

SV3 Pre-Launch Checklist

|         |                                                     |              |                     |
|---------|-----------------------------------------------------|--------------|---------------------|
| Date    | 2020-09-03T18:40:32.992Z                            | Glider Name  | SV3-794595959(Tiny) |
| Tech(s) | cwahl                                               | Organization | MBARI               |
| Project | LRAUV testing, BOG timeseries, DEIMOS Hotspot tests | Ship/Op Area | Paragon MB          |

Software Information

|                 |                                                                                                                                                        |
|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| Regulus Version | Tiny, sn=794595959, Running Regulus 3.2.2, software version of 2019-12-03T23:58:34Z, production build 35, sv3, SOMDM3730-30-1880AKIR-A, (1.2.3) secure |
| Plugins         | Running: AirmarWeather, LogAlarmReporter, PortForwarder, ThrusterAdjuster Not running: GPSasRudderCompass                                              |

Communication

| Item/Procedure             | Readings                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Comments | Initials                            |
|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-------------------------------------|
| WiFi Connection            | WiFi is On                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |          | <input checked="" type="checkbox"/> |
| Virtual Relay              | 0 queued msgs state=TALKING, sent=1180, lastTx=29.904s, avgTxSize=212.6B, totalTx=428.184kB, received=15, lastRx=29.897s, avgRxSize=5.0B, totalRx=6.663kB, powerState=ON (18h50m51.530s), virtualDevice=true, Requested by: pilotRequest, powerThreadActive=false, (108/108 success rate), sleepTime=120000, packetSize=8192, numberOfDnTransactionFailures=9.                                                                                                                                                                                         |          | <input checked="" type="checkbox"/> |
| WGMS Iridium               | IMEI:300434060708190, starts=1, r=24, w=6, sessionAttempts=274, sessionErrs=1, wErrs=0, rErrs=0, cErrs=0, 10m ss avg=1.8 (i=3), 0 queued msgs state=TALKING, sent=6, lastTx=13h32m24.599s, totalTx=0.480kB, received=24, lastRx=7m34.787s, avgRxSize=38.6B, totalRx=0.965kB, powerState=ON (18h50m23.316s), virtualDevice=true, Requested by: iridiumModem, powerThreadActive=false                                                                                                                                                                    |          | <input checked="" type="checkbox"/> |
| Vehicle telemetry received | available channels=[tcpChannel, virtualRelay, iridiumModem]0 blocked messages, averageMessageQueueRate=22.125s, sent=1186, totalBytesSent=428.664kB, received=39, totalBytesReceived=7.628kB, lastRx=7m34.792s, ProtobufMessageHandler[header=BB,header=BC,active=true, #accepted=0, #handled=0],ProtobufMessageHandler[header=BB,header=BC,active=true, #accepted=0, #handled=0],secureComms[header=A9,active=true, #accepted=0, #handled=0],WGMSCommandHandler[header=0A,active=true, #accepted=39, #handled=39, lastRx=rx=2020-09-03T18:32:58.239Z, |          | <input checked="" type="checkbox"/> |
| Location                   | Using GPSUblox, declination=12.9414425, failoverCounter=1, timeLastSwitchedGps=2020-09-02T23:52:02.990Z, clockDt=-1.063s                                                                                                                                                                                                                                                                                                                                                                                                                               |          | <input checked="" type="checkbox"/> |
| Tracker telemetry received | <div>Battery (Volts)15.9</div> <div>Report Rate4 hours</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |          | <input checked="" type="checkbox"/> |

Configuration

| Item/Procedure                 | Readings     | Specifications | Comments                   | Initials                            |
|--------------------------------|--------------|----------------|----------------------------|-------------------------------------|
| Tracker WGMS name              | Tiny Tracker |                |                            | <input checked="" type="checkbox"/> |
| (Optional) Second Tracker Name |              |                |                            | <input type="checkbox"/>            |
| Drybox WGMS name               | Tiny SV3-011 |                |                            | <input checked="" type="checkbox"/> |
| Float name                     | Tiny         |                |                            | <input checked="" type="checkbox"/> |
| Glider name                    | Tiny v200    |                | repaired forward wing post | <input checked="" type="checkbox"/> |
| Umbilical Length               | 4m           |                |                            | <input checked="" type="checkbox"/> |
| G1                             |              |                |                            | <input type="checkbox"/>            |
| G2                             |              |                |                            |                                     |

