

# Wave Glider – SV3 Pre-Launch Checklist

Date / Time 6/24/14  
 Technician(s): Kiet / Coenen

Project: Rover  
 Ship / Op Area: Montana Bay South Ridge

**Cycle Power on CCU Prior to Pre-Launch Checks. Ensure Auto Avoidance settings = 0, and no check in WSS: assume in water**

## Vehicle / WGMS Configurations

| Item/Procedure                 | Readings      | Specifications  | Initials |
|--------------------------------|---------------|-----------------|----------|
| SV3 WGMS Name                  | <u>Tiny</u>   |                 |          |
| Float Name                     | <u>Tiny</u>   |                 |          |
| Glider Name                    | <u>Tiny</u>   |                 |          |
| Thruster Serial Number         | <u>V54163</u> | Hardware ID     |          |
| Onboard Server WiFi IP         | 192-168-100-1 | URL             |          |
| Onboard Server Virtual Cell IP |               | URL10.20.15.XXX |          |

## Tracking

|                        |                                    |                                                         |           |
|------------------------|------------------------------------|---------------------------------------------------------|-----------|
| Resilient Tracker IMEI | <u>300434060618480 green light</u> | Every 10 min (1 <sup>st</sup> hour), then every 12 hrs. |           |
|                        |                                    |                                                         |           |
|                        |                                    |                                                         |           |
|                        | (O2)                               | (S4)                                                    | (O1) (S4) |

## Payloads

|                         | RTE <input checked="" type="checkbox"/> | AIS <input checked="" type="checkbox"/> | Weather Station <input checked="" type="checkbox"/> | Water Speed <input checked="" type="checkbox"/> | Lightbar <input checked="" type="checkbox"/> |  |
|-------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------------------|-------------------------------------------------|----------------------------------------------|--|
| XP 1 (G1) SV3 PL or MPU | NA                                      | see comments section                    |                                                     | Description                                     |                                              |  |
| XP 2 (G2)               | NA                                      | <u>off</u>                              |                                                     | Description                                     |                                              |  |
| XP 3 (G3)               | NA                                      | <u>off</u>                              |                                                     | Description                                     |                                              |  |
| Payload 1 (sensor 1)    | NA                                      | <u>off</u>                              |                                                     | Description                                     |                                              |  |
| Payload 2 (S2)          | NA                                      | <u>off</u>                              |                                                     | Description                                     |                                              |  |
| Payload 3 (S3)          | NA                                      | <u>off</u>                              |                                                     | Description                                     |                                              |  |

## WGMS

|                         |              |                               |  |
|-------------------------|--------------|-------------------------------|--|
| Organization            | <u>MBARD</u> |                               |  |
| Escalation List         | <u>LIT</u>   | Created and Populated         |  |
| Event Definitions       | <u>LIT</u>   | Compare Against Standard List |  |
| Vehicle Op Area Defined | <u>yes</u>   | Poly Name(s). Alarms Enabled  |  |

## Communications

|                            |  |                                  |            |
|----------------------------|--|----------------------------------|------------|
| WiFi Connection            |  | Onboard Server Accessible        | <u>yes</u> |
| Virtual Relay Cell         |  | WGMS Raw Outputs – VR Cell       | <u>yes</u> |
| Iridium                    |  | WGMS Raw Outputs - IridiumStatus | <u>yes</u> |
| Vehicle Telemetry Received |  | Packet Data Displayed in WGMS    | <u>yes</u> |
| Resilient Tracker          |  | WGMS Raw Outputs                 | <u>yes</u> |

