Instant AutoFocus

Photos:

- Record to Memory Card A
- Super Fine SLW (3264x1840),
- Flash is taped down on camera to prevent autoflash from washing out digital still photos taken (see pic to right)

Other:

- Wireless Remote Control "on" (for viewfinder),
- Power saving mode on
- External Mic on
- HDMI output on

Face LCD outward while installing!

