

5 Things Every Surveyor Should Remember Before Heading out on their First Survey



The key to the success of any project lies in thorough preparation, and hydrographic surveys are no exception. In this article, Vitad Pradith from Teledyne Oceanscience provides five tips to help surveyors perform their important work efficiently, effectively and, above all, safely.

1. Initial System Preparation: Once you receive your vehicle, unpack it and give it a thorough check. Look for any anomalies and tighten up any parts that may have come loose on the vehicle and associated accessories during shipping. Vehicles are manufactured under tight quality control and shipped with care, but the delivery folks may not be quite so careful! If you find something awry, contact the Field Support Team for prompt assistance.

2. Mission Preplanning: Prepping the vehicle for the first mission requires a slight change in the approach to the survey to ensure quality data collection. Remember, you are removing yourself from the water and controlling (or monitoring) the vehicle from a remote location. Here are some things to think about:

- a. How are you going to get the vehicle into the water? Are there steep embankments or loose gravel that limit secure footing? Be prepared.
- b. Have an initial survey plan and check out the survey area as best you can. It is amazing what information you can glean with a quick internet search of the area. Leverage this information to plan your survey/mapping mission accordingly.
- c. During the planning, take mental and recorded notes on potentially hazardous areas that the vehicle should avoid (such as near water intakes or areas where the vehicle could get stuck). If you need to survey these areas, have an escape/rescue plan for the vehicle.
- d. Sometimes, the area that you need to work is obstructed (e.g. cruise ships that sit on top of the quay wall area that needs to be surveyed). If your project covers multiple areas, be willing to adapt and have an alternate site in mind to maximize your data collection activities.
- e. Define and clarify the project geodesy ahead of time! Many surveys have been muddled with wrong projections. Save yourself the headache as well as precious time to remedy the data and get a clear read on the job requirements.
- f. Do you need permits or permissions to be on site? Hopefully, your managers have taken care of this for you, but you are the prudent surveyor! Verify.
- g. Stay within the vehicle's line of sight. This not only affects the wireless links, but it is also a safety concern. You should always be able to observe the vehicle and intervene if needed.
- h. Check the weather forecast – a few days before, the day before and the morning before. Surveyors are a hardy bunch, but knowing the weather conditions ahead of time improves your situational awareness and increases the probability of a successful survey.

3. Data Management: Predefine your data structure. File management is always time-consuming. Keep yourself organized in the beginning and establish a data architecture that everyone can understand. It will save you precious time when it comes to processing and producing products from the data.

4. Day before operations:

- a. Turn everything on once inside (except the sonar if the vehicle is not in the water). Make sure that everything is working (computers are notorious for being fickle).
 - b. Charge everything that has a battery! This includes the vehicle's batteries, handheld radio controller (RC controller) and, on certain models, the Power/Data Module. Don't forget about the spares!
 - c. Know your roles. Brief your team on the survey/mapping plan. Have clearly defined roles for the participants while the vehicle is operating.
- 5. Check your head:** Take stock of how you are feeling the day of the survey. While these vehicles keep you and your team out of harm's way, you should always be alert, conscious and ready to respond accordingly while the vehicle is working. In doing so, you increase the efficacy and efficiency of your important project.

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