

DeepPIV on MiniROV Deployment #? Checklist

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K. Katija

Dive Objective:

Deployment Date: 08.08.15

Recovery Date: 08-08-15

Person performing topside checklist:

KAZANI KATIJA

Pre-deployment:

1. Ensure that comm and power systems on MiniROV are functioning normally.
2. Align the laser and camera
 - a. Attach protective shroud and cloth to MiniROV's body
 - i. Zero digital level based on orientation of MiniROV sitting on deck
 - ii. Verify alignment of shroud using a digital level
 - iii. Record digital level reading on shroud: _____
 - b. Enable Tilt and Laser controls in LabVIEW
 - c. Zero the Science Camera
 - i. Click Zero button in Tilt dialog tab
 - ii. Click Home button in Tilt dialog tab
 - iii. Record digital level reading on camera: _____
 - d. Remove laser housing protective cover, and put on protective goggles
 - e. Power up the laser
 - i. Rotate the dial to 1.5 V in Laser dialog tab
 - ii. Record output of ADC: _____
 - f. Verify that laser sheet is perpendicular to Science camera
 - i. Measure angle of laser sheet on shroud using a digital level
 - ii. Record digital level reading of laser sheet: _____
 - g. Power down the laser
 - h. Replace laser housing protective cover
3. Remove protective shroud from MiniROV.
4. Secure protective shroud on deck of ship.
5. Run pre-dive test program and verify correct operation of the following systems:
 - a. MiniROV LED lights
 - b. Science camera (adjust zoom, focus, shutter speed, and IR filter settings)
 - c. AJA HD recorder (record, stop, playback)
 - d. Dye injector/vortex generator (disconnect tubing if dye injector being used, move piston, reset piston, set different increments)
 - e. Sizing lasers (measure separation at multiple distances)
6. Sync all components (including Science camera) with ship's NTP
7. Start MiniROV dive log
8. Initialize Giancarlo's CTD/DVL logging code
 - a. Double click on launch_procMAIN_miniROV.sh
 - b. Enable LOW COST, NAV SENS, and DVL on MiniROV's window
 - c. Start all drivers (ctrl+s on "drivers")

- ✓ d. Verify that RTI-DVL (DVL output), VN-100 (Giancarlo's sensor), and miniROV-NMEA (survey out) is functioning normally
- ✓ e. Start all loggers (ctrl+s on "loggers")
- ✓ f. Verify that lcm_logger is functioning normally
- ✓ g. Start all navigation (ctrl+s on "nav"; UUV-KF not expected to work)
- ✓ h. Start all viewers (ctrl+s on "viewer") to see DVL and dead-reckoning output
- ✓ i. Stop logging data (ctrl+t on "viewer", "nav", and "loggers")
- ✓ j. Stop all drivers (ctrl+t on "drivers")
- ✓ k. Check that all cable connectors and dummies are installed and tight.
- ✓ l. Check that all dye/vortex generator tubing is installed and tight.
- ✓ m. Open all dye valves and connectors.
- ✓ n. Remove laser housing protective cover.
- ✓ o. Check that the MiniROV tool sled is secure.
- ✓ p. Check for tools left on and in MiniROV frame.
- ✓ q. Remove MiniROV hold-down straps.

Deployment:

- 1. Start Giancarlo's CTD/DVL logging code
 - a. Start all drivers (ctrl+s on "drivers")
 - b. Start all loggers (ctrl+s on "loggers")
 - c. Verify that lcm_logger is functioning normally
 - d. Start all navigation (ctrl+s on "nav"; UUV-KF not expected to work)
 - e. Start all viewers (ctrl+s on "viewer") to see DVL and dead-reckoning output
- 2. Start AJA recorder
- 3. Deploy MiniROV, noting exact time and position of launch.
 - a. MiniROV launch time: 22:21 GMT PDT
 - b. Latitude: N 36.44.81 deg
 - c. Longitude: W 126.4152 deg
- 4. Record time it takes for MiniROV to submerge: 22:31 GMT
- 5. Dive plan: refer to document?

Bruce's pre-dive } bathos 3DR 4 PIV

Recovery:

- 6. Check that the laser is powered down.
- 7. Change the Science camera settings (focus and others) to auto and zoom to wide.
- 8. Stop Giancarlo's CTD/DVL logging code (ctrl+t on all options)
- 9. Complete MiniROV dive log
- 10. Stop recording video with Aja
- 11. Recover MiniROV.
- 12. Secure MiniROV and DeepPIV on the ship deck.
- 13. Record the time that MiniROV is on deck: 10:21 PDT
- 14. Close all dye injector/vortex generator valves.
- 15. Replace laser housing protective cover.