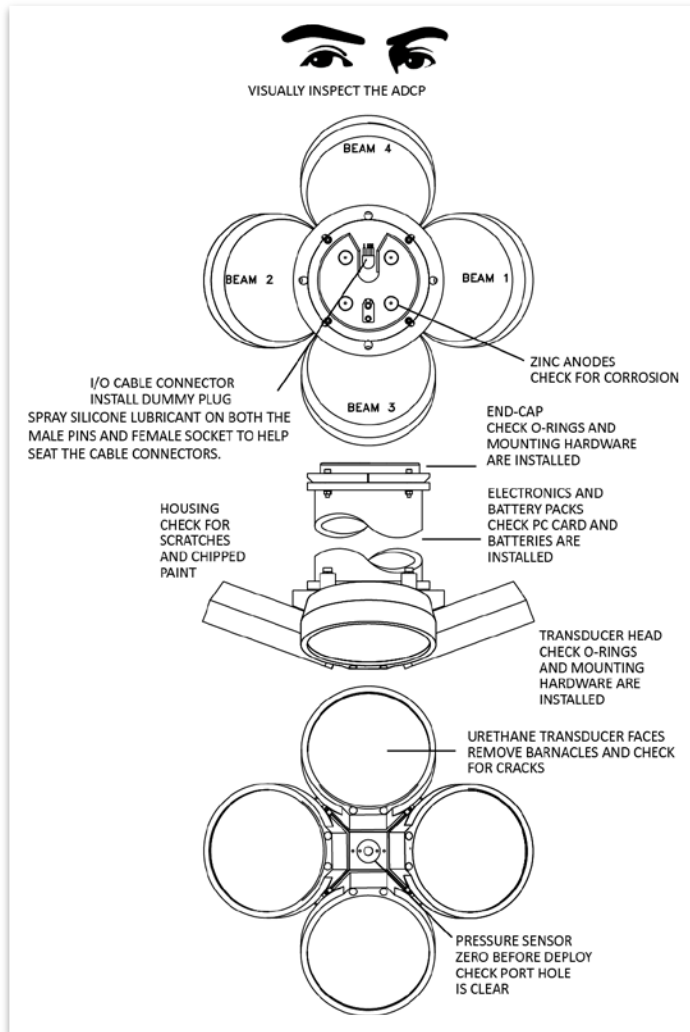


# Long Ranger / QuarterMaster Quick Reference Card

## Deployment Checklist

- ❑ **Visually inspect the Long Ranger / QuarterMaster**
  - ❑ Check the I/O Cable and connector pins for damage
  - ❑ Check the housing paint condition for damage
  - ❑ Check the transducer faces are clean and free from defects
  - ❑ Clean the pressure sensor port
  - ❑ Check the zinc anodes condition
- ❑ **Seal the Long Ranger / QuarterMaster for deployment**
  - ❑ Install and connect the battery
  - ❑ Check Recorder PC card is installed
  - ❑ Use fresh desiccant inside Long Ranger / QuarterMaster
  - ❑ Install new o-rings; use silicone lubricant
  - ❑ Check all mounting hardware is corrosion free and installed
- ❑ **Bench Tests**
  - ❑ Test the Long Ranger / QuarterMaster using *BBTalk* or *WinSC*
  - ❑ Verify the compass alignment using *BBTalk* or *WinSC*; if necessary, re-calibrate
  - ❑ Check the recorder status using *BBTalk* or *WinSC*
- ❑ **Final Preparation for Deployment**
  - ❑ Are biofouling precautions needed?
  - ❑ Zero the pressure sensor at deployment site with the AZ command



## Long Ranger / QuarterMaster Care

This section contains a list of items you should be aware of every time you handle, use, or deploy your Long Ranger / QuarterMaster. *Please refer to this list often.*

### General Handling Guidelines

- Never set the transducer on a hard or rough surface. **The urethane faces may be damaged.**
- Always remove the retaining strap on the underwater-connect cable and dummy plug when disconnecting them. **Failure to do so will break the retainer strap.**
- Do not apply any upward force on the end-cap connector as the I/O cable is being disconnected. **Stressing the connector may cause the ADCP to flood.** Read the Installation section for details on disconnecting the I/O cable.
- Do not expose the transducer faces to prolonged sunlight. **The urethane faces may develop cracks.** Cover the transducer faces on the Long Ranger / QuarterMaster if it will be exposed to sunlight.
- Do not expose the I/O connector to prolonged sunlight. **The plastic may become brittle.** Cover the connector on the Long Ranger / QuarterMaster if it will be exposed to sunlight.
- Do not store the ADCP in temperatures over 60 degrees C with the batteries removed. **The urethane faces may be damaged.**
- Store batteries in a **cool dry location** (0 to 21 degrees C). If the batteries are installed in the ADCP, do not store the ADCP in temperatures over 21 degrees C.
- Do not store batteries inside the ADCP for extended periods. **The batteries may leak.**
- **Use batteries within one year of the Manufacture date (use by Warning date).** A battery pack used to start a deployment prior to the Warning Date means that it will perform as expected and provide the required power for any deployment that was created using the TRDI planning module. For example, if your deployment is going to be 12 months long and the battery label shows it is nine months old, it is safe to use the battery.
- Vent the system before opening by loosening the hardware on the housing. **If the ADCP flooded, there may be gas under pressure inside the housing.**
- Do not scratch or damage the O-ring surfaces or grooves. **If scratches or damage exists, they may provide a leakage path and cause the ADCP to flood.** Do not risk a deployment with damaged O-ring surfaces.
- Do not lift or support a Long Ranger / QuarterMaster by the external I/O cable. **The connector or cable will break.**

