

Ultrasonic Thickness Gauge

Tritex Communicator Software Manual

*For use with
Multigauge 3000 & 4000
Series Gauges*



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1. Introduction

Tritex Communicator software displays live measurement results from either the Multigauge 3000 Underwater Thickness Gauge or the Multigauge 4000 series ROV Thickness Gauges onto either a laptop or PC. The software also allows setting within the gauge to be changed.

Templates can be preset based on a grid, string of measurements or a combination of both. This gives maximum versatility for a wide range of applications including measurements on pipelines, pilings or ships hulls. As well as storing measurement data, *Communicator* software also has the option to store the time, date and an identifying label for each measurement. In addition, various settings within the gauge can be changed from the software to optimise performance.

2. System Requirements

Tritex Communicator will run on any PC or laptop which has Microsoft Windows XP or Vista installed. *Tritex Communicator* will not run on older versions of Windows.

Tritex Communicator requires *Microsoft .NET Framework 3.5 SP1* to be installed on your computer. If this is not already installed, the code can be automatically downloaded from the Microsoft website or can be installed directly from the Tritex installation CD.

Note: you may require administrator privileges in order to install this software on your computer.

The hardware interface requires a spare USB port. An adaptor for *RS422 to USB* or *RS232 to USB* is provided with the kit. The associated software drivers will need to be installed on your computer.

The installation process will begin automatically when the Tritex installation CD is inserted in your DVD/CD reader – otherwise double-click the file *setup.exe* to begin installation.

3. Quick Start Guide

Tritex Communicator program can be used with any Tritex Underwater Thickness Gauge including:

- Multigaugage 3000 Underwater Thickness Gauge, with Topside Repeater option.
- Multigaugage 4100 ROV Underwater Thickness Gauge.
- Multigaugage 4400 ROV Underwater Thickness Gauge.

3.1. Tritex 3000 Underwater Gauge and Multigaugage 4000 ROV Gauge Quick Start.

With *Tritex Communicator* program already installed and with the appropriate Serial to USB drivers also installed:

- i. Click to launch the program from the Start menu. Start / All Programs / Tritex Communicator / Tritex Communicator.
- ii. The program will launch, and after about 5 seconds a warning will popup which indicates that the program has not yet found a Tritex gauge connected.
- iii. Click the 'OK' button to remove this popup.

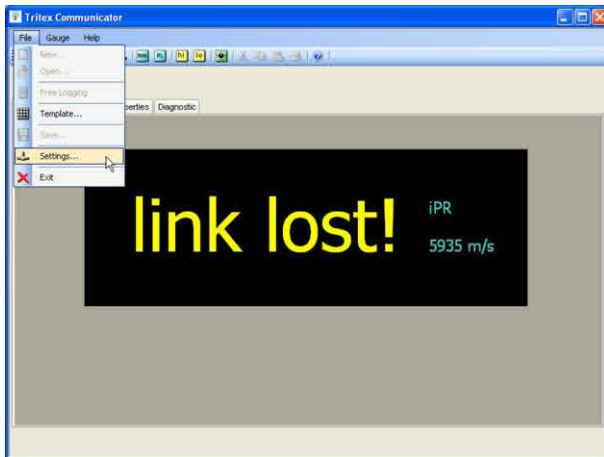


- iv. Connect either the Multigaugage 3000 Underwater Gauge using the umbilical cable or connect the Multigaugage 4000 ROV Gauge using the test cable in accordance with their respective gauge manuals.

Note: For the Multigaugage 4000 ROV, confirm the Comms Protocol indicated on the inside label of the gauge agrees with the supplied Serial to USB adaptor. If the Comms Protocol is RS232 then plug the RS232 to USB adaptor (including its grey wiring adaptor) into the data socket on the Test Cable. If the Comms Protocol is RS422 then plug the RS422 to USB adaptor into the data socket on the Test Cable.

