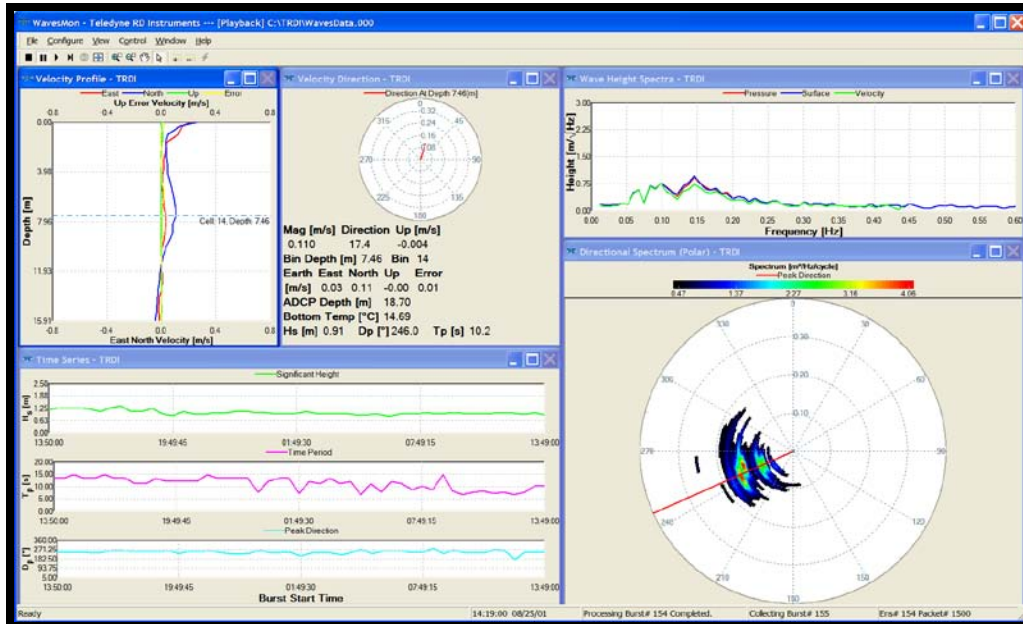


WavesMon v3.07

Quick Start Guide



P/N 957-6233-00 (May 2010)

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NOTES



WavesMon Quick Start Guide

Introduction

Thank you for purchasing the Waves upgrade for your WorkHorse ADCP. This Quick Start Guide will lead you through the steps required for a successful waves deployment. Please read the entire guide, and then follow the instructions in the order they are presented. Additional information can be found in the WavesMon User's Guide that is supplied on CD-ROM.



NOTE. To purchase a printed copy of the WavesMon User's Guide, contact our Customer Service department at rdifs@teledyne.com or call (858) 842-2600 and order P/N 957-6232-00.

The latest versions of our software can be downloaded through our Customer Support section on our web site (<http://www.rdinstruments.com/support/support.aspx>). You must register before you are able to download.

How to Contact Teledyne RD Instruments

If you have technical issues or questions involving a specific application or deployment with your instrument, contact our Field Service group:

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Client Services Administration – rdicsadmin@teledyne.com

Web: <http://www.rdinstruments.com>

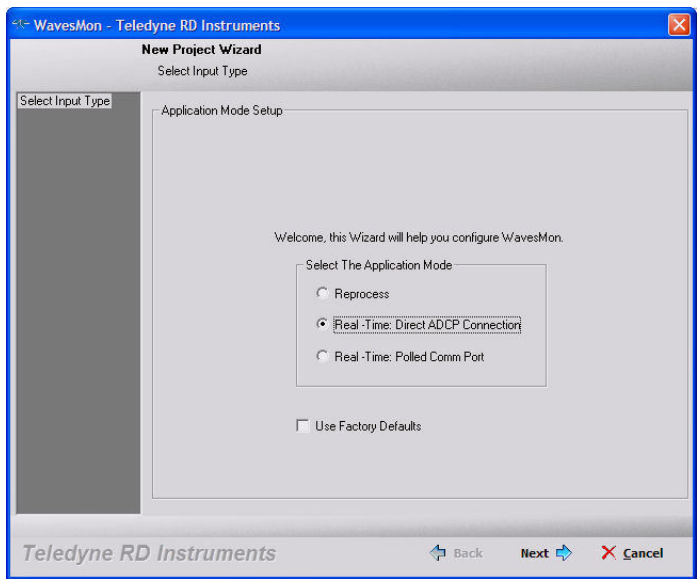
24 Hour Emergency Support +1 (858) 842-2700

Collecting Real-Time Data with *WavesMon*

WavesMon is designed for real-time data collection and processing of wave data gathered by a WorkHorse ADCP.

Real-time: Direct ADCP Connection

Use this option if the ADCP is connected to the computer running *WavesMon*.

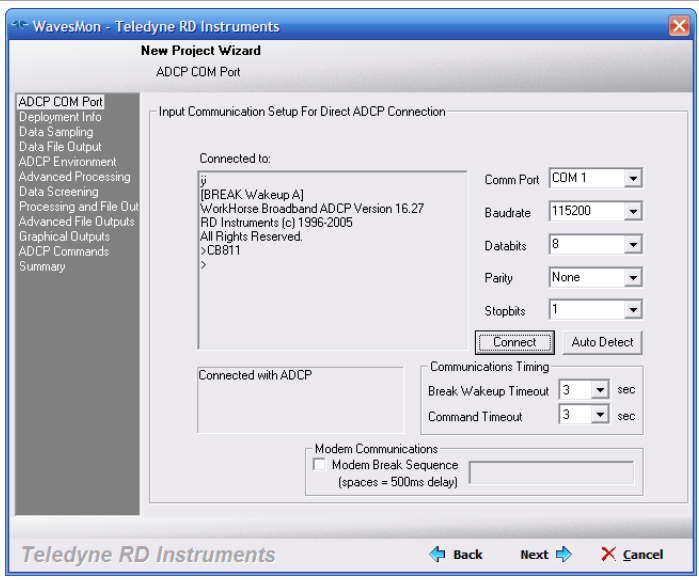


Start *WavesMon*.

On the **File** menu, click **New Project**.

At the **Select Input Type** dialog, choose **Real-time: Direct ADCP Connection**.

Click **Next**.



Enter the ADCP's communication settings. Try to select the fastest Baud rate that can reliably communicate with the ADCP.

Click the **Connect** button to test the communication settings. You should see the wake-up message in the **Connected to:** box.

Click **Next**.