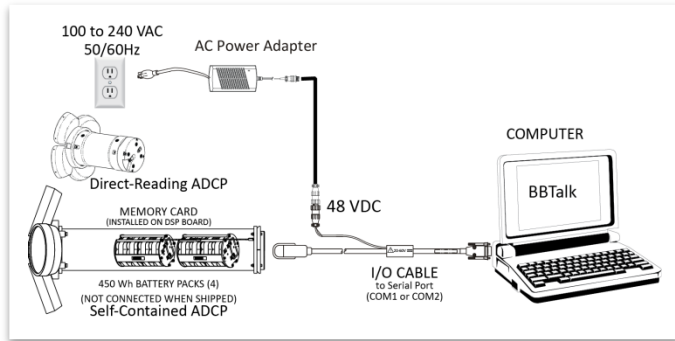
### Assembly Guidelines

- Read the Maintenance section for details on Long Ranger / QuarterMaster re-assembly. Make sure the housing assembly O-ring stays in the groove when you re-assemble the Long Ranger / QuarterMaster. Tighten the hardware as specified. **Loose, missing, stripped hardware, or a damaged O-ring can cause the Long Ranger / QuarterMaster transducer to flood.**
- Use light amounts of silicone lubricant (such as 3M™ Silicone Lubricant (Dry Type) ID No: 62-4678-4930-3) on both the male pins and female socket to help seat the cable connectors. Wipe off excessive silicone spray from the metal portions of the pins. **Regular lubrication is required: Apply dry type silicone lubricant prior to each connection.**
- Do not connect or disconnect the I/O cable with power applied. When you connect the cable with power applied, you may see a small spark. **The connector pins may become pitted and worn.**
- The Long Ranger / QuarterMaster I/O cable may be connected while slightly wet; **do not connect under water.**

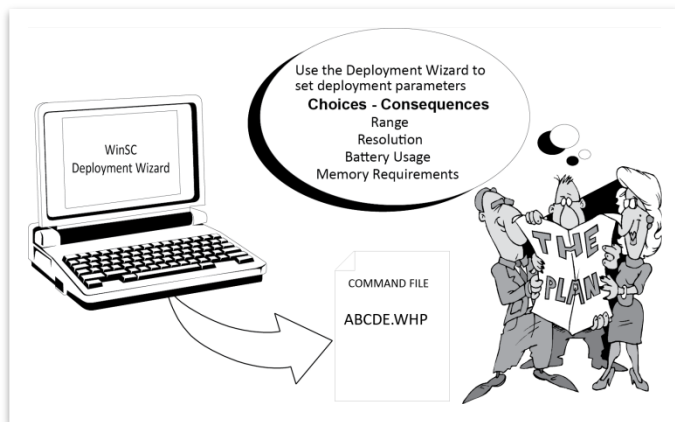
### Deployment Guidelines

- Read the RDI Tools and WinSC Software User's Guides. These guides have tutorials to help you learn how to use the ADCP.
- Long Ranger / QuarterMaster batteries are shipped inside the ADCP but not connected. **Connect the battery and seal the ADCP before deployment.**
- **Align the compass whenever the batteries are replaced,** the recorder module is replaced, or when any ferrous metals are relocated inside or around the Long Ranger / QuarterMaster housing. **Ferro-magnetic materials affect the compass.**
- The AC power adapter is not designed to withstand water. **Use caution when using on decks in wet conditions.**
- Avoid using ferro-magnetic materials in the mounting fixtures or near the Long Ranger / QuarterMaster. **Ferro-magnetic materials affect the compass.**

