

Sentinel Setup Card

1. Documentation

All documentation is being provided to you on CD in a fully searchable, printable, electronic format. This way, information is always available, whether you are at the office or in the field, and the electronic format is an environmentally friendly way to provide a large set of technical manuals. The documentation for each software program is located on the software program's CD.

To purchase a printed copy of the system documentation (includes the WorkHorse Technical Manual, Sentinel User's Guide, Command and Output Data Format Guide, and software guides), contact our Customer Service department at rdifs@rdinstruments.com or call (858)-693-1178 and order the WorkHorse Sentinel Technical Manual kit (P/N 757K6002-01).

2. Unpacking and Inventory

When unpacking, use care to prevent physical damage to the transducer faces and connector. Use the protective cover and a soft pad to protect the transducer. When handling any electronics modules, follow electrostatic discharge (ESD) prevention measures.

Use the following figure to ensure you have all of the Workhorse equipment.

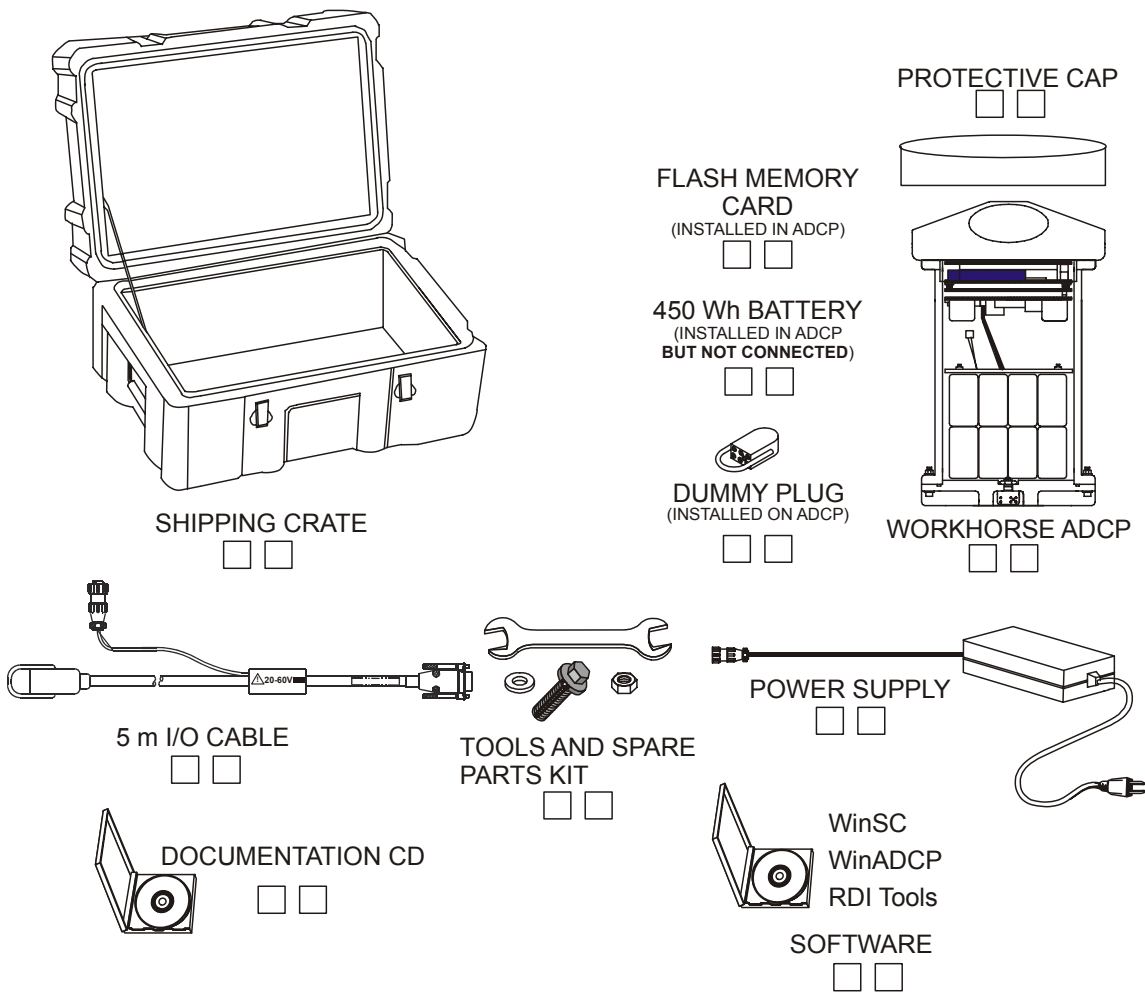


Figure 1. ADCP Inventory

3. Set Up the ADCP

Use this figure to connect the ADCP to a computer for a bench test. Refer to the Sentinel User's Guide for more details on system interconnections.

