

Sentinel Setup Card

1. Unpacking

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

2. Inventory

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

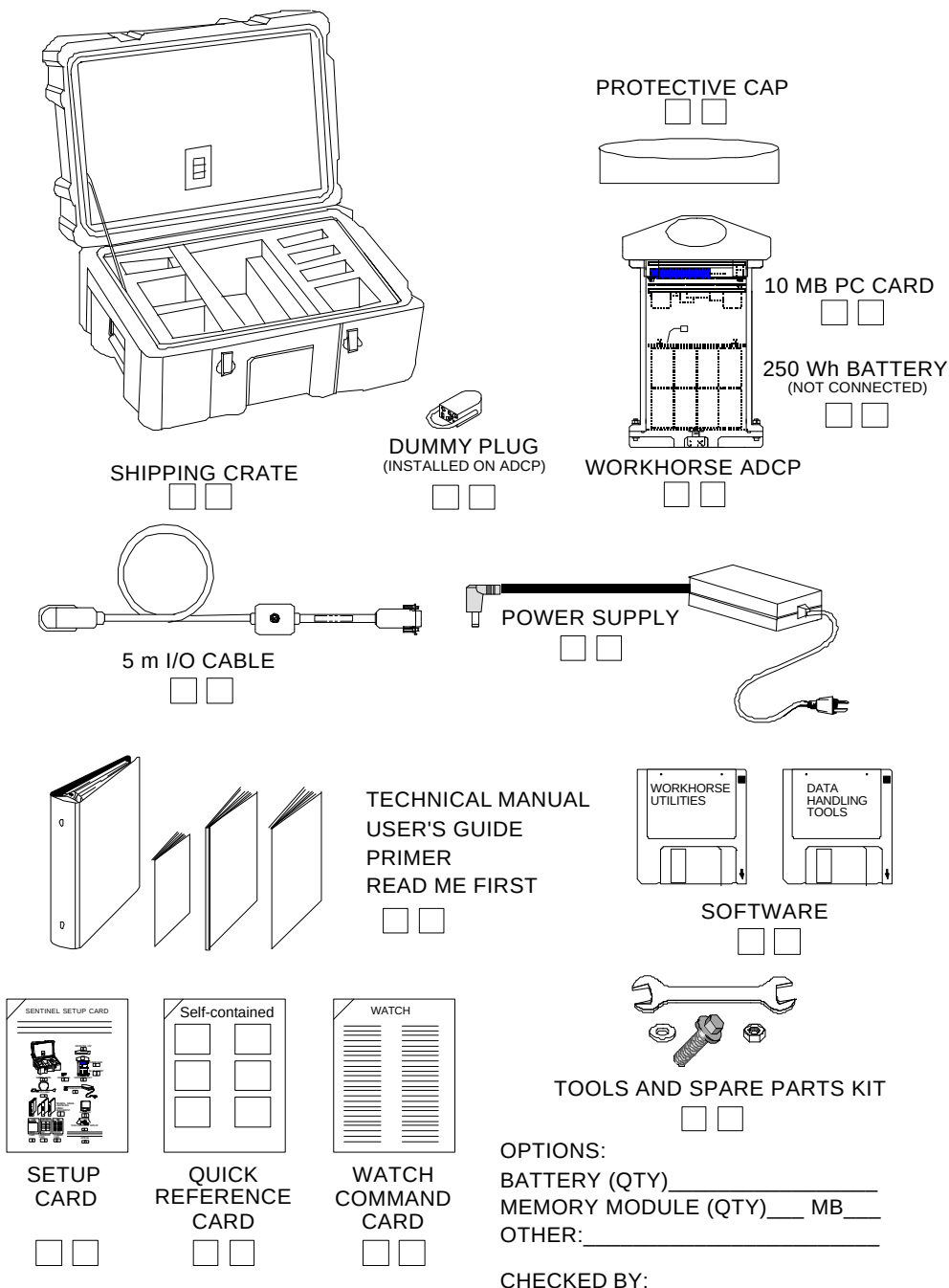


Figure 1. ADCP Inventory

3. Set Up the ADCP

Use this figure to connect the ADCP to a computer.