WavesMon - Teledyne RD Instruments

New Project Wizard

Deployment Info

ADCP COM Port
Deployment Info
Data Sampling
Data File Output
ADCP Environment
Advanced Processing
Data Screening
Processing and File Out
Advanced File Outputs
Graphical Outputs
ADCP Commands
Summary

ADCP Type and Location

System Frequency
 1200 kHz
 600 kHz
 300 kHz

System Type
 Vertical: Up - Looking
 Vertical: Down - Looking
 Horizontal

ADCP Environment
 Depth: 10 m
 Altitude Above Bottom: 0 m
 Magnetic Variation: 0 deg

Other Options
 Moored (Dynamic) Mounting

Teledyne RD Instruments

Back Next

Select the ADCP's **System Frequency**.
Select the **System Type**.

Enter the **ADCP Environment** information. The **Depth** is the estimated depth of water from the ADCP face to the surface. The **Altitude** is the distance of the ADCP face from the seafloor. Enter the **Magnetic Variation** to correct the data from magnetic north to true north.

If the ADCP is using a **Moored (Dynamic) Mounting**, then check the box. (Note, this will force the ADCP to use UVW rather than array processing)

Click **Next**.

WavesMon - Teledyne RD Instruments

New Project Wizard

Data Sampling

ADCP COM Port
Deployment Info
Data Sampling
Data File Output
ADCP Environment
Advanced Processing
Data Screening
Processing and File Out
Advanced File Outputs
Graphical Outputs
ADCP Commands
Summary

Waves and Currents Sampling

Waves Sampling
 Burst Duration: 20 min
 Time Between Start of Bursts: 60 min
 Samples per Burst: 2400

Currents Sampling
 Time Between Averaged Ensembles: 10 min

Start Time
 Now
 Later: 4/21/2006 10:28:14 AM

Teledyne RD Instruments

Back Next

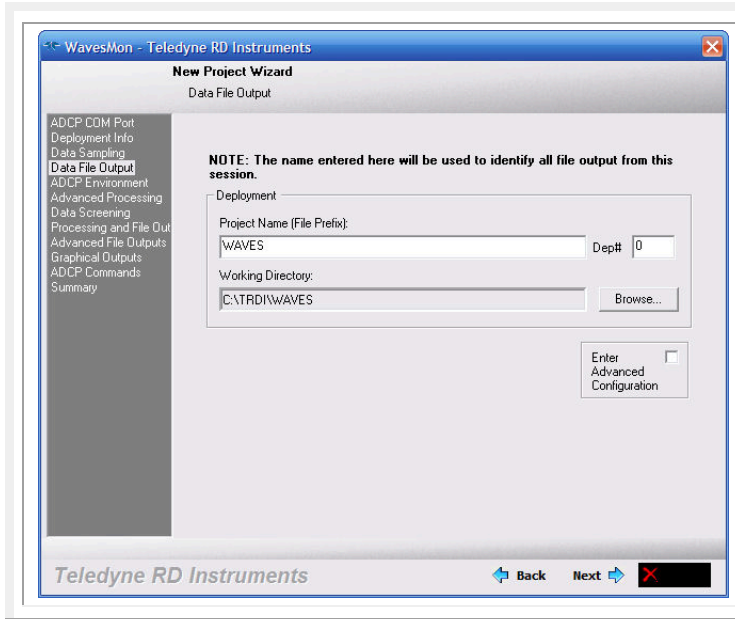
Set the **Waves and Currents Sampling** parameters.

Waves Sampling – enter the **Burst Duration** and the **Time Between start of Bursts**. The recommended setting is 20 minutes **Burst Duration** with 60 minutes **Time Between start of Bursts** and 2400 **Samples per Burst**.

Currents Sampling – enter the **Time Between Averaged Ensembles**. The recommended setting is 5 minutes.

Start Time – Click **Now** to start pinging as soon as the commands are sent, or **Later** to delay pinging. To make data analysis easier, it is recommended to delay the start time until the hour mark.

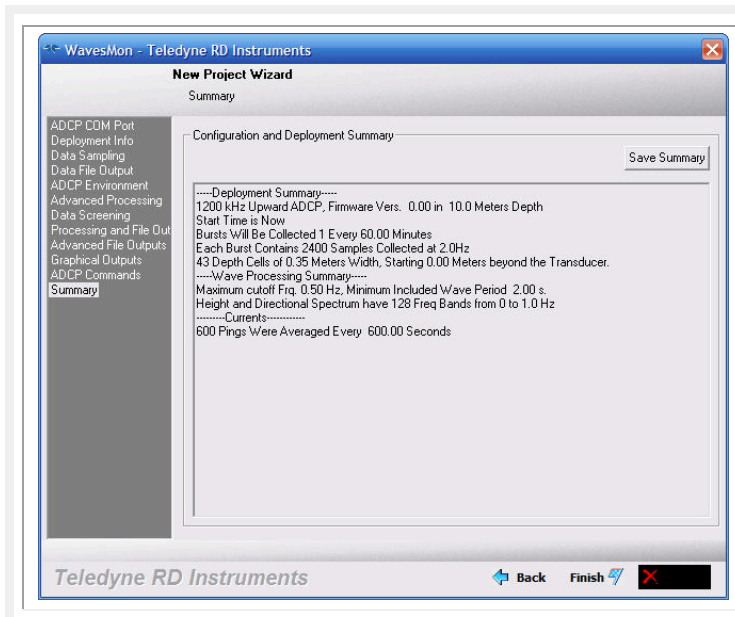
Click **Next**.



On the **Data File Output** dialog, name the Project file something meaningful. The output data files will be tied to the project file name and path.

For this Quick Start, leave the **Enter Advanced Configuration** box unchecked.

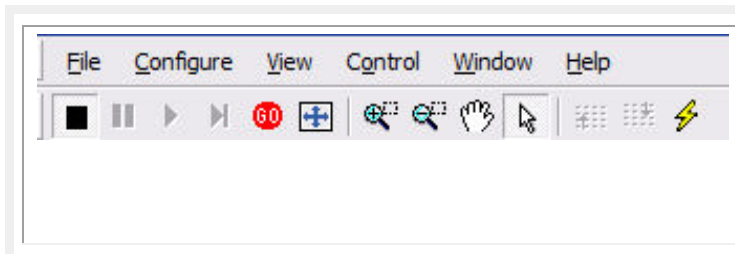
Click **Next**.



Review the Summary.

To save the **Configuration and Deployment Summary**, click **Save Summary**.

Click **Finish**.



Click the red **Go** button to begin collecting data. The commands created by *WavesMon* will be sent to the ADCP.