- v. Plug the *Serial to USB adaptor* into any free USB socket on the computer. The computer should immediately recognise the insertion of the adaptor.

- vi. Set the serial COM port number to match the number obtained during the installation of the *Serial to USB adaptor* as follows:



- a. Click '**File / Settings**'.
- b. Use the drop-down selector to choose the required COM port.
- c. Click '**OK**'.



- vii. Turn the gauge on - *Tritex Communicator* will immediately begin receiving measurement and status data from the gauge and the *lost link!* message in the *Measurement* tab will disappear.

4. Tritex Communicator User Guide

4.1. Initial Setup and Use

- i. Launch *Tritex Communicator* program from the Start menu - Start / All Programs / Tritex Communicator / Tritex Communicator / Serial Port.
- ii. Use the Settings menu to set *Tritex Communicator* to receive data from the appropriate Serial Port [COM: number]. See *Quick Start Guide* (above) for details on how to identify the *Serial Port*.

Note: The current *Serial Port* setting is stored and recalled by *Tritex Communicator* each time the program is run.

4.2. Introduction

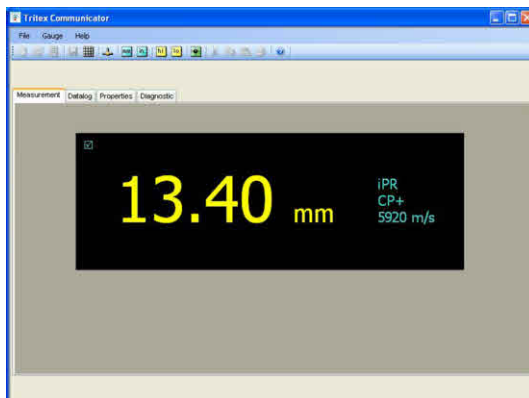
Tritex Communicator has a main menu bar and a matching icon menu toolbar below. The main display area presents the user with a tabbed interface which separates the **Measurement**, **Status** and **Control** functions of the gauge:

1. **Measurement Tab:** For simply viewing the measurements received from the gauge and calibrating if required.
2. **Datalog Tab:** For viewing and storing measurements to pre-defined datalog files.
3. **Properties Tab:** For viewing and/or adjusting the measurement settings of the gauge.
4. **Diagnostic Tab:** For viewing the detailed information being sent from the gauge in the event of possible interface problems.

4.2.1. Measurement Tab

The *Measurement tab* is used to view measurements received from the gauge in the simplest form, with large-scale digits for convenience.

1. Display Area





The *Measurement area* contains the following annunciators:


- i. **Packet received** - constantly changing annunciator shows data is still being received from the gauge:
 - Calibrated Measurement - normally the case for the Multigauge 3000 Underwater Gauge.
 - Uncalibrated Measurement - normally the case for the Multigauge 4100 or 4400 ROV Gauge.
 - Status packet received.
- ii. **IPR** - A Tritex probe is correctly connected to the gauge and Intelligent Probe Recognition (IPR) is working correctly.
- iii. **CP+** - Coating Plus+ has been turned on in the gauge. This setting is used when measuring through thick coatings up to 20mm. If blank, then Coating Plus+ is turned off.
- iv. **Velocity** - This shows the calibration value currently in use for the displayed measurement. The units correspond to the measurement units selected i.e. metres/sec for mm or inches/microsecond for inch.
 - a. **Multigauge 3000 Underwater Gauge** – this velocity value is normally the value stored in the gauge itself and sent up as *Status data*.
 - b. **Multigauge 4100/4400 ROV Gauge** – this velocity value is normally a value held by the *Tritex Communicator* program, which is then applied to the un-calibrated measurement received from the gauge.

