

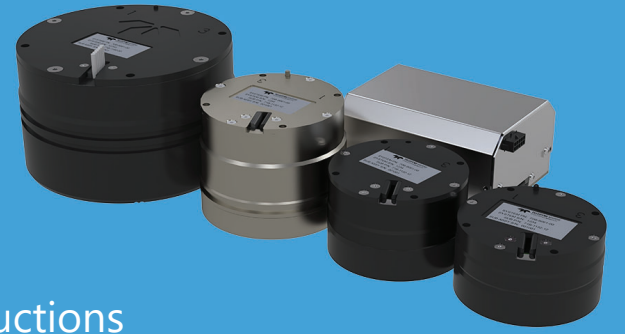
Getting Started with the Pathfinder OEM DVL

Step 1

Verify all parts are present

The standard DVL includes:

- Pathfinder OEM DVL and Electronics Chassis
- Pigtail Power/Comm Cable
- Shipping case
- Spare Parts Kit
- Software and Documentation download instructions

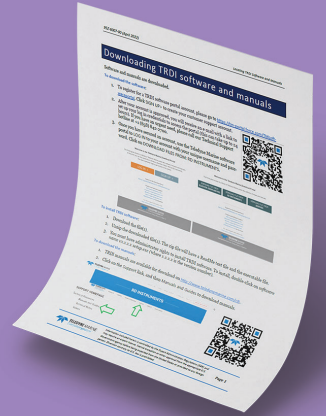


Step 2

Download the Software and Documentation

See Deployment Guide for details:

- Install TRDI Toolz software
- Install NavUI software
- Install other software as needed
- Download Pathfinder manuals



Step 3

Communication and Power Setup

See the reverse side of this guide for detailed instructions.



Step 4

Read the Integration Guide



The Pathfinder DVL is based on a TRDI patented Phased Array design which offers the following benefits:

- **Smaller Package** while keeping the same specs
- **Extended Range** from a smaller size array
- **Improved Low Altitude:** New advanced Bottom Detection method has been developed to allow for the Pathfinder DVL to track closer to the seabed
- **Improved Long Term Accuracy:** Our BroadBand algorithm has been fine tuned to allow for twice the accuracy
- **Improved position accuracy**

The Pathfinder DVL comes with our most advanced Bottom Tracking algorithm, Bottom Mode 8, which offers the following benefits over earlier bottom tracking instruments:

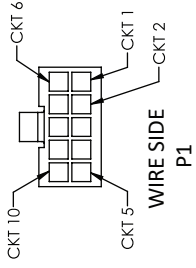
- **Better Handling of Tilted or Over Slope Operation**
- **High resolution altitude**
- **Lowered Energy Demand**
- **More Robust Bottom Detection**
- **Superior Station-Keeping Performance**

Step 3 Communication and Power Setup - Detailed Instructions

Step 3 A 10-Pin Power/Comm Connector Pinout

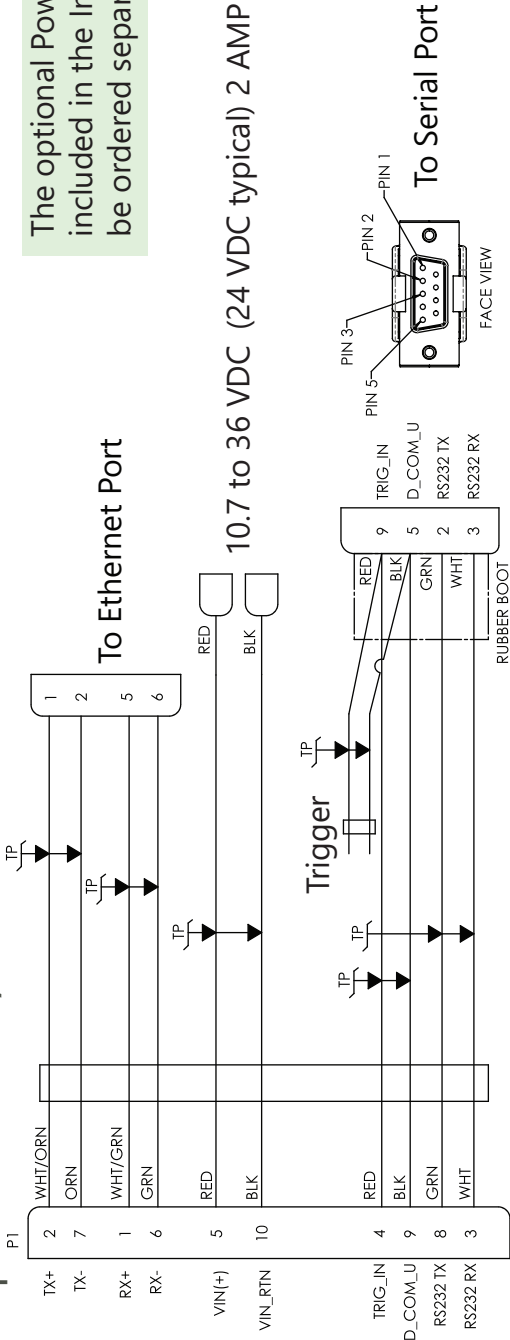
Wire the cable or use the optional Power/Comm Test Cable.