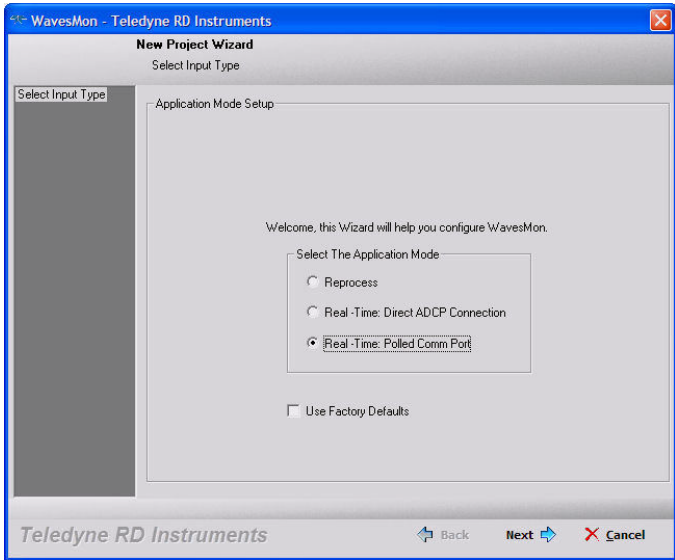
The screen will update as data is received (check the Status bar to see what the program is doing).



NOTE. If any ADCP command fails, a warning message will be displayed. Click **Stop** and review/correct the problem.

Real-Time: Polled Comm Port

The **Polled Mode** configures *WavesMon* to listen to the COM port only. While in the Polled Mode, data will continue to be collected. However, the user will not be able to send commands to the ADCP.

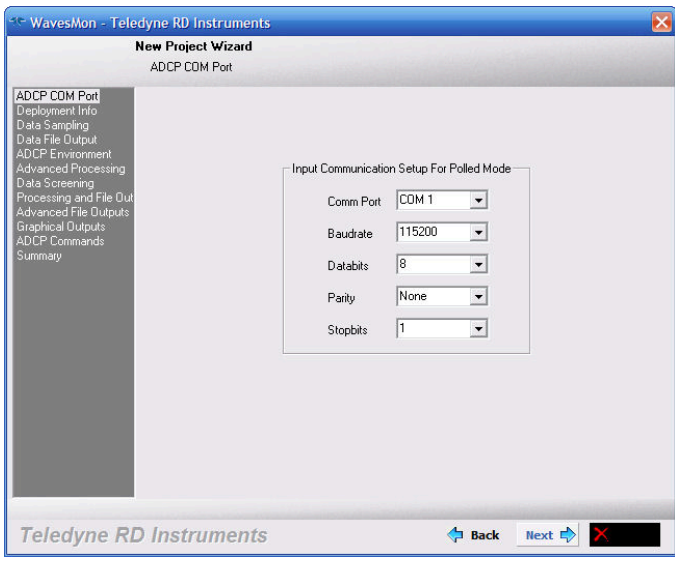


Start *WavesMon*.

On the **File** menu, click **New Project**.

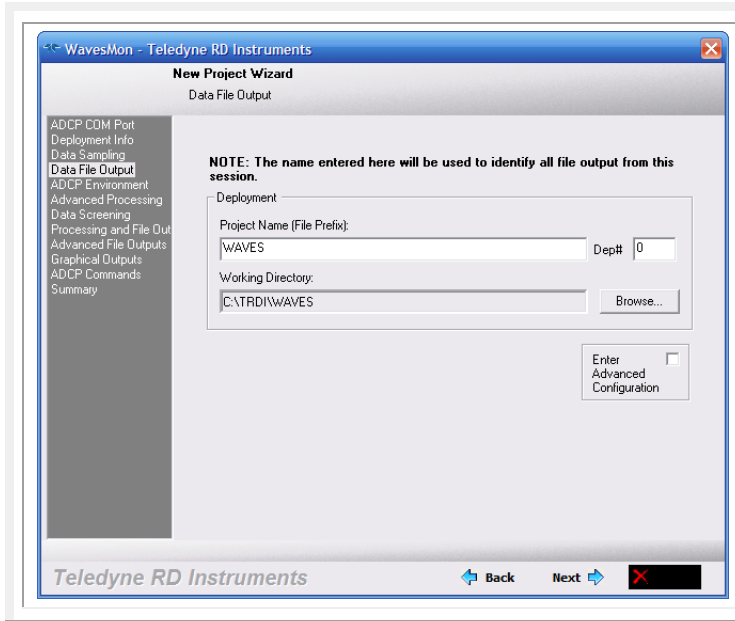
At the **Select Input Type** dialog, choose **Real-time: Polled Comm Port**.

Click **Next**.



Enter the ADCP's communication settings. Try to select the fastest Baud rate that can reliably communicate with the ADCP.

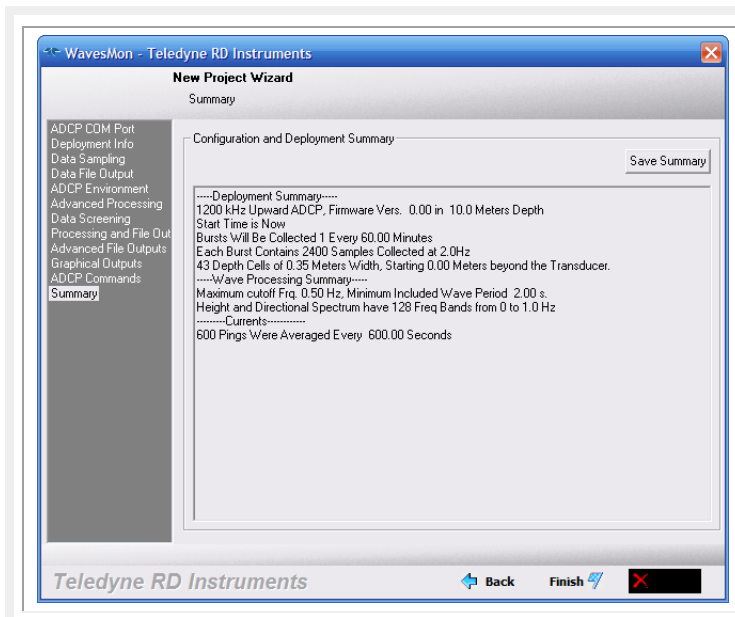
Click **Next**.



On the **Data File Output** dialog, name the Project file something meaningful. The output data files will be tied to the project file name and path.

For this Quick Start, leave the **Enter Advanced Configuration** box unchecked.

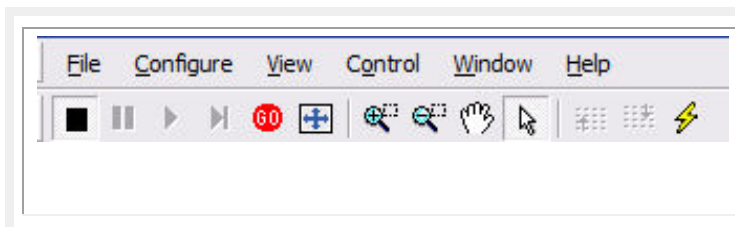
Click **Next**.



Review the Summary.

To save the **Configuration and Deployment Summary**, click **Save Summary**.

Click **Finish**.