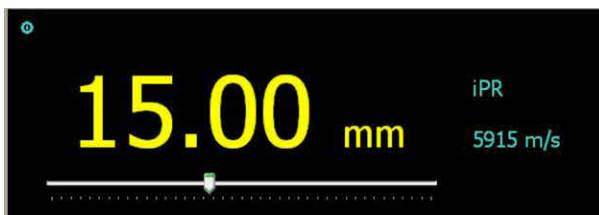
2. Calibration

Measurement calibration can be carried out from the

Measurement tab by clicking on Gauge /  Calibration

/  Enable menu-item, or by clicking on the Calibration


icon . A *Calibration Slider Control* will appear in the measurement area:





With the gauge measuring on a sample of test material of known thickness, drag the slider to the left or right until the correct measurement is shown. The *Velocity of Sound* displayed will change at the same time

If there is no sample of test material available, Calibration can still be performed by adjusting the *Velocity of Sound* value to an appropriate value. Drag the slider to the left or right until the required velocity value is shown.

Note: The slider offers an adjustment range of 5500 to 6500 m/s

By default, the *Calibration Slider Control* is not shown when *Tritex Communicator* is first launched. To remove the slider from the *Measurement display*, Click Gauge /  Calibration/

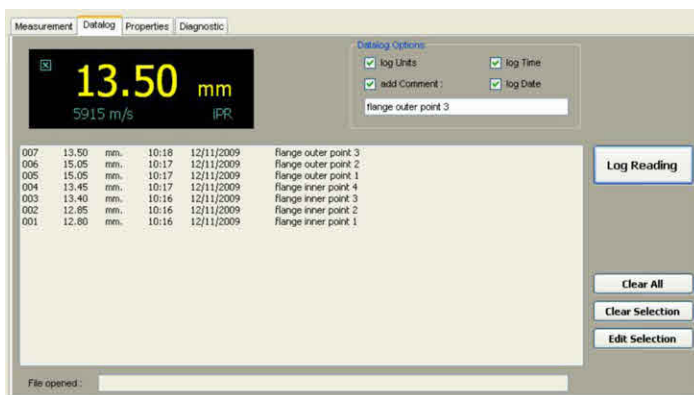
 Disable menu-item or click the Calibration icon 

4.2.2 Datalog Tab

Datalogging is enabled when the *Datalog tab* is clicked – the File menu then offers New..., Open..., Free-Logging, Template and Save... menu-items. There are two methods for datalogging. The first is by Free-Logging where a string of measurements are collected. The second is by setting up templates which allows measurements to be stored in a *String*, *Grid* or a combination of both.

1. Free-Logging

Free-Logging is the default datalogging method – measurements are freely added to a flexible list, which is a *String of Readings* up to 999 in length.



Measurements are added to the list by clicking on the button. The newest readings are added to the top of the list, and older readings are pushed down.

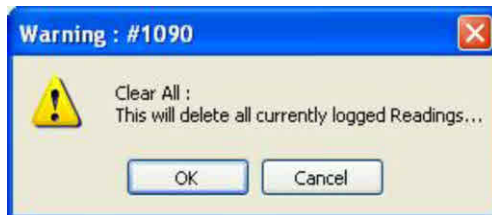
Each reading consists of a 3-digit number indicating the order in which the readings were taken and the measurement value itself.

Additional information can be optionally added to each reading by checking any of the *Datalog Options* boxes. If the *add Comment* box is checked, the contents of the text box are added to the next reading when is clicked.

i. **Editing the Datalog List**

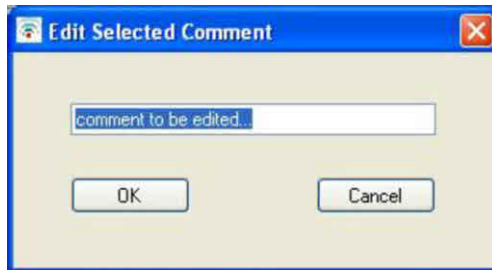
- Deletes the entire list.

Click '**OK**' to delete the entire current list of readings or click '**Cancel**' to return to Free-Logging, with the current list unchanged.




