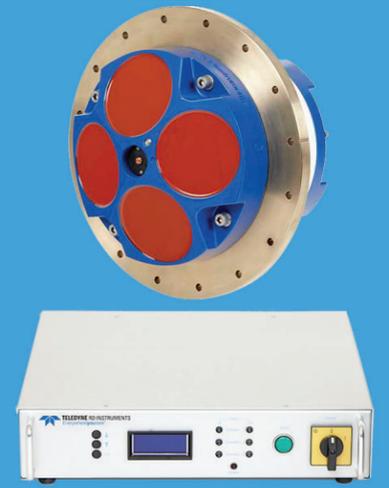# Getting Started with the WorkHorse Mariner

Step 1
Verify all parts are present
The standard Mariner ADCP includes:
- Mariner ADCP, Deckbox, and Adapter Plate
- I/O Cable
- Shipping case
- Spare Parts Kit
- USB to Serial adapter
- Software and Documentation download instructions

Step 2
Download the Software and Documentation
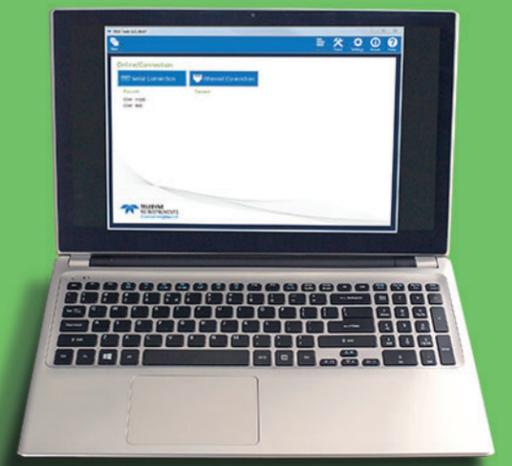See Deployment Guide for details:
- Install TRDI Toolz
  - WH systems: Install PlanADCP
  - WHII systems: Install Workhorse II Plan, ISM Compass Calibration, Compass Post Calibration
- Install WinADCP, other as needed
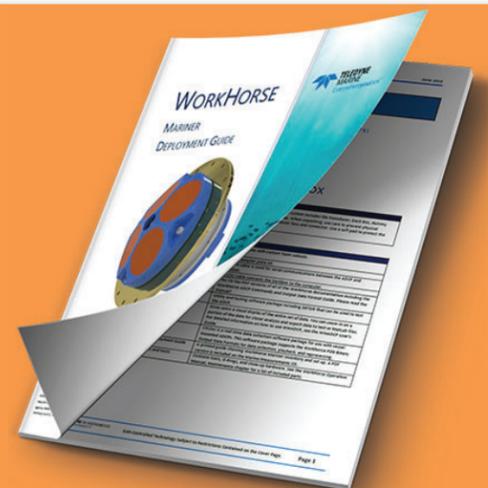- Download WorkHorse manuals

Step 3
Communication and Power Setup
See the reverse side of this guide for detailed instructions.

Step 4
Read the Deployment Guide

Product Features

- **Convenience**: By installing the Mariner directly in the vessel 's hull, the ADCP is always ready to operate —no need for cumbersome mounting tools and hardware, and the unit is safely protected from external elements.

- **A turn-key solution**: The Mariner comes complete with all the tools you need to go straight to work to collect high resolution current profiling data

- **A four-beam solution**: Teledyne RDI's patented 4-beam design improves data reliability, improves data quality, and improves data accuracy.

- **Precision data**: Teledyne RDI's patented BroadBand signal processing delivers very low-noise data, resulting in unparalleled data resolution and minimal power consumption.

