

# Getting Started with the 150 kHz Pioneer DVL

## Step

# 1

## Verify all parts are present

The standard DVL includes:

- Pioneer DVL with Dummy Plug
- Power/Comm Pigtail 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 Pioneer manuals

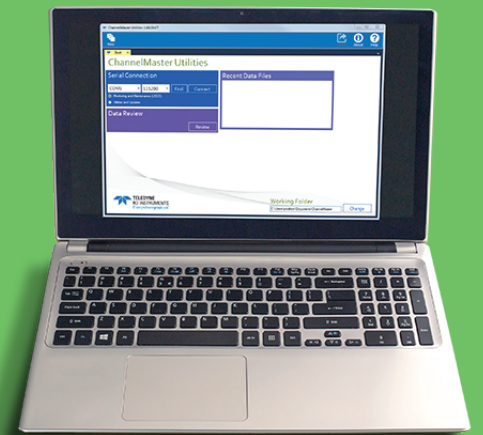


## Step

# 3

## Communication and Power Setup

See the reverse side of this guide for detailed instructions.



## Step

# 4

## Read the Integration Guide



### PRODUCT FEATURES:

- Bottom-tracking capability for deep water operations: 6000 meter depth rating for tracking ranges 500 m
- Optional XRT (Extended Range Tracking) delivers up to a 60% increase in bottom tracking range
- Compact DVLs that can be packaged into small portable UUVs of 7.5 inches (<19 cm) in diameter
- Flexible triggering with both trigger in and trigger out
- Multiple communications channels, allowing for optimum connectivity with external sensors
- Real-time current profiling option provides additional critical data parameters from a single instrument

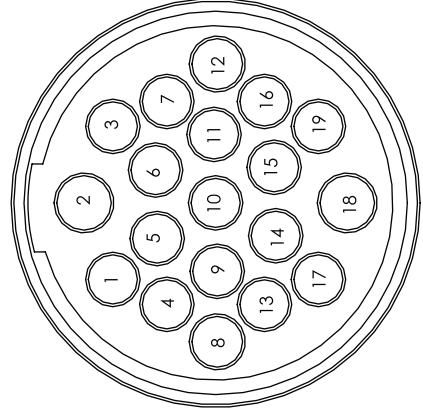
- Self-contained or remote-head options available
- Advanced AHRS IMU for accurate vehicle attitude correction in static and dynamic environments
- Leak detection and monitoring for peace of mind in the most critically demanding deep missions
- Transducer and system health monitoring for real-time health monitoring of your critical navigation asset
- Time of validity output for highly accurate coupling with an Inertial Navigation System (INS), further improving the resulting DVL-aided-INS position accuracy

# Step 3 Communication and Power Setup - Detailed Instructions

## Step 3 A Wiring the Standard Power/Comm Pigtail Cable

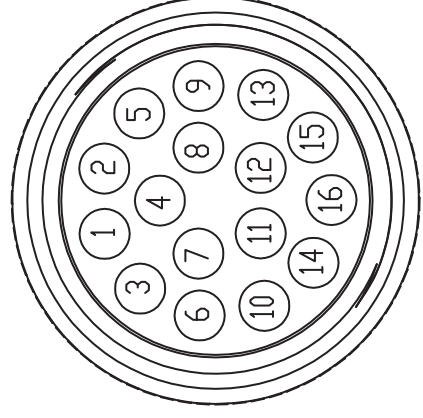
Wire the pigtail cable to the vehicle.

PIN	SIGNAL
1	NC
2	+DC_IN
3	NC
4	NC
5	TRIG_IN_U
6	NC
7	NC
8	NC
9	NC
10	D_COM1
11	NC
12	NC
13	RX422B
14	TRIG_OUT_U
15	NC
16	TX232 / TX422A
17	RX232 / RX422A
18	-DC_IN
19	TX422B



6000 METER DVL

PIN	SIGNAL
1	+DC_IN
2	NC
3	-DC_IN
4	TX422A
5	TX422B
6	NC
7	RX422B
8	D_COM1
9	TRIG_IN_U
10	NC
11	RX422A
12	TRIG_OUT_U
13	NC
14	NC
15	NC
16	NC



1000 METER DVL

## Step 3 B Connecting the Power/Comm Cable

- Place the Pioneer on its transducer face on a soft surface.
- Remove the Power/Comm protective cap and lubricate the connector.
- Push the cable straight onto the Power/COMM connector ensuring the pins are properly aligned. While keeping a slight inward pressure on the cable connector and ensuring that the connector is straight, thread the locking sleeve onto the receptacle to complete the connection.
- Attach the Power/Comm cable to the computer's serial communication port. Use an RS-422 to RS-232 adapter if the DVL is configured with port 1 as RS-422.
- Connect +28 to 48VDC power. The power supply should be able to source at least 4 Amps.
- Place the Pioneer system in water (at least a few inches to cover the transducer face).
- Establish communications with the Pioneer.

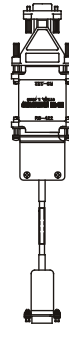
28 to 48 VDC  
(32 VDC typical)  
4 AMP



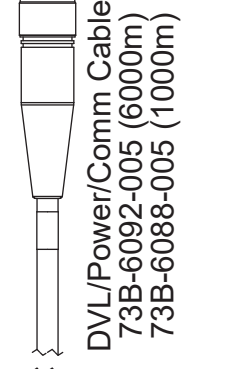
To Serial Port  
(COM1 or COM2)

\* RS-232 or use

RS-422 to RS-232 Adapter



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



DVL/Power/Comm Cable  
73B-6092-005 (6000m)  
73B-6088-005 (1000m)

Pioneer DVL Bucket of Water

## Step 3 C Setting Up the Communications

To establish communications with the Pioneer:

- Connect and power the system as shown in Steps 3A and 3B.
- Start the *TRDI Toolz* software (installed in Step 2).
- Select **New Serial Connection**.
- Enter the Pioneer's communication settings.

For **Serial** comms select the COM Port the cable connected to and set the Baud Rate to 115200.



- Click the **Connect** button. Once connected, the button will change to Disconnect.
- Click inside the terminal window and then click the **Break** (f) button located at the bottom left of the terminal window. The wakeup banner below will be displayed.

Pioneer DVL  
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Firmware Version: 57.xx



Refer to the Integration Guide for further information.