


Use these checklists to help you prepare your VR4-UWM for deployment, successfully deploy the receiver, and gather the data when you return to the deployment location.



Electronics inside the case must **NEVER come in contact with any water** or the VR4-UWM will be damaged.

Equipment

- Benthos Deck Box - fully charged prior to field day and/or make sure you have a "clean power source" to power the unit.
- Benthos surface modem transducer
- Dummy plug if receiver has an unused external connector (serial port)
- Laptop with latest VUE software and VR4-UWM user manual installed
- DB-9 to USB adapter (if necessary) with software drivers installed
- Complete mooring inventory
- VR4-UWM receiver
- VEMCO Comm key (magnet) 
- GPS
- Bluetooth® USB adapter
- Serial cable

Important

- **Initialize VR4-UWM before deploying.** Use the magnet and the VUE software (Bluetooth communication) and start recording to remove the receiver from Suspend mode.
- **Do not open the case** except to change battery. This receiver was sealed and pressure tested prior to shipping.
- **Never deploy** a VR4-UWM **beyond 500 meters** depth.
- Do not deploy VR4-UWM receivers with the **same modem address within 5 km of each other**. Doing so could disable modem communications with the surface acoustic modem.
- Do not allow the VR4-UWM to be **dropped or struck** against other objects.
- **Do not mix different metals**, especially in contact with each other. This will promote galvanic corrosion and cause rapid failure of the hardware.
- **Initializing the VR4-UWM will erase the receiver's memory.** Retrieve all detection logs before the VR4-UWM is initialized.



Do not bump the VR4-UWM hydrophone or expose it to extreme temperature variations.

Doing so may damage the receiver and render it unable to detect transmitters.



Never cover the Status Light/Release Valve.

The Release Valve **must be able to pop open** if needed and must not be blocked by tape or paint.



Preparation - On Land

- Make sure **latest VUE version** is installed on PC, including the latest **manuals**.
- Start a study** using VUE software and Bluetooth communication (exit Suspend mode).
- Perform an **in-air test** (see manual) using **Bluetooth** communication.
- Perform an **in-air test** (see manual) using **Benthos** acoustic modem communication.

Deployment

- At desired location, **turn off** the boat's depth sounder.
- Mechanically secure the Benthos cable** to the surface modem transducer using a shackle and place in water. **Never rely on the electrical connector to support the tension in the cable.**
- Confirm that Status Light gives **2 quick flashes every 5 seconds** (initialized); **red** = 69kHz; **yellow** = 180kHz.
- Inspect case**, especially pressure relief valves (make sure they're flush with surroundings).
- Deploy** the VR4-UWM in a **vertical** position – no more than 10° tilt angle.
- Communicate** with VR4-UWM while it is being deployed to monitor the tilt of the receiver. The **hydrophone** heads should always be **pointing up**.
- Record GPS position** of receiver; position can be tuned if depth is known (see manual).

Data Retrieval

- Return** to GPS position or receiver (recorded during deployment).
- Set up** surface modem (connect Deck Box to PC and deploy surface modem).
- Turn off** boat's depth sounder during acoustic communication.
- Open VUE** software and select the desired **Offload** icon (usually the **Offload New Data** option).
- If data to be used in a VPS study, then answer "Yes" to the "Offload high-resolution VPS data?" question that appears.
- Monitor communication** while data is being offloaded. Make adjustments as needed (to power level, boat position, etc.).
- End communication** when data offload is completed.