- Any individual reading can be deleted from the list. Click to highlight the reading, then click the '**Clear Selection**' button. The selected reading will disappear from the list, and all newer readings will be renumbered.

- Any individual comment can be edited, or a previously empty comment can be added to a reading. Click to highlight the reading, then click the '**Edit Selection**' button. A window will popup allowing a comment to be added. Click '**OK**' when finished.




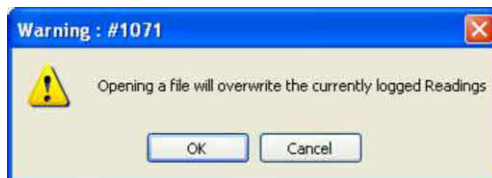
ii. **Saving and Opening Files**

The datalogged readings can be saved to file by clicking on the File/  Save. A standard File-Save dialog will pop up.

- Navigate to your required sub-directory, and enter a name for the new file. The file will be saved as <new name>.txt.

Note: Free-logging files are saved as text-files [**.txt*], with tab-separated values to allow convenient opening in other programs such as Microsoft™ Excel if required.

The file can be saved at any time and later re-opened to resume logging by clicking File/  Open. If the current list has not been saved you will be prompted to cancel opening the file to allow it to be saved first:




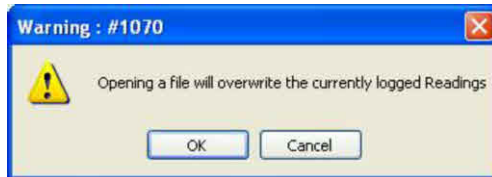
Click '**Cancel**' to decline opening a file and return to the original unsaved list or click '**OK**' to overwrite the current list and replace with the new file.

2. **Logging to Templates**

Templates can be setup in advance to gather information in either a *grid* or *string* format, or a combination of both. (See *Template Generation* on page 18).

i. Open a New File for Datalogging


To open a new file, ensure the *Datalog* tab is selected and click File/  New file. If the current list has not been saved you will be prompted to cancel opening the file to allow it to be saved first.

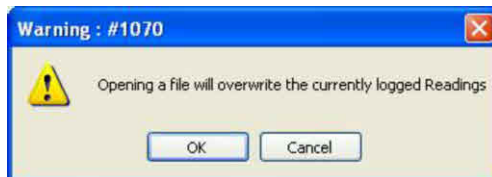


Click '**Cancel**' to decline opening a file and return to the original unsaved list or click '**OK**' to overwrite the current list and replace with the new file as follows:

- a. A standard File-Open dialog will pop up.
- b. Navigate to the sub-directory which contains your template files [*.ttx].
- c. Select and open the required template.

ii. Open an Existing File to Continue a Previous Session

To open an existing file, ensure the *Datalog* tab is selected and click File/  Open file. If the current list has not been saved you will be prompted to cancel opening the file to allow it to be saved first.

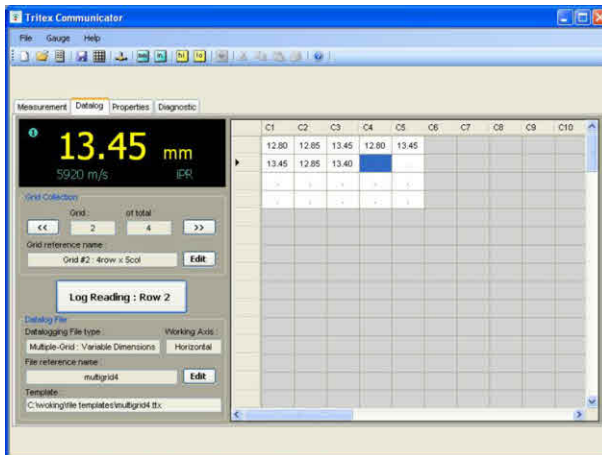


Click '**Cancel**' to decline opening a file and return to the original unsaved list or click '**OK**' to overwrite the current list and replace with the new file as follows:

- a. A standard File-Open dialog will pop up.
- b. Navigate to the sub-directory which contains your datalog files [*.txt].
- c. Select and open the required file.

iii. Logging Readings

The *Datalog* tab will reconfigure to allow datalogging to the new file structure.