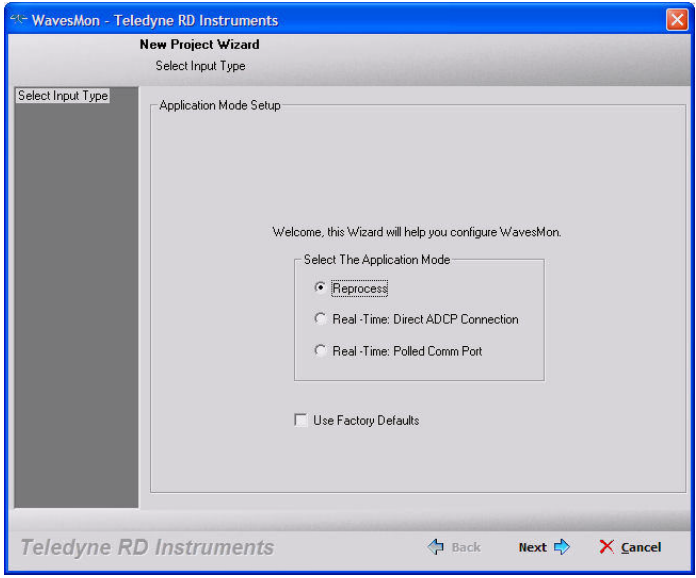


Click the red **Go** button to begin collecting data.

The screen will update as data is received (check the Status bar to see what the program is doing).

Reprocess Data with *WavesMon*

WavesMon can also be used for reprocessing the wave data gathered by a Self-Contained ADCP with Waves enabled. A sample data file named *WaveData.000* is included on the Waves CD. The file is not installed to your computer by default due to the large file size (approximately 90 MB).



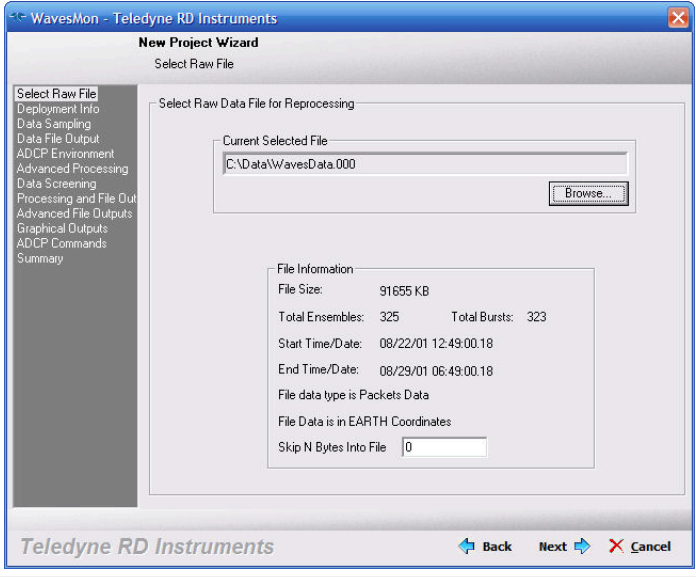
The screenshot shows the 'New Project Wizard' dialog box with the title 'WavesMon - Teledyne RD Instruments'. The 'Select Input Type' pane is selected on the left. The main area is titled 'Application Mode Setup' and contains a message: 'Welcome, this Wizard will help you configure WavesMon.' Below this is a section 'Select The Application Mode' with three radio buttons: 'Reprocess' (selected), 'Real-Time: Direct ADCP Connection', and 'Real-Time: Polled Comm Port'. There is also a checkbox for 'Use Factory Defaults' which is unchecked. At the bottom, there are 'Back', 'Next', and 'Cancel' buttons.

Start *WavesMon*.

On the **File** menu, click **New Project**.

At the **New Project Wizard** dialog, choose **Reprocess**.

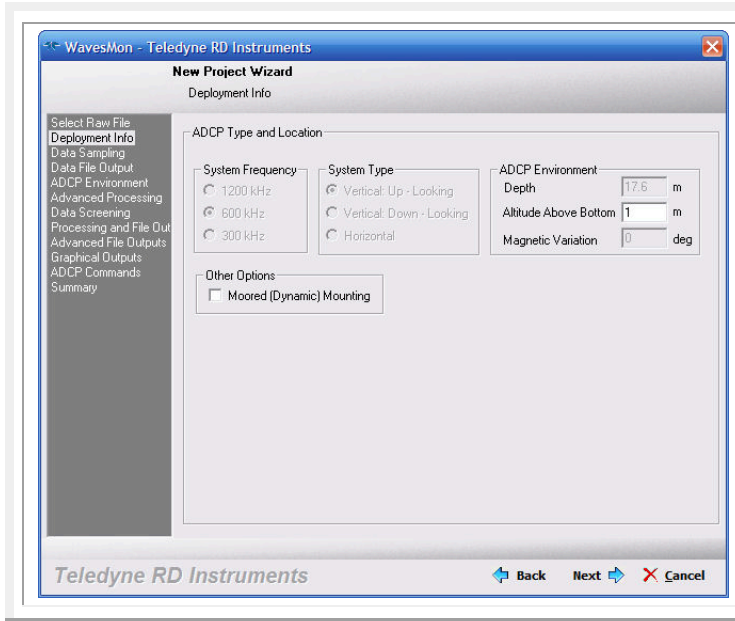
Click **Next**.



The screenshot shows the 'New Project Wizard' dialog box with the title 'WavesMon - Teledyne RD Instruments'. The 'Select Raw File' pane is selected on the left. The main area is titled 'Select Raw Data File for Reprocessing'. It shows a text box with 'Current Selected File' containing 'C:\Data\WavesData.000' and a 'Browse...' button. Below this is a 'File Information' section with the following details: File Size: 91655 KB, Total Ensembles: 325, Total Bursts: 323, Start Time/Date: 08/22/01 12:49:00.18, End Time/Date: 08/29/01 06:49:00.18, File data type is Packets Data, File Data is in EARTH Coordinates, and Skip N Bytes Into File: 0. At the bottom, there are 'Back', 'Next', and 'Cancel' buttons.

At the **Select Raw Data File for Reprocessing** dialog box, select the data file to be opened by using the **Browse** button.