## Vehicle Status

|                           |                    |           |             |           |
|---------------------------|--------------------|-----------|-------------|-----------|
| Battery [Wh] > 500 Wh     |                    |           |             |           |
| Solar Power Indicators:   | Panel 1            | Panel 2   | Panel 3     | Panel 4   |
| Output > 0 W              | <u>10W</u>         | <u>0</u>  | <u>9.2W</u> |           |
| Drybox Environmental:     | CCU                | XP 1      | XP 2        | XP 3      |
| Pressure > 120 kpa (+/-2) | <u>120.8</u>       |           |             |           |
| Temp                      | <u>22.1</u>        |           |             |           |
| Drybox Environmental:     | Thruster (170 kpa) | Payload 1 | Payload 2   | Payload 3 |
| Pressure > 120 kpa (+/-2) | <u>156.7</u>       |           |             |           |
| Temp                      | <u>20.1</u>        |           |             |           |

| Vehicle Status: WGMS, SV3 Commands, SV3 vehicle form (AMPS, WX , AIS) Adaptable modular power system |                     |                           |          |
|------------------------------------------------------------------------------------------------------|---------------------|---------------------------|----------|
| Item/Procedure                                                                                       | Readings            | Specifications            | Initials |
| Linux Uptime                                                                                         | 1:30                | Time Since Last Boot 1:38 |          |
| Regulus Uptime                                                                                       |                     | Time Since Last Boot      |          |
| Weather Station                                                                                      |                     | Accurate Reporting        |          |
| Airmar Weather GPS                                                                                   |                     | Latest Report             |          |
| Torpedo GPS                                                                                          | Vehicle status page | Latest Report present     |          |
| UBLOX GPS                                                                                            | Vehicle status page | Latest Report             |          |
| Weather Station Heading                                                                              |                     |                           |          |
| Thruder Heading                                                                                      |                     |                           |          |
| Water Speed                                                                                          |                     | Current Draw              |          |

| Mechanical Checks |                             |                                                                          |   |
|-------------------|-----------------------------|--------------------------------------------------------------------------|---|
| Float             | Wet-mates connected/lubed   |                                                                          |   |
|                   | Connector covers secure     | no change                                                                |   |
|                   | Drybox secure               | no change                                                                |   |
|                   | Contact info secure         | yes                                                                      |   |
|                   | Hull                        | Free of cracks and dings                                                 | ✓ |
|                   | Skeg/Fin                    | Secure                                                                   | ✓ |
| Sub               | Hardware secure             |                                                                          |   |
|                   | Umbilical visual inspection | Free of voids/defects                                                    | ✓ |
|                   | Roll pins inserted          | Flushed with surface                                                     | ✓ |
|                   | Wings                       | Hardware secure with Loctite no change                                   |   |
|                   | Thruder                     | Hardware secure. No protrusion of fin and bottom back fairing fasteners. | ✓ |

| Final Checks                  |  |                                                  |     |
|-------------------------------|--|--------------------------------------------------|-----|
| Thruster Spin                 |  | Slow, Fast                                       | yes |
| Thruder Range of Motion       |  | Manual and Command                               | yes |
| Rudder Right, Left, Center    |  |                                                  |     |
| Fixed Heading Test (spin)     |  | Heading used, Avoidance Off                      |     |
| Waypoint Course Test (spin)   |  | Waypoint used, Avoidance Off                     |     |
| Buoy Release Mechanism        |  | Tested and Secure                                | yes |
| Photo Document                |  |                                                  |     |
| RDF Beacon(s) Test            |  | Test with receiver no beacon                     |     |
| Autonomous Obstacle Avoidance |  | Enabled                                          |     |
| WGMS Alarms Checked / Cleared |  | "Out of Bounds" = Red. All others = Yellow/Green | yes |

| Comments                                                                            |  |
|-------------------------------------------------------------------------------------|--|
| Port side Octopus 1: CCU, water speed, solar panel mid and aft (3, 4)               |  |
| Stbd side Octopus 2: CCU, buoy release, solar panel fwd (1), radar reflector, light |  |
|                                                                                     |  |
|                                                                                     |  |

Technician Signature: \_\_\_\_\_

Note: Once vehicle is launched the following tasks must be completed

1. Clear alarms
2. Log vehicle modifications in notebook
3. Vehicle on mission
4. Create *LAUNCHED* comment into WGMS
5. Upload photos to gallery website with album name: *VehicleName YYYYMMDD*