



Inclinometer Driver Description for Cutter Suction Dredges

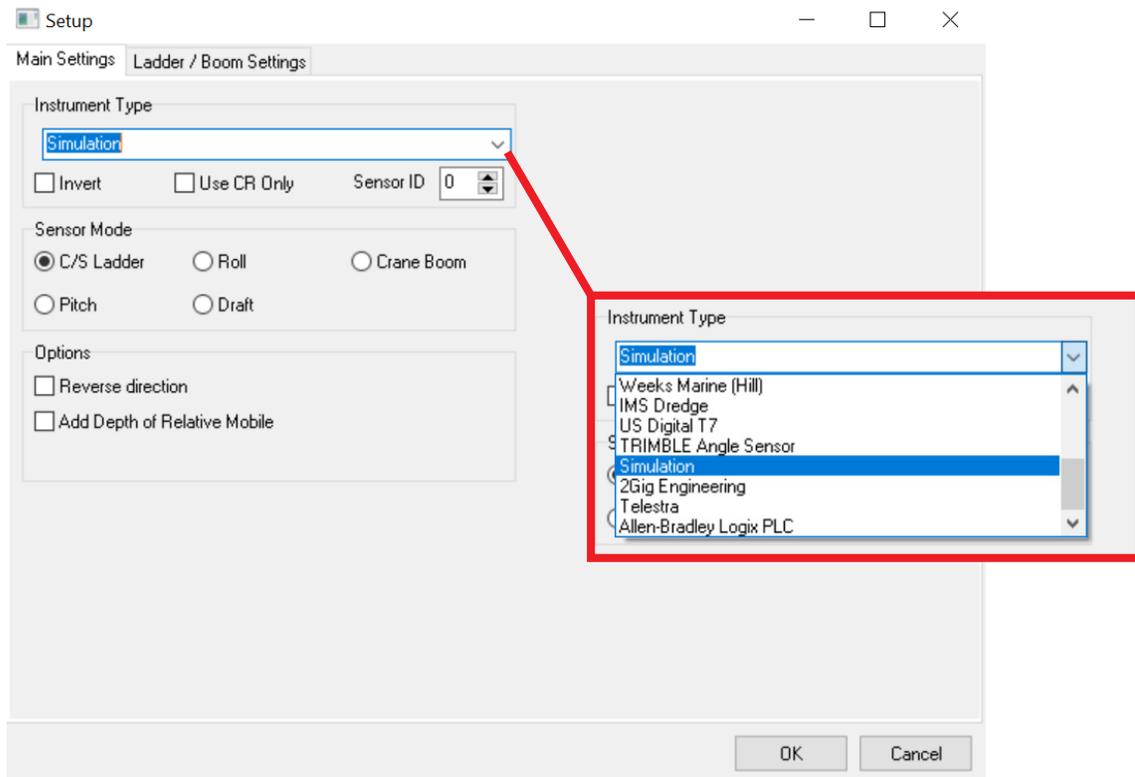
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This article goes over parameters found in the inclinometer.dll driver setup when working with a cutter suction dredge. When I work on different things, I sometimes forget the configurations of certain drivers. I created this document as a reference guide on inclinometer.dll to help users remember each parameter available in this driver.

Descriptions of available parameters on each tab are described below.

MAIN SETTINGS TAB

FIGURE 1. *Inclinometer.dll Main Settings Tab*



Instrument Type - Select the type of inclinometer you are using from this drop down menu. By default, the inclinometer.dll Setup window has the Main Settings and Ladder/Boom

Settings tabs. Selecting certain inclinometers (ex: Telestra, Allen-Bradley Logix PLC) will add a third tab with parameters specific to the selected inclinometer.

Invert - This option inverts ladder rotation values. For instance, if the ladder is rotating clockwise, enabling this option inverts the values so it rotates counterclockwise. If you see the ladder is rotating in the incorrect direction in DREDGEPACK®, you should enable this option.

Use CR Only - Normally at the end of a message, LF(Line Feed) CR (Carrier Return) is included. Use this option when the message doesn't contain a LF.

Sensor ID (Instrument Type) - ID only used with eTrac inclinometers.