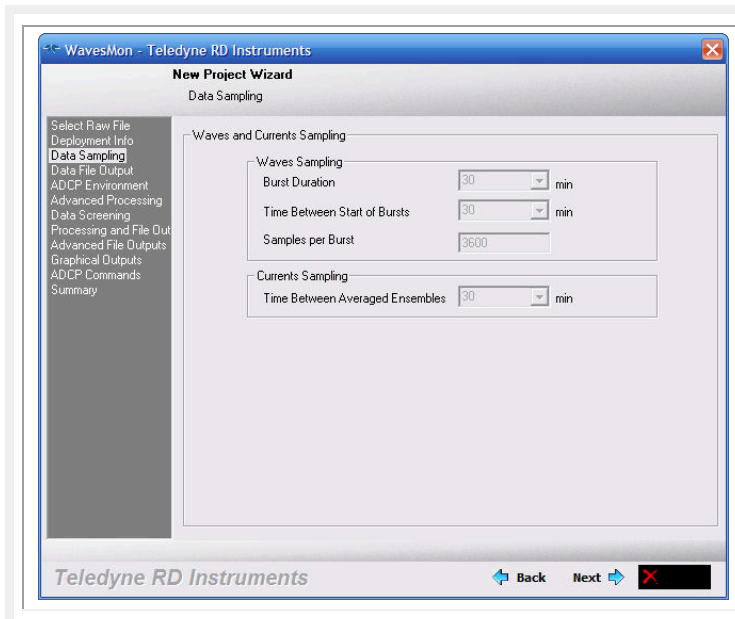
Click **Next**.



Enter the **Altitude Above Bottom** when the ADCP was deployed.

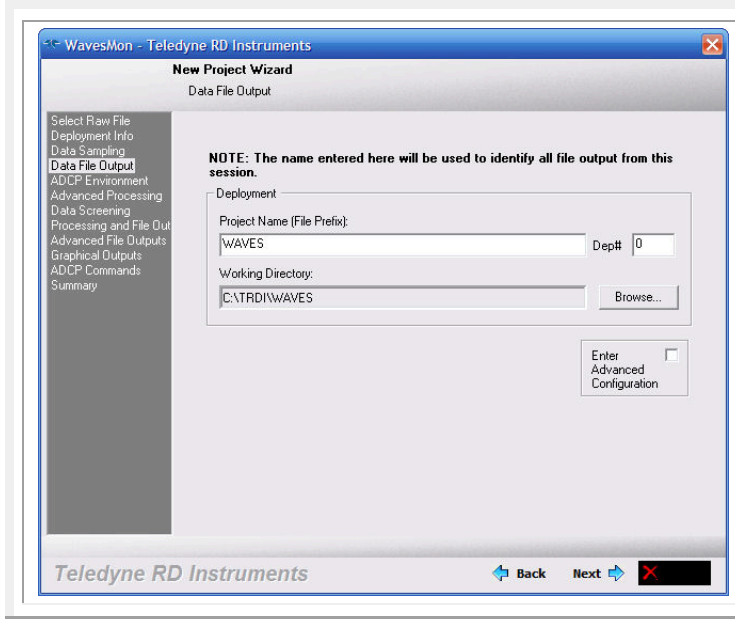
If the ADCP was using a **Moored (Dynamic) Mounting**, then check the box.

Click **Next**.



The **Data Sampling** screen shows the **Waves and Currents Sampling** parameters used during data collection. No changes are allowed.

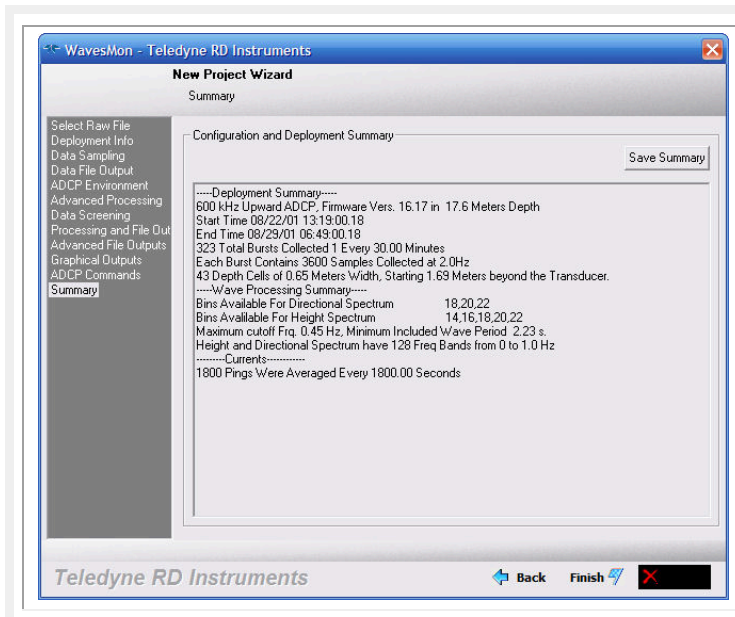
Click **Next**.



On the **Data File Output** dialog, name the Project file something meaningful. The output data files will be tied to the project file name and path.

For this Quick Start, leave the **Enter Advanced Configuration** box unchecked.

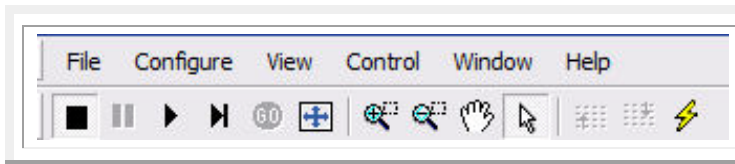
Click **Next**.



Review the summary.

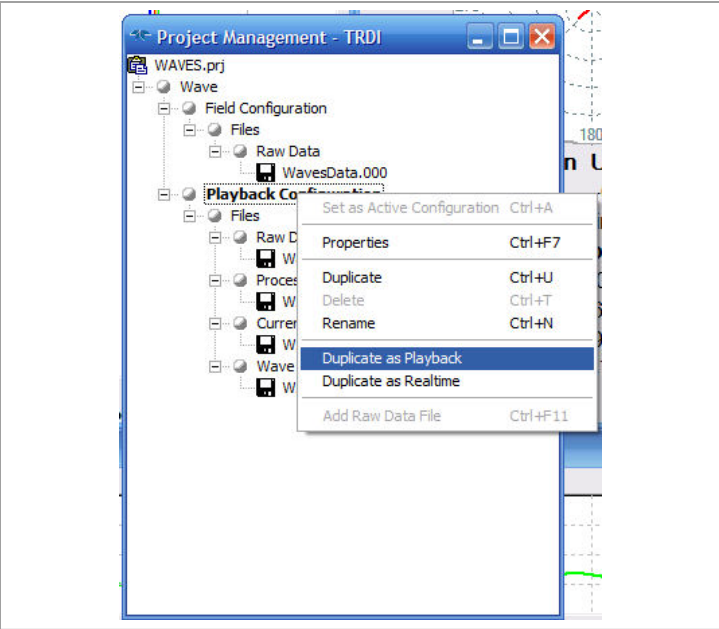
To save the **Configuration and Deployment Summary**, click **Save Summary**.

Click **Finish**.