|                                     |                                 |                                     |  |                                     |
|-------------------------------------|---------------------------------|-------------------------------------|--|-------------------------------------|
|                                     | Ecopuck plus VR2C               |                                     |  | <input checked="" type="checkbox"/> |
| G3                                  |                                 |                                     |  | <input type="checkbox"/>            |
| T1                                  |                                 |                                     |  | <input type="checkbox"/>            |
| D1                                  |                                 |                                     |  | <input type="checkbox"/>            |
| S1                                  | Hotspot with MF (no DAT) and LF |                                     |  | <input checked="" type="checkbox"/> |
| S2                                  | GPCTD plus D0                   |                                     |  | <input checked="" type="checkbox"/> |
| S3                                  | pCO2 plus pH                    |                                     |  | <input checked="" type="checkbox"/> |
| S4                                  |                                 |                                     |  | <input type="checkbox"/>            |
| Event definitions                   |                                 | Compare against standard list       |  | <input checked="" type="checkbox"/> |
| Vehicle and tracker op area defined |                                 | Note area name(s) and enable alarms |  | <input checked="" type="checkbox"/> |
| Escalation list created/populated   |                                 |                                     |  | <input checked="" type="checkbox"/> |

## Vehicle Status

| Item/Procedure              | Readings                          | Comments | Initials                            |
|-----------------------------|-----------------------------------|----------|-------------------------------------|
| Battery [Wh] > 700 Wh       | 803.896                           |          | <input checked="" type="checkbox"/> |
| Solar Power Indicators: > 0 | 17.804<br>0.0<br>26.854<br>26.349 |          | <input checked="" type="checkbox"/> |

| Item/Procedure                                                                                              | Readings             |                  |                |                             |          | Initials                            |
|-------------------------------------------------------------------------------------------------------------|----------------------|------------------|----------------|-----------------------------|----------|-------------------------------------|
| Domain Info                                                                                                 | AMPS Hardware Status | Temperature (°C) | Pressure (kPa) | Hardware Uptime             | Comments | Initials                            |
| Domain_Name=Host, Node=1,<br>HW_SerNum=0x3132471639323739002d0037<br>On=Y                                   | OK                   | 27.8             | 120.5          | Uptime: 0 days,<br>18:53:17 |          | <input checked="" type="checkbox"/> |
| Domain_Name=Thruder-2, Node=3,<br>HW_SerNum=0x3333470738373634002c001c<br>On=Y                              | OK                   | 24.5             | 161.6          | Uptime: 0 days,<br>18:45:57 |          | <input checked="" type="checkbox"/> |
| Domain_Name=PyldInt-<br>0x3332470932363032002b0025, Node=5,<br>HW_SerNum=0x3332470932363032002b0025<br>On=Y | OK                   | 22.1             | 118.8          | Uptime: 0 days,<br>18:32:28 |          | <input checked="" type="checkbox"/> |

## Mechanical Checks

|       | Item/Procedure                    | Specifications                                            | Comments                       | Initials                            |
|-------|-----------------------------------|-----------------------------------------------------------|--------------------------------|-------------------------------------|
| Float | Wet-mates connected/lubed         | 3M Silicone Lubricant Spray 3M ID No. 62-4678-4930-3      |                                | <input checked="" type="checkbox"/> |
|       | Connector covers secure           |                                                           |                                | <input checked="" type="checkbox"/> |
|       | Drybox secure                     | Wiggle test                                               |                                | <input checked="" type="checkbox"/> |
|       | Contact info secure               |                                                           |                                | <input checked="" type="checkbox"/> |
|       | Hull                              | Inspect, note condition                                   |                                | <input checked="" type="checkbox"/> |
|       | Skeg/Fin                          | Secure                                                    |                                | <input checked="" type="checkbox"/> |
| Sub   | Hardware secure                   |                                                           |                                | <input checked="" type="checkbox"/> |
|       | Umbilical visual inspection       | Free of voids/defects                                     |                                | <input checked="" type="checkbox"/> |
|       | Umbilical ribbon cable inspection |                                                           |                                | <input checked="" type="checkbox"/> |
|       | Roll pins inserted                | Flush with surface                                        |                                | <input checked="" type="checkbox"/> |
|       | Wings                             | Hardware secure with Loctite, lock nuts, and seizing wire | repaired foward port wing post | <input checked="" type="checkbox"/> |
|       | Thruder                           | Hardware secure                                           |                                | <input checked="" type="checkbox"/> |

## Vehicle Functionality

| Item/Procedure             | Readings                                                                                   | Specifications                     | Comments | Initials                            |
|----------------------------|--------------------------------------------------------------------------------------------|------------------------------------|----------|-------------------------------------|
| Thruster Spin              | 457.0                                                                                      | Spins freely, slow and fast speeds |          | <input checked="" type="checkbox"/> |
| Rudder Range of Motion     |                                                                                            | Rudder moves freely and smoothly   |          | <input checked="" type="checkbox"/> |
| Rudder right, left, center | Rudder(2020-09-03T18:40:30.736Z,desiredHeading=264.4,compass=307.7,rack=-15.9,post=-14.8ru | Right, Left, Center                |          | <input checked="" type="checkbox"/> |