ETHERNET/RS-232	RS-422	71B-2051	71B-2061
5	PWR (+)	PWR (+)	PWR (+)
10	PWR RTN (-)	PWR RTN (-)	PWR RTN (-)
4	TRIG_IN	TRIG_IN	TRIG_IN
9	D_COM1	D_COM1	D_COM1
3	RX (RS-232)	NO CONNECTION	NO CONNECTION
8	TX (RS-232)	TRIG_OUT	TRIG_OUT
2	TX+ (ETHERNET)	TXA	TXA
7	TX- (ETHERNET)	TXB	TXB
1	RX+ (ETHERNET)	RXA	RXA
6	RX- (ETHERNET)	RXB	RXB



MATING CONNECTOR: MOLEX 0430251008
PINS (CRIMP): MOLEX 0430300009

Optional Power/Comm Test Cable



The optional Power/Comm Test cable is included in the Integration Kit, which must be ordered separately.

Step 3 C Setting Up the Communications

To establish communications with the Pathfinder:

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** or **New Ethernet Connection**. The **command and control port can be Serial or Ethernet, but not both**.
 4. Enter the Pathfinder's communication settings.
- For **Serial** comms select the COM Port the cable connected to and set the Baud Rate to 115200.



For **Ethernet** comms enter the Static DHCP server IP or host name 192.168.1.100 - for Dynamic DHCP networks, see the Integration Guide for information on how to determine the IP Address.

Enter the Port Number 1033

Select TCP



5. Click the **Connect** button. Once connected, the button will change to Disconnect.

6. Click inside the terminal window and then click the Break (⚡) button located at the bottom left of the terminal window. The wakeup banner below will be displayed.

```
DVL
Teledyne RD Instruments (c) 2021
All rights reserved.
Firmware Version: 83.xx
Current time is: 21/12/22,09:01:38.47
Break received, serial
>
```



Refer to the Integration Guide for further information.

Step 3 B Connecting the Power/Comm Cable

Place the Pathfinder transducer face down on a soft surface.

1. With an ESD wrist strap on, remove the top cover on the transducer. Loosen, but do not remove the two screws next to the cable exit slot.

2. Connect the cables and ground wire on the transducer. The 600 kHz transducers have 3-pin beam cables with the beam number on the connector and are color-coded: Beam 1 = black, Beam 2 = red, Beam 3 = yellow, Beam 4 = blue. The 300 kHz transducer has ROW and COLUMN cables. The ground wire on the ROW cable is covered in heat shrink so the customer has an option if they want to ground the transducer to the chassis.

3. Attach the Leak/Temperature cable to the 4 pin connector (2-pin on 300 kHz).

4. For 600 kHz systems, remove the screw and attach the ground wire lug. Tighten the ground screw to 4 IN-LB.

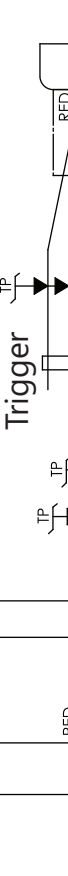
5. Thread the cables through the slot and attach the cover. Tighten the four M3 screws on the cover to 4 IN-LB. Tighten the two screws next to the cable exit slot to hold the cables in place.

6. Connect P1 to the Electronics Chassis.

7. Attach the Power/Comm cable to the computer's serial or Ethernet communication port.

8. Connect +12 to 36 VDC (24 VDC typical) power. The power supply should be able to source at least 1.5 to 2 Amps.

9. Refer to the Integration Guide for further information.



Refer to the Integration Guide for further information.