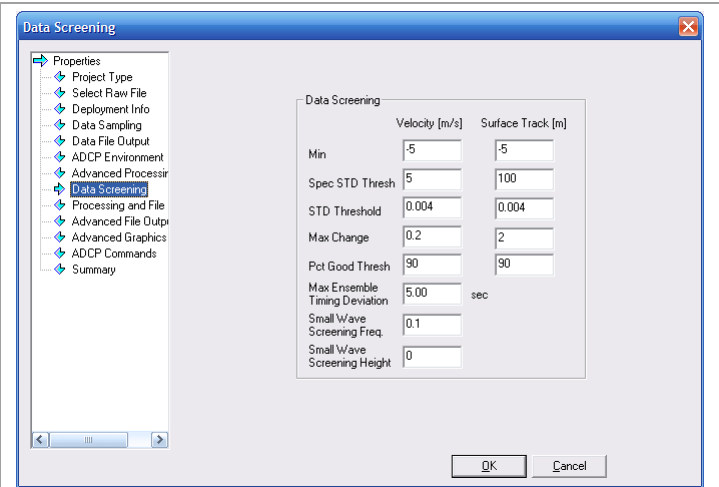
Click the ► button to begin processing.

Adjusting Playback Settings



On the **View** menu, click **Project Management**.

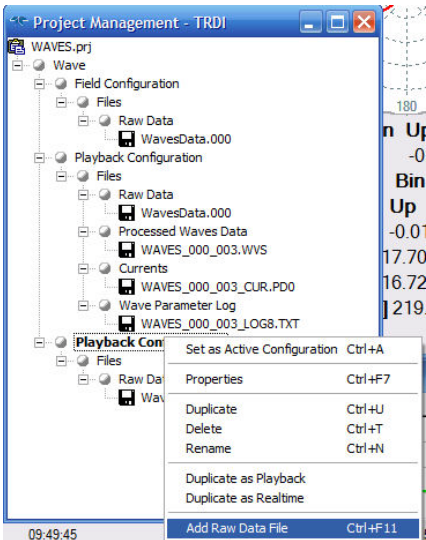
Right-click on the **Playback Configuration** node and select **Duplicate as Playback**.



Right-click on the duplicate **Playback Configuration** node and select **Properties**.

Make changes as needed to the properties. For details, see the Waves User's Guide.

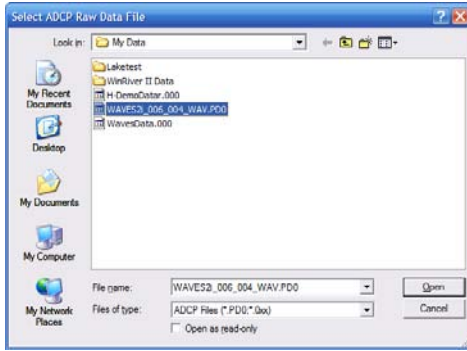
Batch Processing Data Files



If you have multiple data files that need to be processed, do the following.

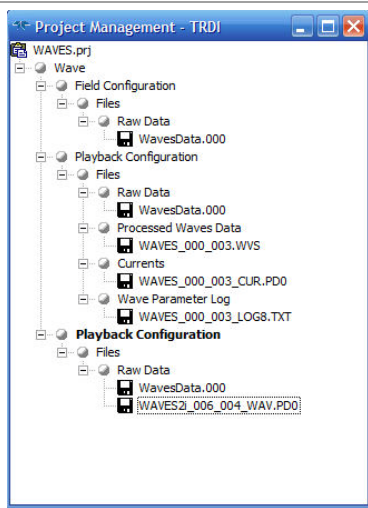
Duplicate the original Playback Configuration node by right-clicking on the **Playback Configuration** node and select **Duplicate as Playback**.

Right-click on the duplicate Playback Configuration node and select **Add Raw Data File**.



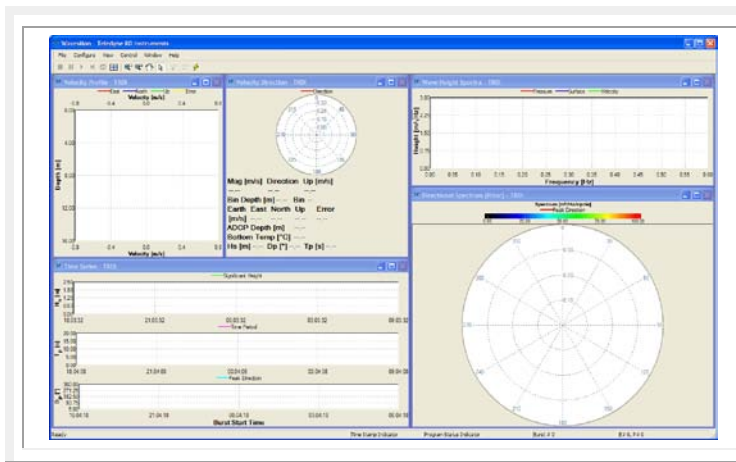
Select the waves raw data file (*.000 or *.PD0).

Click **Open**.



Repeat as needed to add multiple data files.

Export Raw Wave Burst Data

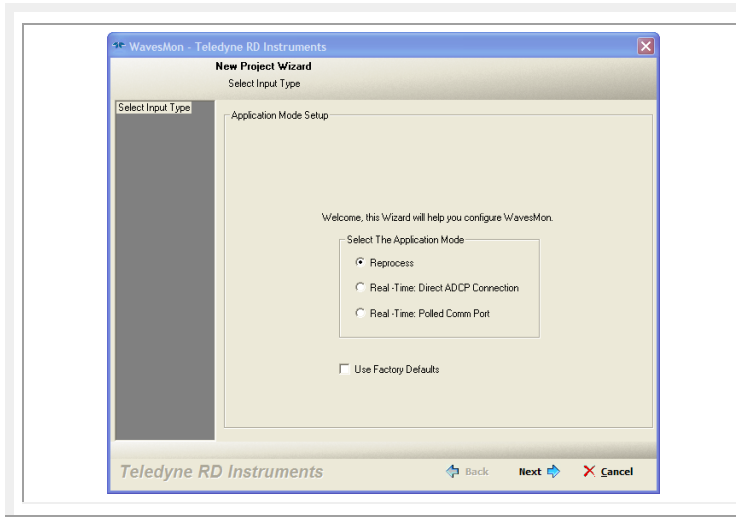


To save non processed data recorded during a waves burst, the save as text option should be marked in *WavesMon*.

