

DeepPIV on 17 Aug 17 Deployment # 7 Checklist

v 6.0.0

02 July 17

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Dive Objective: _____

Deployment Date: 8/17/17

Recovery Date: 8/17/17

Person performing topside checklist: K Thomas

Pre-deployment alignment:

- Step
1. Verify that DeepPIV laptop and peripherals are connected (Ethernet, usb, mouse, monitor, AJA/Shogun recorder)
 2. Power up DeepPIV
 3. Open Sony Camera Software and modify camera settings
 4. Verify laser and camera alignment
 - a. Place protective shroud around DeepPIV instrumentation
 - b. Remove protective covers on laser and camera housings
 - c. Check that housing markings on laser and camera housing are aligned
 - d. Power up the laser
 - i. Rotate the dial to 2 V in Laser dialog tab
 - ii. Record output of ADC: _____
 - iii. Measure laser power: _____
 - e. Using focus board after attaching to laser housing, ensure
 - i. Laser sheet and camera axis are aligned: _____
 - ii. Laser sheet is aligned with camera plane: _____
 - f. Power down the laser
 - g. Replace protective covers on laser and camera housings
 - h. Remove protective shroud from DeepPIV instrumentation
 - i. Close Camera software
 5. Power down DeepPIV

Pre-deployment:

- ✓ 1. Verify that DeepPIV laptop and peripherals are connected (Ethernet, USB/serial, mouse, monitor, AJA/Shogun recorder)
- ✓ 2. Power up DeepPIV
3. Run predictive test program and verify correct operation of the following systems:
 - ✓ a. DeepPIV camera (ISO, shutter speed, f-stop, record)
 - ✓ i. Open Sony Camera Software
 - ✓ ii. Change camera settings
 - ✓ b. DeepPIV laser
 - i. Power up the laser, rotate the dial to 2 V

- needs post connecting.*
- ii. Record output ADC: 2.02
 - iii. Measure laser power: 2038
 - ✓ c. AJA/Shogun HD recorder (record, stop, playback)
 - i. Change file names to correspond to deployment number
 - ii. Record sample footage of ROV science and DeepPIV cameras
 - ✓ d. Dye injector/vortex generator (disconnect tubing if dye injector being used, move piston, reset piston, set different increments)
 - i. Note COM port on ROV: _____
 - ii. Note COM port on Serial-to-USB converter (either 1/2): _____
 - iii. Open ELMO Controller software
 - iv. Direct connect to motor
 - v. Set baud rate to 19200
 - vi. Set COM port (either 3/4): _____
 - vii. Connect
 - viii. Use Velocity Mode, hit stop to prevent dye leakage
 - ix. Set speed to 100 rpm and hit go, stop; reverse direction, go, stop
 - e. Sizing lasers
 - ✓ 4. Sync all components (including Science and DeepPIV camera) with ship's NTP and record video on both cameras of timestamp (using time.gov if NTP not available)
 - 5. Check that all cable connectors and dummies are installed and tight
 - 6. Check that all dye/vortex generator tubing is installed and tight
 - 7. Open all dye valves and connectors
 - 8. Remove protective covers on laser and camera housings

Deployment:

1. Deploy ROV, noting exact time and position of launch.
 - a. ROV launch time: 09:40 PDT
 - b. Latitude: N 36 42.247 deg
 - c. Longitude: W 122 2.7959 deg
2. Record time it takes for ROV to submerge: 1 min
3. Dive plan: refer to _____
4. Start AJA/Shogun recorder when event of interest occurs; stop when finished

Recovery:

1. Record the time that ROV is on deck: _____ PDT
2. Power down DeepPIV
3. Close all dye injector/vortex generator valves
4. Rinse instrument housings and attachments with fresh water
5. Replace protective covers for laser and camera housings