- **Upgrades**: Original Workhorses can receive Workhorse II upgrades and continue to be serviced for many more years of successful deployments.
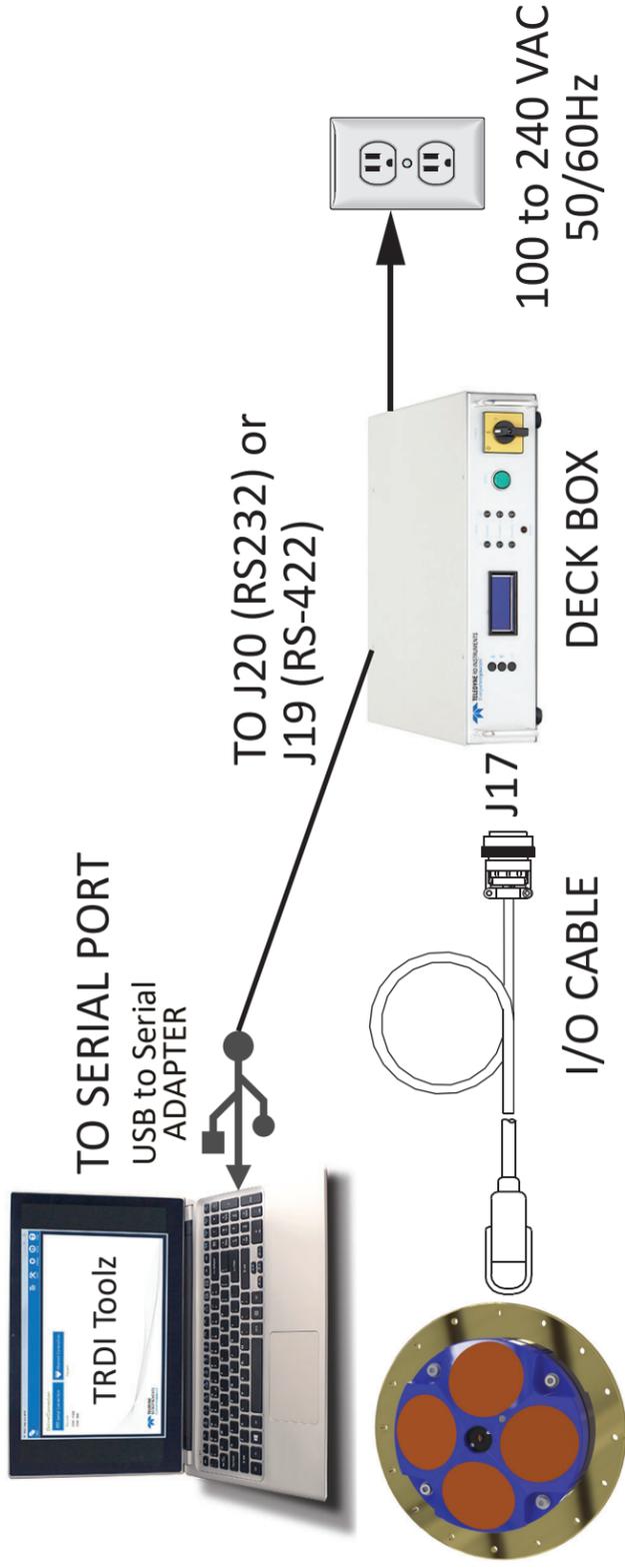
Applications

Teledyne RD Instruments' Workhorse Mariner acoustic Doppler current profiler (ADCP) has become the instrument of choice for researchers and commercial surveyors working in coastal waters.

The Mariner offers all of the benefits of RDI's traditional ADCP products in a compact package designed specifically for coastal hull-mount applications. The unit is easily integrated into the vessel's DGPS input to provide integrated ADCP readings with precise position information.

- Seismic, Cable and Pipe Laying Vessel Operations
- Renewable Energy
- Biological/Oceanographic
- Environmental Management
- Coastal and Ocean Engineering
- Research Vessels
- Academic Coastal Oceanography

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Step 3 Communication and Power Setup – Detailed Instructions

Step 3 A Cable Connection Overview

TRDI Toolz

TO SERIAL PORT

USB to Serial ADAPTER

TO J20 (RS232) or J19 (RS-422)

J17

I/O CABLE

DECK BOX

100 to 240 VAC 50/60Hz

Step 3 B Connecting the I/O Cable

1. Place the ADCP on its transducer face on a soft surface.

2. Remove the Dummy Plug and lubricate the connector.

3. Push the I/O cable straight onto the connector ensuring the pins are properly aligned. Roll the retaining strap over the connector. Connect the I/O cable to the Deckbox J17.

4. Attach the serial cable to the computer's serial communication port or connect the USB adapter to a spare USB port. Attach the cable to the Deckbox J20 (RS-232) or J19 (RS-422).