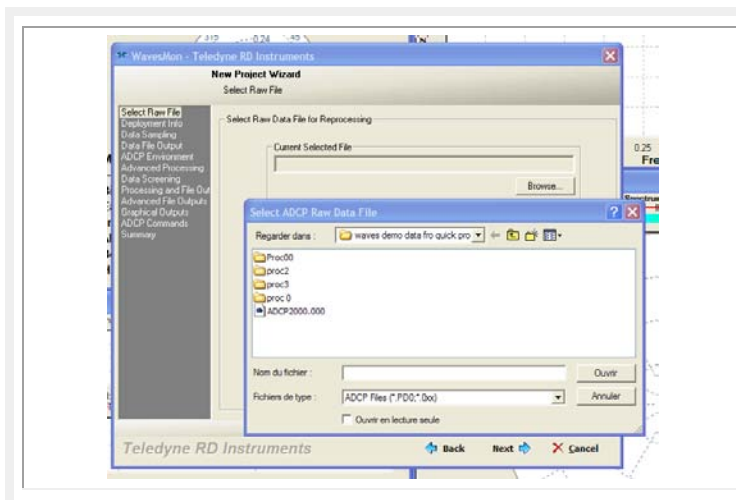
The following procedure describes all the steps to perform to process and save text raw data.

Open *WavesMon* and start a new Play-back project.

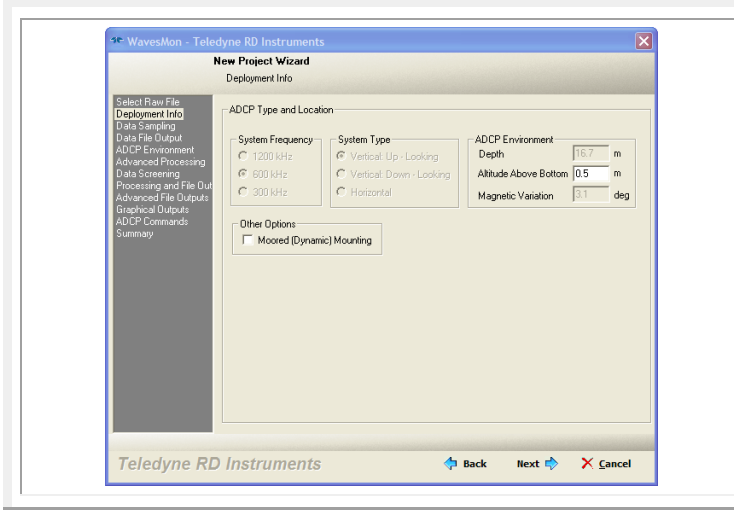
On the **File** menu, select **New waves Project**.



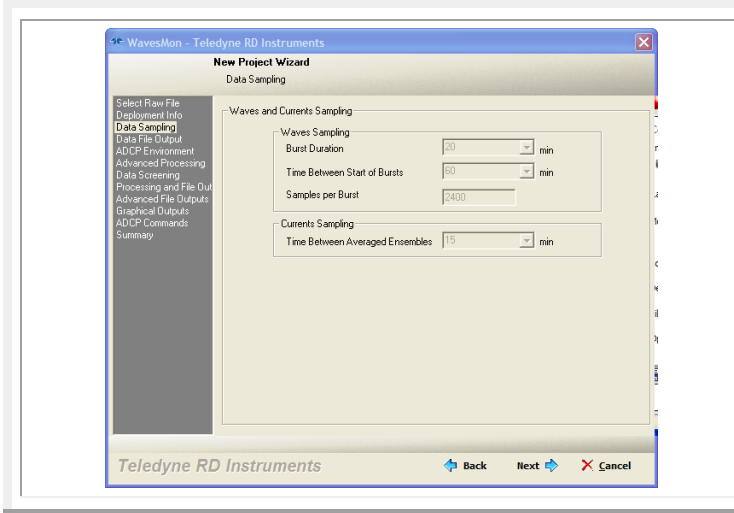
Select **Reprocess**.



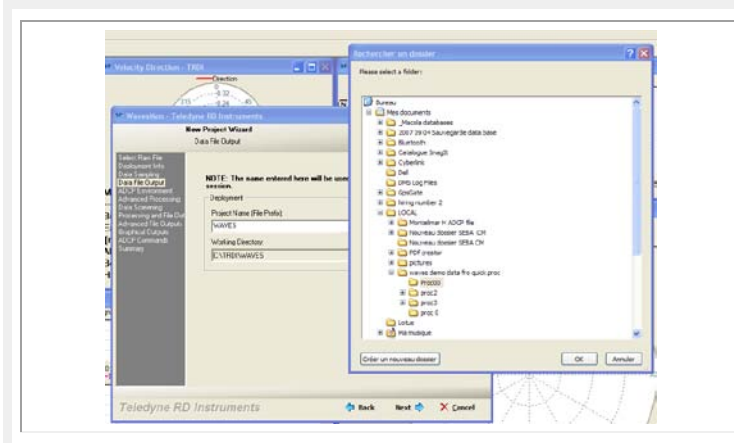
Select the raw data file.



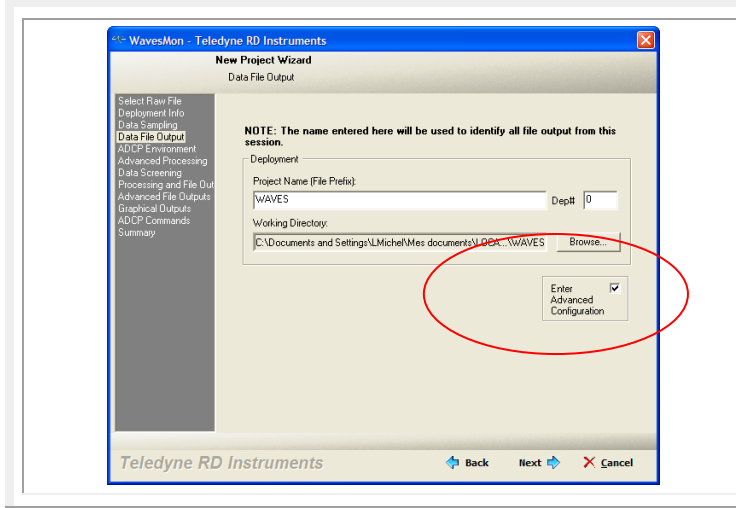
Enter the transducer altitude over the sea bed.



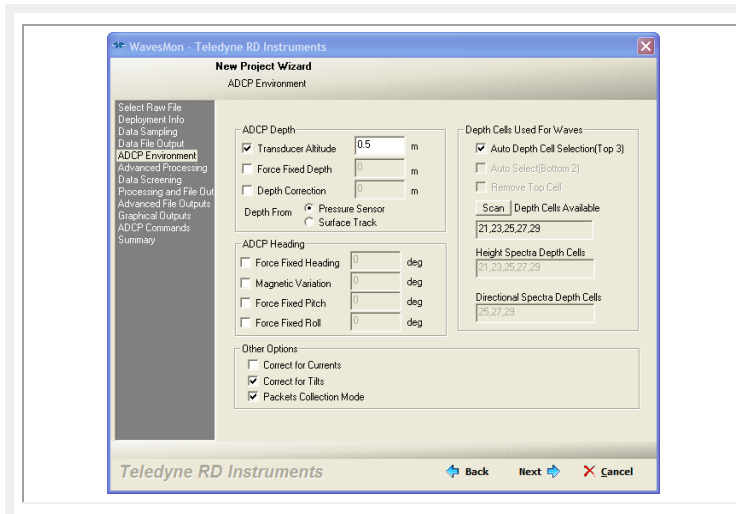
Click **Next**.



