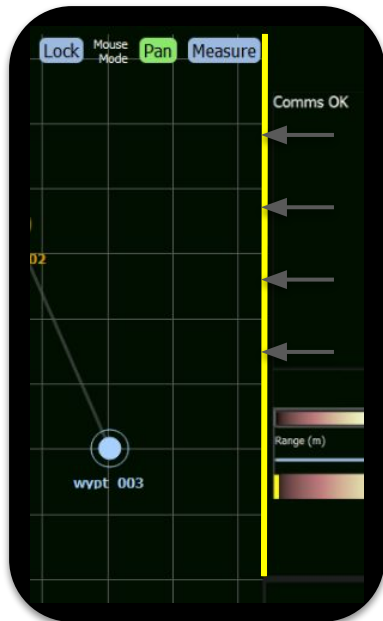


## Resize Workspace

1. Hover over the edge of a workspace component.
2. Click and drag to the resize the component

If a component has been completely hidden, it can be reopened by moving the separation bar away from its location or by changing your Workspace View.



## Depth & Altitude

-  Above Water
-  Water
-  Bottom



**Setpoint:** When Auto-Altitude or Auto-Depth is enabled, indicates that altitude or depth the vehicle is commanded to go.

**Breadcrumb Trail:** Tracks the most recent known depths and altitudes of the vehicle.

## Workspace Views

**F1** - Chart Only

**F2** - Sonar and Video

**F3** - Sonar Only





**F4** - Video Only

**F5** - Chart, Sonar, and Video

**F6** - Show/Hide Control Tabs



## Alarm Color Codes

-  Information
-  Warning
-  Severe
-  Fatal

## Heading Ribbon Information



**Vehicle's Current Heading:**  
Enabled if using Auto Heading.



**Course Over Ground:**  
The direction the vehicle is traveling.

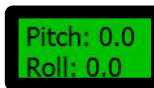


Vehicle Heading (Default)

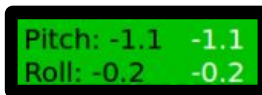


Auto-Heading Enabled - You control the setpoint

**Green:** Current Vehicle Heading  
**White:** Heading Setpoint



Current Pitch & Roll (default)



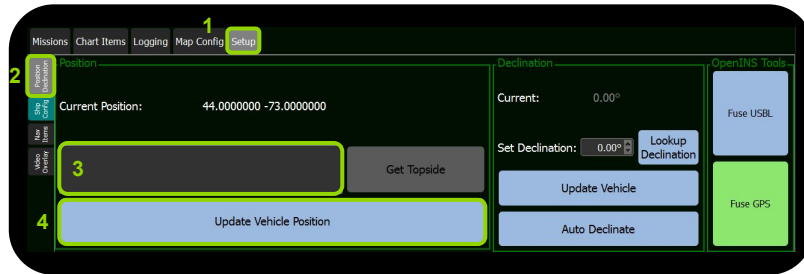
Auto Pitch & Roll Enabled - You control the setpoint

**Black:** Current Vehicle Pitch & Roll  
**White:** Pitch & Roll Setpoint

# Set Position

## Manually Set Position

1. Select the Setup tab
2. Select the Position Declination subtab
3. Enter the Latitude/Longitude position in the field
4. Click the Update Vehicle Position button



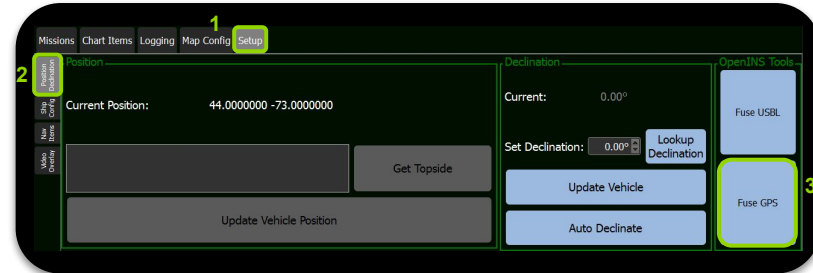
## Click to Set

1. Right-click the chart where you want to set the vehicle position
2. Select Set Position



## Toggle Fuse GPS

1. Select the Setup tab
2. Select the Position Declination tab
3. Select the Fuse GPS



*Fuse GPS Enabled*



*Fuse GPS Disabled*



# Autopilot Controls

## Orientation and Vertical



**Auto Heading:** Toggles Auto-Heading. When enabled, the vehicle will maintain and follow the heading setpoint.



**Auto Depth:** Toggles Auto-Depth. When enabled, the vehicle will maintain and follow the depth setpoint. Enabling Auto-depth will disable auto-altitude and vice versa.