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|                             |                                                                                                                                                                                                          |                                          |                      |                                     |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|----------------------|-------------------------------------|
| Thrudder Compass Correction | Thrudder compass is corrected                                                                                                                                                                            | recommended NOT corrected                | LR legacy, disregard | <input type="checkbox"/>            |
| Fixed heading test (spin)   | 180                                                                                                                                                                                                      | Avoidance Off, Note Heading Used         |                      | <input checked="" type="checkbox"/> |
| Waypoint course test (spin) | 36.797, -121.847                                                                                                                                                                                         | Avoidance Off, Note Waypoint Course Used |                      | <input checked="" type="checkbox"/> |
| Buoy Release Mechanism      | device is disarmed, deviceState=OFF, deployCounter=0, waitTime=1m30s, powerState=OFF (18h48m30.593s), ampsPower=false, powerThreadActive=false                                                           | Catch release buoy by hand               |                      | <input checked="" type="checkbox"/> |
| Octopus Cable 01            | OK                                                                                                                                                                                                       | Must Pass                                |                      | <input checked="" type="checkbox"/> |
| Octopus Cable 02            | OK                                                                                                                                                                                                       | Must Pass                                |                      | <input checked="" type="checkbox"/> |
| AIS Status                  | lastSeen=MMSI 367766000 (WESTERN FLYER). Pos=36.802398, -121.787048. t=33:0:UNDERWAY_ENGINE, 2020-09-03T18:40:34.765Z, lengthErrs=0, latlonErrs=0, broadcastCount=320, lastRx=1.815s, numberObserved=10, | If in harbor, must see MMSI              |                      | <input checked="" type="checkbox"/> |
| Photo Document              |                                                                                                                                                                                                          |                                          |                      | <input checked="" type="checkbox"/> |

Vehicle Communication and Telemetry

| Item/Procedure            | Readings / Specifications                                                                                                                                                                                                                                                                                                                                                               | Comments | Initials                            |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-------------------------------------|
| WX reporting              | Temp=15.0°C, Press=1019.3mb, Wind Speed=7.86kn, Wind Dir=302.3°.                                                                                                                                                                                                                                                                                                                        |          | <input checked="" type="checkbox"/> |
| UBLOX GPS                 | 2020-09-03T18:40:36Z@36.8021818,-121.7869203,lastRx=0.268s, quality=100, timeout=1m, nmeaValid=true, clockDt=0.610s, lastValidFix=2020-09-03T18:40:36Z@36.8021818,-121.7869203, gpsWatchdogFailureCounter=0, ggaQCount:2=300,numSat:sma=11.83,std=0.37,min=11.00,max=12.00,n=300,hdop:sma=0.77,std=0.03,min=0.75,max=0.87,n=300,altitude:sma=-0.01,std=0.82,min=-1.                     |          | <input checked="" type="checkbox"/> |
| Airmar GPS                | 2020-09-03T18:40:35.400Z@36.8021917,-121.786915,lastRx=0.155s, quality=00, timeout=5m, nmeaValid=true, clockDt=1.234s, lastValidFix=2020-09-03T18:40:35.400Z@36.8021917,-121.786915, gpsWatchdogFailureCounter=0, ggaQCount:2=300,numSat:sma=11.00,std=0.00,min=11.00,max=11.00,n=300,hdop:sma=0.80,std=0.00,min=0.80,max=0.80,n=300,altitude:sma=1.53,std=0.27,min=1.10,max=2.10,n=300 |          | <input checked="" type="checkbox"/> |
| Torpedo GPS               | Not Available!                                                                                                                                                                                                                                                                                                                                                                          |          | <input checked="" type="checkbox"/> |
| Water speed readings      | Unknown speed; ncc=0, nci=0, tec=0, aip=0.00                                                                                                                                                                                                                                                                                                                                            |          | <input checked="" type="checkbox"/> |
| Obstacle Avoidance Status | Disabled                                                                                                                                                                                                                                                                                                                                                                                |          | <input checked="" type="checkbox"/> |
| Check alarms              | "Out of bounds" red. All yellow/green                                                                                                                                                                                                                                                                                                                                                   |          | <input checked="" type="checkbox"/> |

General Comments

Phew!

Technician Signature: cwahl

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: YYYY-MM-DD VehicleName

Submit

Print

Clear User Input