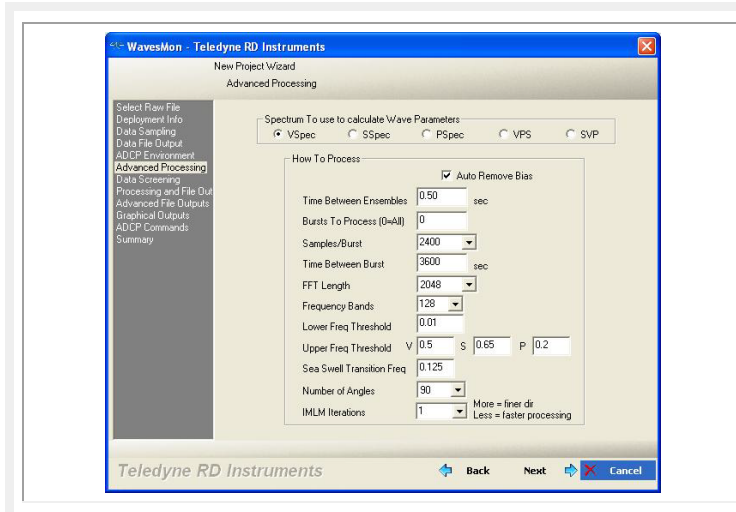
Select the output folder.



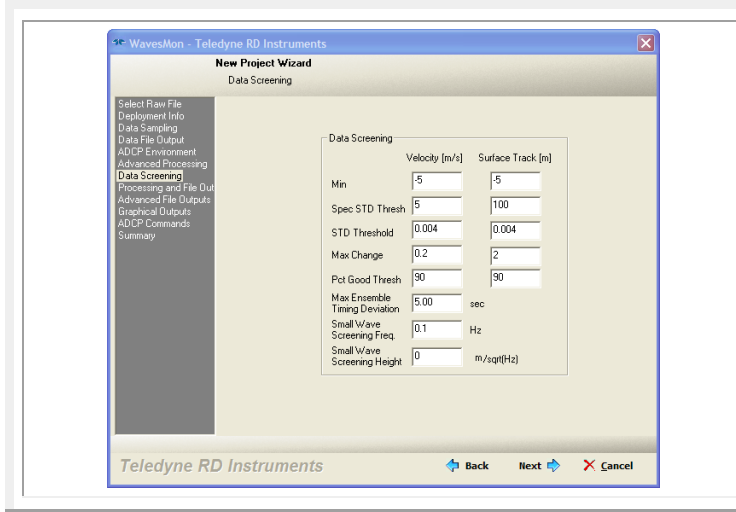
Enter the file name prefix.



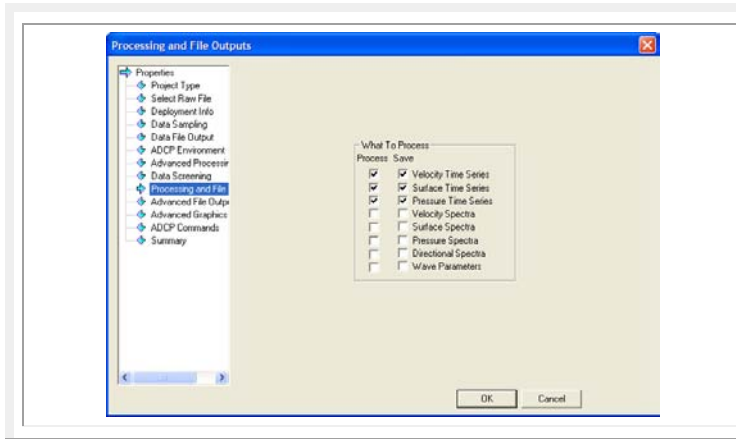
Click Next.



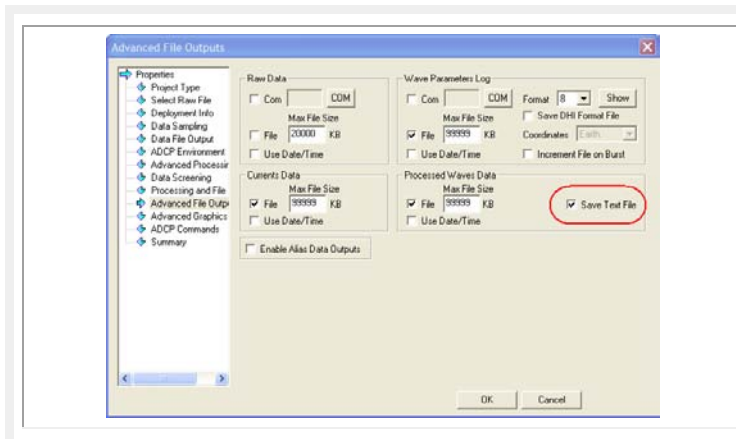
Click Next.



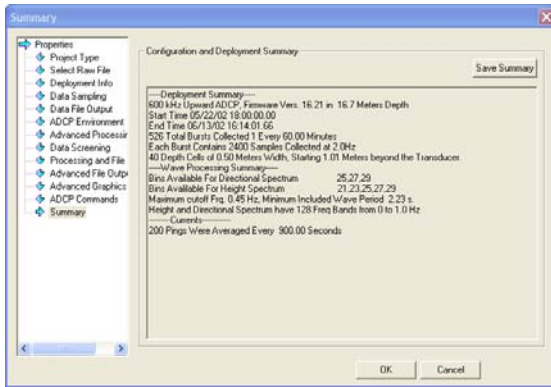
Do not change the data screening. Click **Next**.



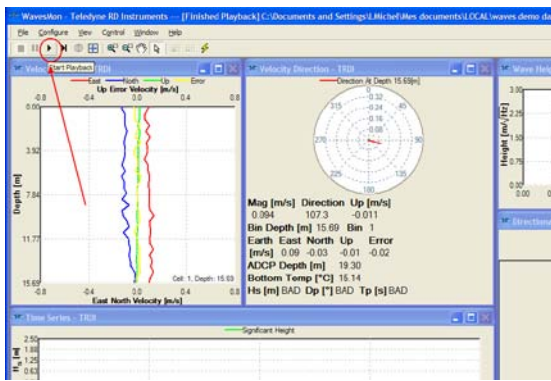
Select the items you want to save under the **Save** column.



Select the option to save raw data as text.



Click **OK**.



Click on **Start Playback** to start the processing.

NOTES

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