- a. **Datalog File box** - lists information about the file which has just been opened :

Datalogging File type - describes the datalogging file structure (see *Template Generation* on page 18 for the full description of available file structures).

File reference name - a descriptive name included when the template is created. To edit this name, click on the button

Working Axis - (for *Grid* collections only) to assist the surveyor when taking readings. The working direction within the *Grid* is preset in the template:

- Vertical : work down columns
- Horizontal : work along rows, left to right


Template - Shows the most recent file path name after either saving or opening a file or template.

- b. **'Grid Collection' or 'String Collection' box**

The file structure consists of 1 to 100 *Strings of Readings* or 1 to 100 *Grids of Readings*. Click on the





or buttons to step through the

collections. The number of grid or string collections is always displayed.



Grid reference name - This name is optionally included when the template is created (see *Template Generation* on page 18). To edit this name, click on the  button.

c. **Datalogging Matrix**



The main display area shows the current grid or string collection of readings as follows:

- The highlighted cell  shows the current position in the grid or string where the next measurement will be logged.
- Click on the  button and the currently displayed measurement will appear in the highlighted cell in the grid or string.
- The highlighted cell  will then step on to the next position ready for the next measurement to be logged.
- You can click on any cell to manually move the highlighted cell  to a new position.

Grid Collection - Horizontal Working Axis:

When  is clicked, the highlighted cell  will step left-to-right across the current row. When the end of the row is reached, the highlight jumps back to the start of the next row, below the current row.

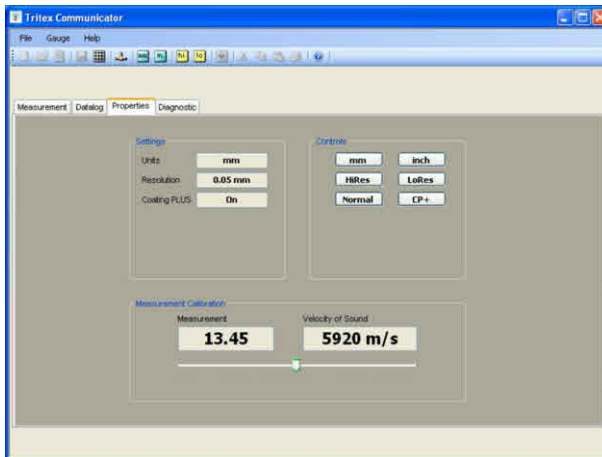
Grid Collection - Vertical Working Axis:

When  is clicked, the highlighted cell  will step down the current column. When the end of the column is reached, the highlight jumps up to the top of the next column, to the right of the current column.

4.2.3. Properties Tab

The *Properties tab* shows the current measurement settings of the gauge and provides a direct facility to change these settings.

1. Multigauge 3000 Underwater Gauge Properties Tab



Measurement settings which can be changed:

- i. **Units** - click on or button to change the measurement units. The following text boxes will change:
 - a. *Units* text box.
 - b. *Resolution* text box.
 - c. *Measurement Calibration* fields.
- ii. **Resolution** - click on or button to change the display resolution.
 - a. mm - Resolution will switch between 0.05 mm and 0.1 mm.
 - b. inch - Resolution will switch between 0.002 inch and 0.005 inch.
- iii. **Coating Plus+** - click on or button to turn Coating Plus+ ON or OFF. Used for very thick coatings up to 20 mm.
- iv. **Measurement Calibration** - The calibration can be adjusted in two ways by using the slider control to make adjustments.
 - a. **Calibration by Measurement**
Place the probe onto a test piece of known thickness and adjust the slider control until the correct reading