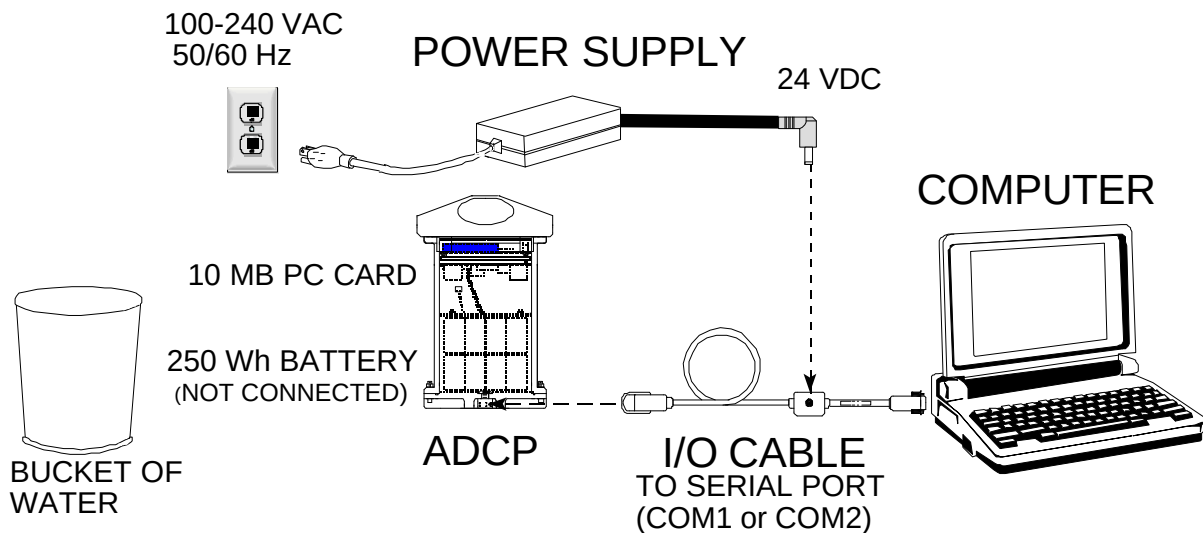


Figure 2. ADCP Connections

4. Install the Software

Before you can use the RDI programs, they must be installed on a hard drive. The programs on the distribution disk are compressed. By using the *INSTALL* program, all the programs will be installed to the directory you specify.

1. If you are running Windows 95, click “Shut Down...”, then “Restart the computer in MS-DOS mode”.
2. Place the **Workhorse Utilities** disk in the disk drive (usually the “A” drive).
3. Switch to the source drive (usually “A” drive) by typing `A: [ENTER]`.
4. Type `INSTALL destination directory`. For example, typing `INSTALL [SPACE] C:\WH [ENTER]` installs programs to the C:\WH directory. If the destination directory name does not exist, install will create the directory for you.

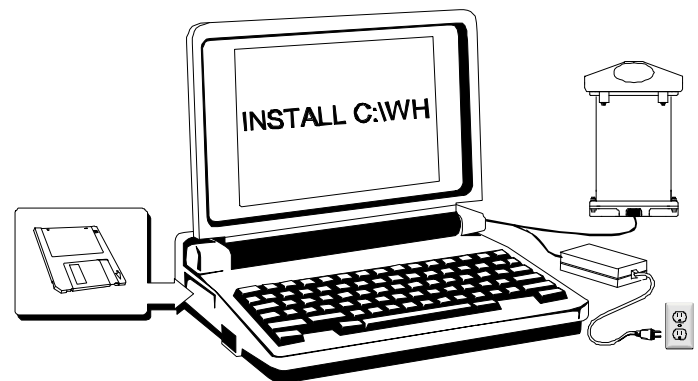


Figure 3. Installing the Software

5. Windows vs. DOS

Some Workhorse software works in Windows 95. If not, click “Shut Down...”, then “Restart the computer in MS-DOS mode”. You can also press the F8 function key during boot-up; this will display a menu that lets you start the computer in MS-DOS mode. If you still have problems, remove (actually, rename) your computer's AUTOEXEC.BAT and CONFIG.SYS files. This forces Windows 95 to use default values and removes other programs that may be interfering with Workhorse software operation. International users should load the appropriate keyboard driver (e.g., those in Italy would run KEYB IT).

If your computer is using Windows 95, you may get an error message “Not enough environment space” when installing or running RDI software. Some computers do not have enough environment space set aside (usually done through the CONFIG.SYS or AUTOEXEC.BAT files). To get the install routine to work or to run our software, do the following.