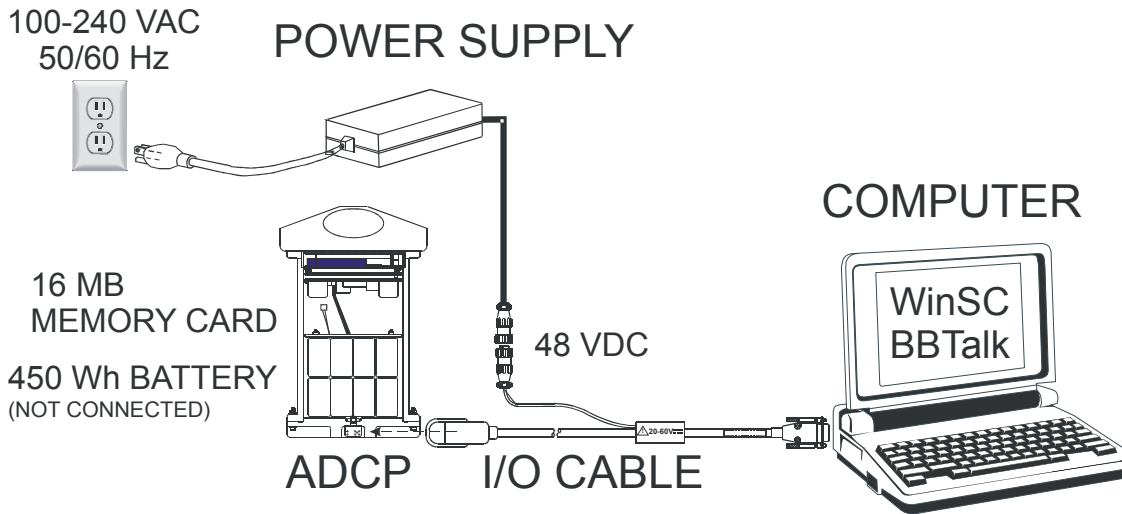


Figure 2. ADCP Connections

4. System Requirements

RDI software requires the following:

- Windows 95®, Windows 98®, Windows NT 4.0® with Service Pack 4 installed, Windows 2000®, or Windows XP®
- Pentium class PC 233 MHz (350 MHz or higher recommended)
- 32 megabytes of RAM (64 MB RAM recommended)
- 6 MB Free Disk Space plus space for data files (A large, fast hard disk is recommended)
- One Serial Port (two or more High Speed UART Serial Port recommended)
- Minimum display resolution of 800 x 600, 256 color (1024 x 768 recommended)
- CD-ROM Drive
- Mouse or other pointing device

5. Install the Software

To install the software, do the following.

- a. Insert the compact disc into your CD-ROM drive and then follow the browser instructions on your screen. If the browser does not appear, complete Steps “b” through “d.”
- b. Click the **Start** button, and then click **Run**.
- c. Type **<drive>:launch**. For example, if your CD-ROM drive is drive D, type **d:launch**.
- d. Follow the browser instructions on your screen. Once, installed, you will have a shortcut added to your Windows® **Start** menu.

6. Test the ADCP

BBTalk (included on the RDI Tools CD) will establish communications with the ADCP and run the System Test to make sure the ADCP is functioning properly. If you have questions about *BBTalk* operation, see the *RDI Tools User's Guide*.

- a. Connect the ADCP as shown in Figure 2. Place the ADCP in a bucket of water (enough water to cover the transducer head). If the ADCP is not placed in water, some of the tests will fail.
- b. Start the *BBTalk* program.
- c. Press <F2> and run the script file TestWH.txt. The results of the tests will be printed to the screen and saved to the log file WH_RSLTS.txt. The WH_RSLTS.txt file will be created in the same directory that *BBTalk* is running from.

7. Workhorse Care

This section contains a list of items you should be aware of every time you handle, use, or deploy your Workhorse Sentinel. *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 end-cap 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 end-cap connector may cause the ADCP to flood.** Read the [Maintenance guide](#) 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 Workhorse 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 Workhorse if it will be exposed to sunlight.
- Do not store the ADCP in temperatures over 75 degrees C. **The urethane faces may be damaged.** Check the temperature indicator inside the shipping case. It changes color if the temperature limit is exceeded.
- Store batteries in a **cool dry location** (0 to 21 degrees C).
- Do not store batteries inside the ADCP for extended periods. **The batteries may leak.**
- Vent the system before opening by loosening the end-cap. **If the ADCP flooded with batteries installed, 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 WorkHorse by the external I/O cable. **The connector or cable will break.**

Assembly Guidelines

- Read the [Maintenance guide](#) for details on WorkHorse re-assembly. Make sure the housing assembly O-rings stay in their groove when you re-assemble the WorkHorse. Tighten the hardware as specified. **Loose, missing, stripped hardware, or damaged O-rings can cause the WorkHorse transducer to flood.**
- Place a light amount of DC-111 lubricant on the end-cap connector pins (rubber portion only). **This will make it easier to connect or remove the I/O cable and dummy plug.**
- Do not connect or disconnect the I/O cable with power applied. An exception to this is the external battery case. The external battery case connector is always “hot” when batteries are installed. When you connect the cable with power applied, you may see a small spark. **The connector pins may become pitted and worn.**
- Do not attach a Workhorse Monitor or Sentinel I/O cable or power supply to the Workhorse Rio Grande ADCP. The Workhorse Mariner, Monitor and Sentinel ADCPs are 24 VDC systems. **The Workhorse Rio Grande uses 12VDC only.**
- The WorkHorse I/O cable is *wet* mate-able, not *under water* mate-able.

Deployment Guidelines

- Read the appropriate WorkHorse User’s Guide and the Software User’s Guides. **These guides have tutorials to help you learn how to use the ADCP.**
- WorkHorse Sentinel batteries are shipped inside the ADCP but not connected. **Connect the battery and seal the ADCP before deployment.**
- Align the compass whenever the battery pack or recorder module is replaced, or when any ferrous metals are relocated inside or around the WorkHorse 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 Workhorse. **Ferro-magnetic materials affect the compass.**

8. How to Contact RD Instruments

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