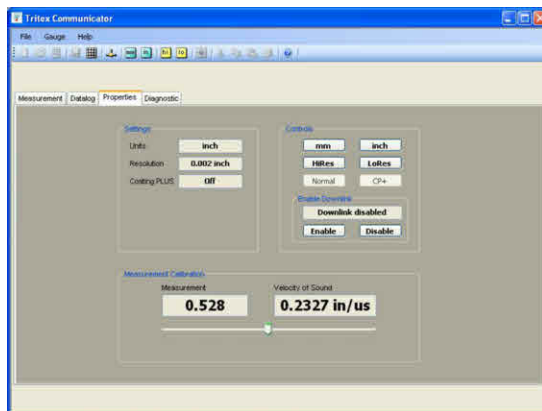
is achieved. The *Velocity of Sound* display will show the calibrated value for this sample.

b. **Calibration by Velocity**

When a suitable test sample is unavailable, calibrate the gauge by adjusting the *Velocity of Sound* to an appropriate value (see the velocity table in the gauge manual).

2. **Multigauge 4000 ROV Gauge Properties Tab**

When *Tritex Communicator* is used with the Multigauge 4000 series ROV gauge, a feature appears in the *Properties tab* allowing the user to enable or disable a *Downlink*. The *Downlink* is normally only enabled when a test cable is used or when the system has been implemented with the full 6-wire connection.



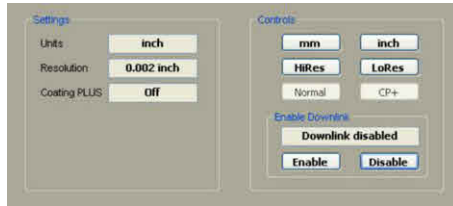
In normal use, a Multigauge 4000 ROV Gauge sends uncalibrated measurement data to the PC and calibration of the measurement and adjustments to the *Units* and *Resolution* are performed on the PC.

Note: The *CoatingPlus* setting is always stored on the gauge, which can only be changed using the **Enable Downlink** facility. This allows bi-directional communication between the gauge and PC when the supplied test cable is connected.

Note: By default, the *Downlink* is disabled when *Tritex Communicator* is initially run.

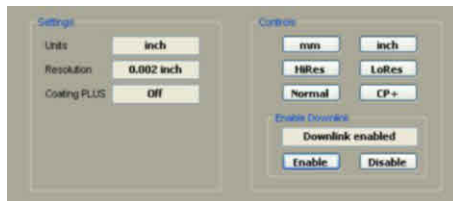
i. Disabling the Downlink

- Click on the **Disable** button.
- Downlink disabled* will be displayed.
- The **Normal** and **CP+** buttons are greyed out.
Coating Plus+ selection is only available via bi-directional link.
- The *PING* feature on the *Diagnostic tab* is also unavailable.



ii. Enabling the Downlink

- Click on the **Enable** button.
- Downlink enabled* will be displayed.
- The Coating PLUS+ controls will now be available.
- The *PING* feature on *Diagnostic tab* will be available.

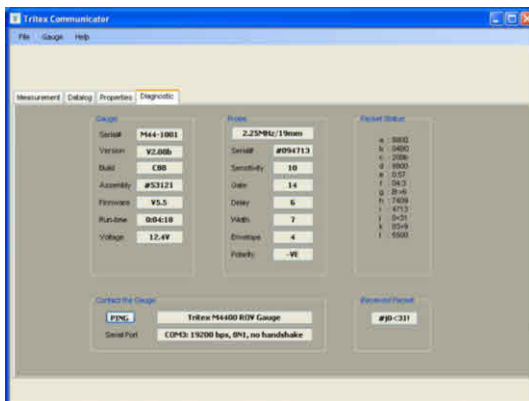


Note: If CoatingPlus is required for normal use then it must be turned on using the supplied Test Cable prior to deployment.