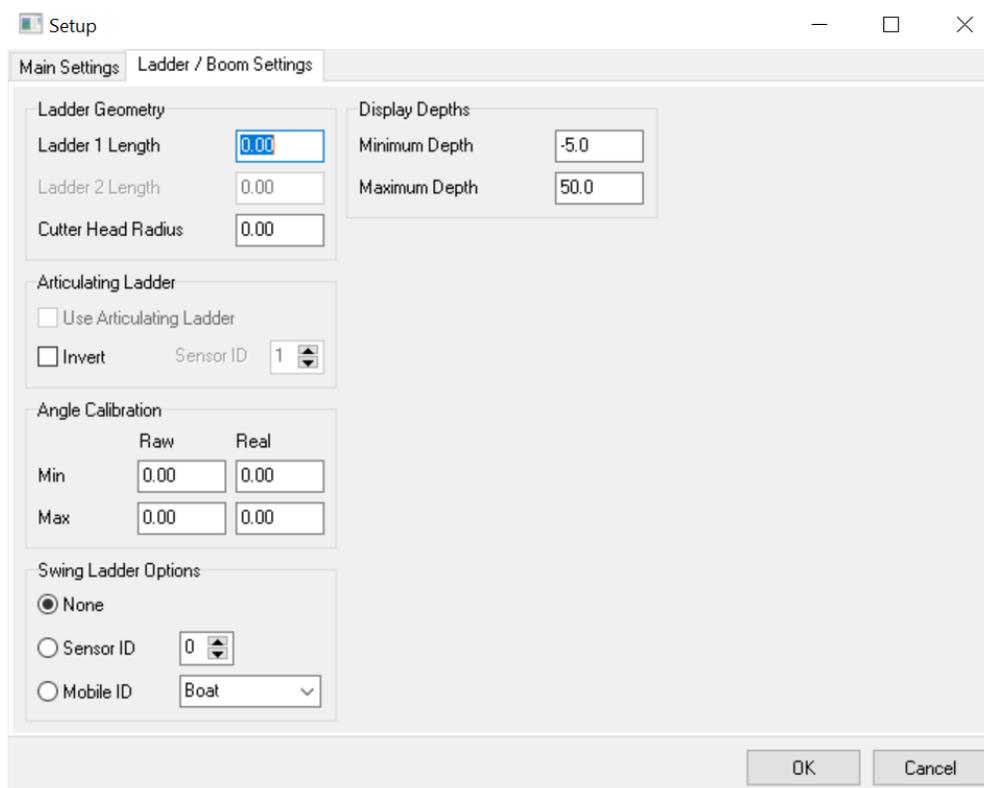
Sensor Mode - For cutter suction dredges, select C/S Ladder.

Reverse Direction - In DREDGEPACK®, this reverses the direction of the ladder on the dredge for C/S operation.

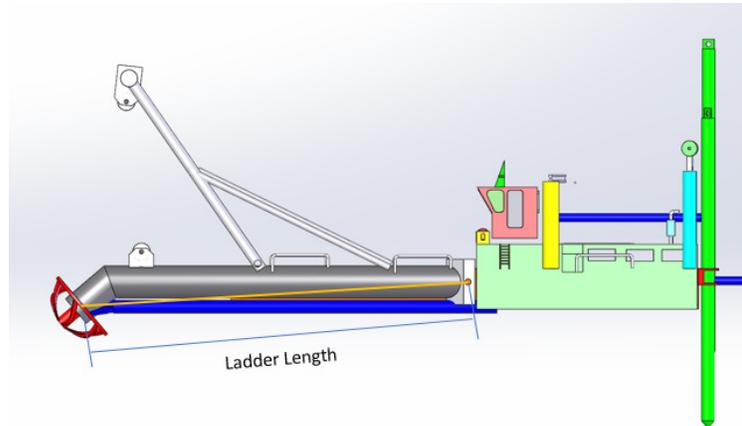
Add Depth of Relative Mobile - Uses the depth on the relative mobile and changes the Z-value for the trunnion. Keep this disabled if you are using RTK tides.

LADDER/BOOM SETTINGS TAB

FIGURE 2. Inclinometer.dll Ladder/Boom Settings Tab

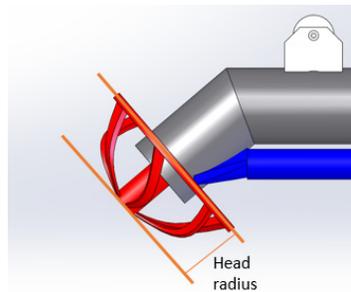


Ladder 1 Length - Enter the ladder length in survey units. Length is measured from ladder pin to front teeth of the cutter head.



Ladder 2 Length - Enter the distance from pin to cutter head when you have an articulating ladder.

Cutter Head Radius - This is the radius of the cutter head. See below image.



Use Articulating Ladder - Option only enabled when using eTrac inclinometers. It allows you to use two inclinometers, one on each ladder section.

Invert (Articulating Ladder) - Lower section is articulating ladder. If the articulating ladder is rotating in the opposite direction in DREDGEPACK®, enable this option.

Sensor ID (Articulating Ladder) - Only for eTrac inclinometers, you have to select the correct ID.

Angle Calibration (Min/Max and Raw/Real) - These values are only used for compensation when an analog sensor is being used.

Mobile ID (Swing Ladder Options) - When you have a rotating ladder, you have to select the Mobile ID where the rotation comes from. For cutter suction dredges, normally the swing sensor is configured in the same mobile as the inclinometer sensor. If you do not have a rotating ladder, select None.