**Auto Altitude:** Toggles Auto-Altitude. When enabled, the vehicle will maintain and follow the altitude setpoint. Enabling auto-altitude on will disable auto-depth and vice versa.



**Auto Pitch:** Toggles Auto-Pitch. When enabled, the vehicle will maintain and follow the Pitch setpoint.



**Auto Roll:** Toggles Auto-Roll. When enabled, the vehicle will maintain and follow the Roll setpoint.

## Positioning



**Dynamic Positioning:** When using Dynamic Positioning vehicle controls will move the waypoint and the vehicle will follow.



**Point of Interest Orbit:** Toggles Point of Interest Orbit. When enabled, vehicle control will be oriented to a selected point of interest. This will allow you to easily orbit the point of interest.



**Sonar Relative:** Sonar Relative is only available when using Sonar Target Tracking. When Enabled, vehicle control will be oriented to the selected sonar target.

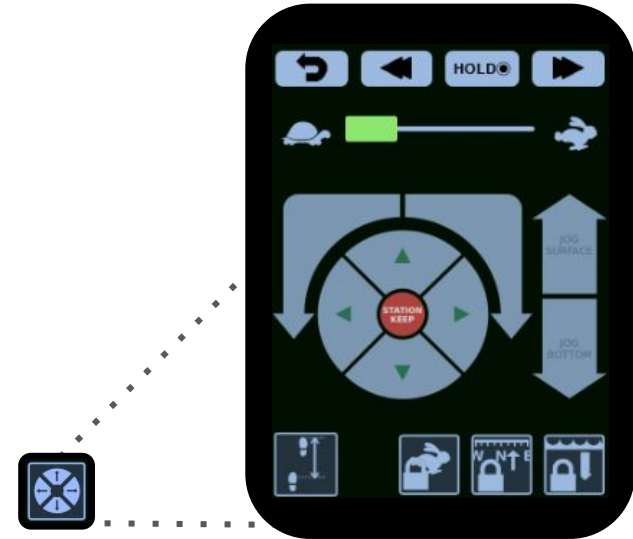
## Icon Color Conventions



Enabled



Disabled



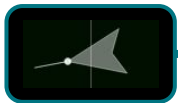
**Autopilot Jog Control. Opens the Autopilot Jog Control Window.**

# Waypoints

## Active Waypoint

Marked with an X,  
Autopilot Jog  
Controls its  
position.

## Vehicle Icon



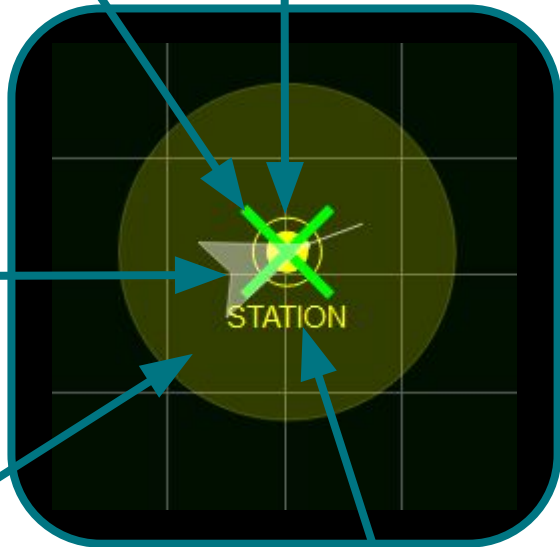
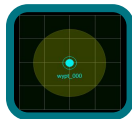
Dot marks the  
center of the  
vehicle

## Waypoint Tolerance

Shaded area, defaults to 2m.  
(Depending on your zoom level  
this may or may not be visible.)