5. Connect AC power to the Deckbox.

6. Establish communications with the ADCP.
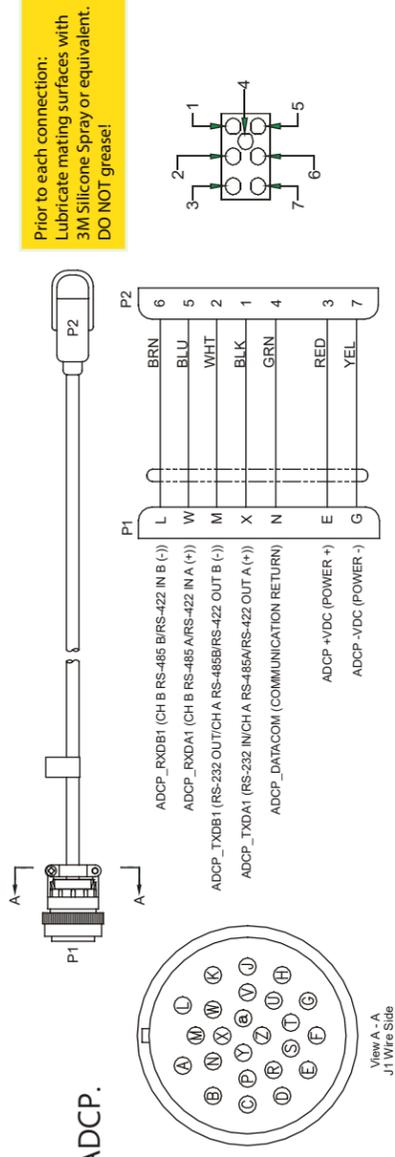
Step 3 C Setting Up the Communications

To establish communications with the WorkHorse:

1. Connect and power the system as shown in Steps 3A and 3B.

2. Start the *TRDI Toolz* software (installed in Step 2).

3. Select **New Serial Connection.**

4. Select the COM Port the serial cable is connected to and set the Baud Rate from the drop down lists.
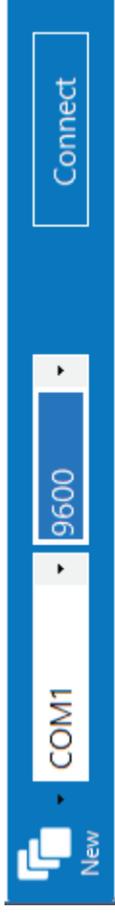
5. Click the **Connect** button. Once connected, the button will change to Disconnect.

6. Use **Alt+H** to switch to a Hard Break and then click the **Break** (⚡) button located at the bottom left of the terminal window. The wakeup banner below will be displayed.

How do I know if I have WH or WHII electronics?

Original WH Electronics:

```
[BREAK Wakeup A]
WorkHorse Broadband ADCP Version 5x.xx
Teledyne RD Instruments (c) 1996-2010
All Rights Reserved.
>
```

The system has the original Workhorse electronics installed. Use the PlanADCP software to create a deployment command file.

WHII Electronics:

```
[BREAK Wakeup A]
WorkHorse II Broadband ADCP Version 7x.xx
Teledyne RD Instruments (c) 1996-2022
All Rights Reserved.
>
```

The system has the Workhorse II electronics installed. Use the Workhorse II Plan software to create a deployment command file.

If you are unsure of the ADCP's baud rate, use Tools, Find ADCP. TRDI Toolz will try different baud rates until it connects to the ADCP. Refer to the Deployment Guide for further information.

If you don't know what com port(s) were added when using a USB to serial adapter, use Windows Device Manager® to determine the Com port. Remove the adapter, wait a moment, note the list of ports, reinsert the adapter and note the new port.

Install the USB to Serial adapter Virtual COM Port (VCP) driver. The free FTDI driver download page is available here: https://ftdichip.com/drivers/

Prior to each connection: Lubricate mating surfaces with 3M Silicone Spray or equivalent. DO NOT grease!

P1		P2
L	ADCP_RXDB1 (CH B RS-485 B/RS-422 IN B (-))	BRN 6
W	ADCP_RXDA1 (CH B RS-485 A/RS-422 IN A (+))	BLU 5
M	ADCP_TXDB1 (RS-232 OUT/CH A RS-485B/RS-422 OUT B (-))	WHT 2
X	ADCP_TXDA1 (RS-232 IN/CH A RS-485A/RS-422 OUT A (+))	BLK 1
N	ADCP_DATACOM (COMMUNICATION RETURN)	GRN 4
E	ADCP +VDC (POWER +)	RED 3
G	ADCP -VDC (POWER -)	YEL 7

View A - A
J1 Wire Side

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EAR99 Technology Subject to Restrictions Contained on the Cover Page.

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