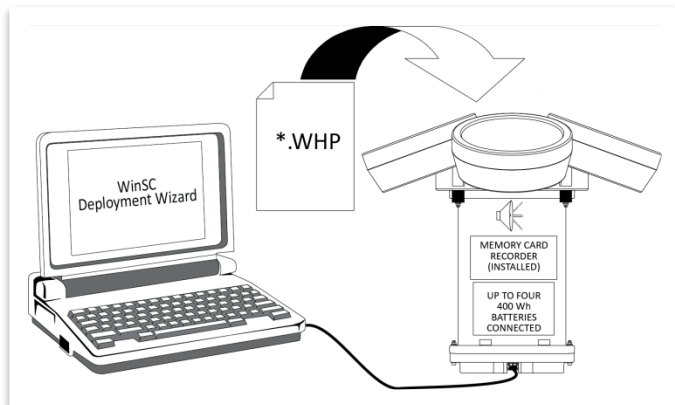
# Long Ranger / QuarterMaster Self-Contained Deployment



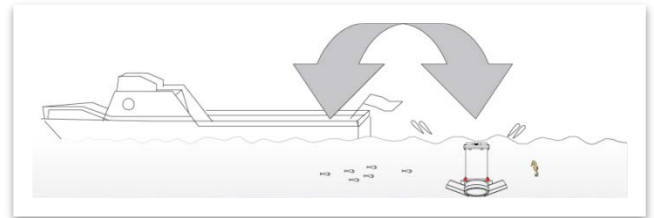
**Step 1.** Use WinSC to create a new deployment file. Use the Deployment Checklist (other side) to verify that the Long Ranger / QuarterMaster is ready for the deployment. Use the Deployment Wizard to test the ADCP, verify the compass calibration, and set the ADCP's clock.



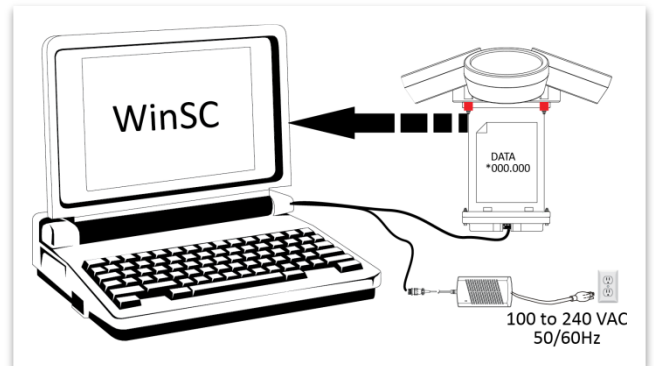
**Step 2.** Use the Deployment Wizard to plan the deployment. Make choices; see the consequences for the entire deployment.



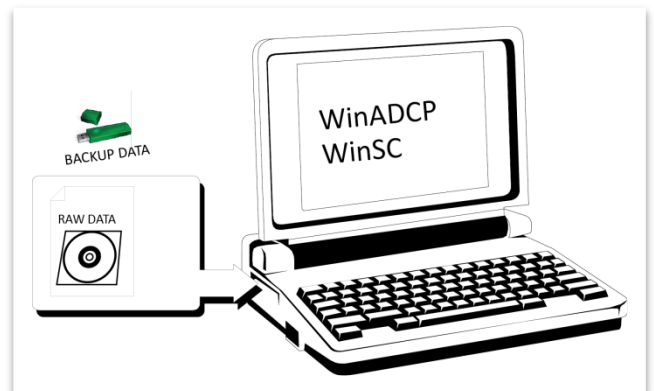
**Step 3.** Use WinSC's Deployment Wizard to send the deployment commands from ABCDE.WHP to the ADCP. View the deployment log file. This file shows all of the commands sent to the ADCP and the ADCP's response. You should hear the Long Ranger / QuarterMaster "beep" after each ping. Disconnect the I/O cable and install the dummy plug.



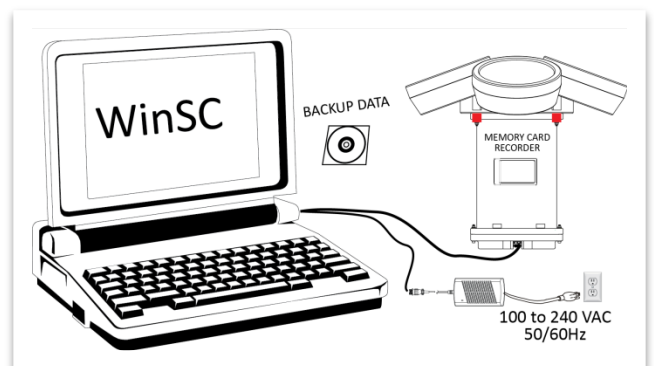
**Step 4.** Deploy and recover the Long Ranger / QuarterMaster. Data files are ABCDE.SCL (deployment log file) and ABCDE000.000 (raw data).



**Step 5.** Use WinSC to recover data from the recorder. The data will be copied to your computer's hard drive.



**Step 6.** Always backup your data. Use WinADCP or WinSC to view the data.



**Step 7.** Use WinSC to erase the recorder and prepare the Long Ranger / QuarterMaster for another deployment.