## Waypoint

Selected  
Waypoint



## Waypoint Name

# Waypoint Types

## Active Waypoint

- Marked with a green X
- Step Controls will move the Active Waypoint

## STATION Waypoint

- Named STATION
- If a STATION Waypoint is the Active Waypoint, moving the joystick will move the waypoint to the location of the vehicle when the joystick returns to null

## Non-station Waypoint

- Named anything other than STATION (usually `wpnt_XXX`)
- If a Non-station Waypoint is the Active Waypoint, moving the joystick will create a new STATION that is part of the current active mission when the joystick returns to null

# Editing Waypoints

1. Right-click Waypoint
2. Select Edit Waypoint
3. Edit Waypoint
4. Click Update

## Waypoint Defaults

Tolerance: 6ft.  
Down: 10ft. Depth  
Speed: 70.00  
Down Mode: Depth



Waypoint Name:

Waypoint Color:

Waypoint Tolerance (m):

Latitude:

Longitude:

Heading: ☐ Along Line ☐ Fixed:

Z Value (m):

Waypoint Effort (%):

4. Click Update

# Pilot Assist Controls



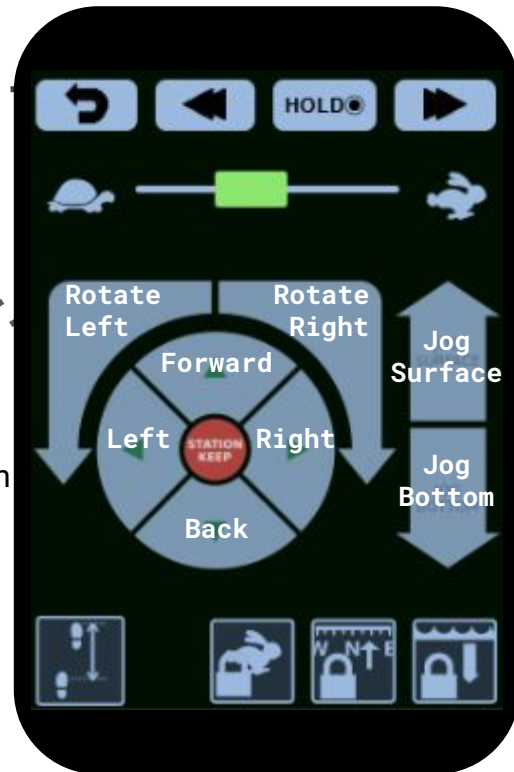
Enable Positioning

Open Autopilot  
Jog Controls



## Autopilot Jog Controls

Move the waypoint  
based on the orientation  
of the vehicle.



# Other Autopilot Jog Controls

## Step Control



### Big Steps

1 click: 3 feet  
5 degrees



### Little Steps

1 click: 2 inches  
1 degree

## Heading Lock



Vehicle Heading will be locked to the current mission waypoint.



You can control the vehicle heading independent from the current waypoint.

## Mission Control



Reverses the order of the waypoints the vehicle is traveling.



Commands the vehicle to travel to the previous Waypoint on its current mission.



Vehicle will move to the next waypoint when it reaches the tolerance of the current waypoint.



Vehicle will stop at the Waypoint it is currently traveling towards.



Commands the vehicle to travel to the next waypoint the current mission.

## Depth Lock



Vehicle depth will be locked to the current mission waypoint.



You can control the vehicle depth independent from the current waypoint.

## Speed Control



Vehicle speed will be locked to the current mission waypoint.