- a. At the DOS prompt type, COMMAND /E:2048
- b. Install the software as normal (i.e.; switch to the floppy drive and type INSTALL C:\dirname.
- c. After installing the software, type EXIT at the prompt. The computer is returned to the initial conditions. NOTE: Adding the line shown in step a to your CONFIG.SYS file will keep you from having to enter this command each time you run our programs.

6. Run CONNECT

Once the install program places the files on the hard drive, it will run a batch file called *CONNECT*. This program will establish communications with the ADCP and run the System Test to make sure the ADCP is functioning properly. If you have questions about *CONNECT* or installing the software, see the Workhorse Technical Manual (Chapter 1).

- 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. If you abort running *CONNECT* during the installation procedure, it can be run at any time by typing CONNECT  at the DOS prompt.
- c. At each prompt, press Y to continue, or N to quit *CONNECT*.

NOTE

CONNECT creates the file called BBTALK.PTR in step 3. All of our software uses this file to find out how to communicate with the ADCP. You must run *CONNECT* at least once before using any other RDI program.

7. Where to Go From Here

Once you have successfully run *CONNECT*, you are ready to begin planning a deployment. We suggest that you read the documentation in the following order.

The Read Me First covers:

- Last minute changes to the manual and other helpful information about your system.

The Technical Manual covers:

- **Initial Equipment Inspection and Setup.** Use the *Setup Card* and Chapter 1 to help unpack, inspect, install the software, and do a simple communication test with the ADCP.
- **Collecting Data.** Chapter 2 covers planning a deployment and self-contained data recovery. Use the *Quick Reference Card* and *User's Guide* once you are familiar with the ADCP operation.
- **Viewing Data.** Chapter 3 covers real-time data collection (*WATCH*), data playback, and using *BBLIST* to convert data to an ASCII format. Use the *Quick Reference Card* and the *WATCH Command Reference Card* once you are familiar with the ADCP operation.
- **Maintenance.** Chapter 4 covers ADCP maintenance. Use this chapter to make sure the ADCP is ready for a deployment.
- **Test Procedures.** Chapter 5 covers ADCP test procedures and compass alignment. You should test the ADCP before your deployment.
- **Troubleshooting.** Chapter 6 covers troubleshooting the ADCP. If the ADCP fails a built-in test, use this chapter to help locate the problem.
- **Data Analysis.** Chapter 7 is an overview on processing data after a deployment and using the Data Handling software included on the BBTOOLS disk. Use this chapter to validate your data.
- **Appendixes.** Appendixes cover system overview, commands, and specifications and dimensions.

The User's Guides covers:

- These booklets contain pointers, figures, and suggestions to make your deployments more reliable and effective.
- A step-by-step deployment guide.

8. Workhorse Care

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

General Handling Guidelines

- Never set the transducer faces on a hard or rough surface. The urethane faces may be damaged.
- 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 scratch or damage the plastic o-ring surfaces or grooves. All o-ring grooves and surfaces must be inspected for scratches or damages on every re-assembly. If scratches or damage exist, they must be sanded out using 400 to 600 grit sandpaper. If the damage can not be repaired, contact RDI. 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 will break.

Assembly Guidelines

- 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.
- A light amount of DC-111 lubricant on the underwater-connect cable and dummy plug connector pins (rubber portion only) will make them easier to connect or remove.
- Do not over tighten the transducer or end-cap mounting hardware. If you over-tighten the bolts, you can crack or break the plastic flanges. The plastic bushing must not be damaged or warped. Over a long period, over-tightening can cause the plastic to creep (permanent deformations are formed primarily at the edges of washers). Consequently, under-torquing the transducer or end-cap mounting hardware can cause the Workhorse to flood. Read Chapter 4 - Workhorse re-assembly.
- Make sure the O-rings stay in their groove when you re-assembly the Workhorse. Tighten the hardware as specified. Read Chapter 4 - Workhorse re-assembly.

Deployment Guidelines

- The AC power adapter is not designed to withstand water. Use caution when using on decks in wet conditions.
- Align the compass whenever the battery pack is replaced.
- Avoid using ferro-magnetic materials in the mounting fixtures or near the Workhorse. They effect the compass.
- Before you deploy the ADCP, you must connect the battery (Sentinel systems only). Refer to Chapter 4 in the Workhorse Technical Manual for instructions on ADCP assembly and battery connection.