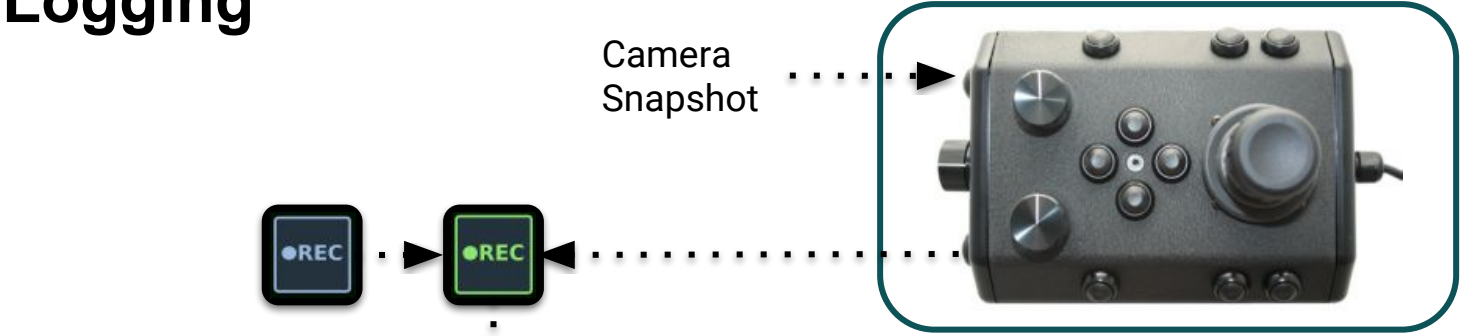
You can control the vehicle speed independent from the current waypoint.



Slow Down Speed Up



# Logging



SONAR

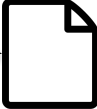


VIDEO

Fastest way to  
**Take** a  
screenshot



Screenshot



Log files are stored here:  
**/home/videoray/gss\_logs**

Screenshot

Fastest way to  
create and **Name**  
a screenshot



# Import a Chart

1. Select the Map Config tab
2. Select the Charts subtab
3. Click the Browse button
4. Use the file viewer to select a chart to import



## Accepted Files Types



# Editing Charts

## Visibility Controls

Visible	Opacity [0,100%]
<input checked="" type="checkbox"/> Uncheck to hide	100
<input checked="" type="checkbox"/> Uncheck to hide	100

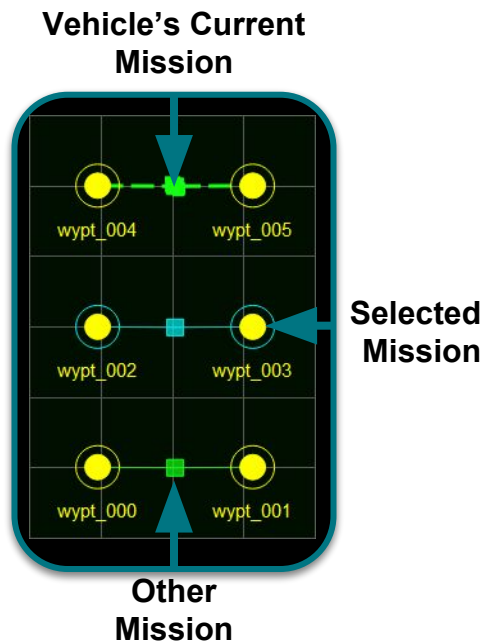
## Layer Controls



- Layer Up - Moves the selected layer towards the foreground the chart stack.
- Layer Down - Moves the selected layer towards the background of the chart stack.
- Remove Layer - Removes the selected layer.



# Multiple Missions



# Troubleshooting

- Keyboard F Keys do not switch views
  - Click on the main Workspace to switch window focus
- Keyboard Jog shortcuts do not move the vehicle setpoints
  - Ensure the Pilot Assist Controls popup is open
  - Click on the main Workspace to switch window focus
- Run away vehicle
  - Grab the joystick and fly ROV to safety
  - Turn off Positioning
  - Evaluate DVL lock
- ROV not updating position on chart plotter
  - Ensure DVL has bottom lock or GPS is Enabled
- No Bottom Lock
  - Descend from the surface away from bubbles
  - Evaluate environment conditions
  - Beam interference
- Camera or Sonar do not connect on boot
  - Power cycle software and vehicle



## Step Control



1 click: 3 ft or 5°



1 click: 2 in or 1°

- No thruster control
  - Check hand controller connection
  - Power cycle vehicle
- Power loss
  - Check GFCI, Breakers, etc.
  - Reduce power in control slider tab
- Joystick does not control ROV
  - Check lock status

## Autopilot Lock Controls



Operator Controlled



Locked to Waypoint

Speed Lock



Depth Lock



Heading Lock