Note: CoatingPlus should only be used for ignoring very thick coatings (over 6mm). In normal use it should be left to the default setting OFF.

4.2.4. Diagnostics Tab

Diagnostics should not normally be required when using Tritex gauges – the information is provided to check the correct performance of the gauge and link.



The only control provided on the *Diagnostics* tab is the *PING* button. Click on *PING* at any time and the gauge should respond immediately. The contents of the text box is cleared and replaced with information identifying the connected gauge type.

Note: This feature is not available on the Multigauge 4000 unless a bi-directional Test Cable is in use and also the Downlink button has been enabled.

Features:



1. **Gauge Status** -
 - i. Serial#: This should be the same as printed on the front-plate (Probe connection) of the gauge.
 - ii. Voltage:
 - a. Multigauge 3000 - This is the internal battery voltage, normally 7.8V to 5.6V. (Less than 6V suggests the battery should be recharged).
 - b. Multigauge 4000 - This is the external supply voltage. For safe operation it should not be less than 9.0V.
 - iii. Run-Time: Elapsed-time usage of the gauge.
 - iv. Build info: Gauge internal build information for reference only.
2. **Probe Status** -
 - i. Probe-type: The main text box confirms that a Tritex IPR probe is correctly connected to the gauge. The probe frequency and size are listed.
 - ii. Serial#: This should be the same as inscribed on the side of the probe body, found underneath the knurled ring.
 - iii. Parameters: Lists the various probe parameters for reference only.
3. **Packet Status** - Lists the most recently received of each of the eleven packets [a : to | :].

4. **Serial Port** - Confirms the currently selected *Serial Port* and its settings. *Serial Port* assignment is selected via the *Settings* menu. *Settings* must always be 19200 bps, 8N1, no handshake.
5. **Received Packet** - Shows the live receipt of the 7-byte *Status Packets* from the gauge. Inactivity means that there is a problem with the data connection.

4.3. Template Generation

Templates are created to store measurements into different formats depending on the application being measured. Once the template has been created it can be reused for each new datalogging location.

4.3.1 Using Templates:

Use the  New... menu command to open a template file for a new datalogging location and use  the Save... menu command to save this file with a specific name for this datalogging location.

4.3.2. Template File Structures

There are six templates available:

1. **Single-String : Fixed Length**
 - A single *string of readings*.
 - The length of the string [number of readings] is specified in the template.
2. **Single-Grid : Fixed Dimensions**
 - A single *grid of readings*.
 - The dimensions of the grid (number of rows, number of columns) is preset.
3. **Multiple-String : Fixed Lengths**
 - A set of *strings of readings*.
 - The number of strings in the set is specified in the template.
 - The length (number of readings) of every string is the same.
 - This length is specified once during template generation.
4. **Multiple-Grid : Fixed Dimensions**
 - A set of *grids of readings*.
 - The number of strings in the set is specified in the template.
 - The dimensions (number of rows, number of columns) of every grid are the same.
 - These dimensions are specified once during template generation.


5. Multiple-String : Variable Lengths
 - A set of *strings of readings*.
 - The number of strings in the set is specified in the template.
 - The lengths (number of readings) of each string can be different.
 - The length of each string is specified during template generation.

6. Multiple-Grid : Variable Dimensions
 - A set of *grids of readings*.
 - The number of grids in the set is specified in the template.
 - The dimensions (number of rows, number of columns) of each grid can be different.
 - The dimensions of each grid are specified during template generation.

4.3.3. Creating a Template

Template generation is a 3-step process:

1. Specify the *File Structure*.
2. Specify each of the *string or grid collections* that make up the structure.
3. Save the new *template* with an appropriate filename.

Open the template generation wizard by clicking on the File  Template... menu-item:

New Datalog File Template

Step 1: Specify the File Structure

Collections of Readings, arranged as:

Strings

Grids

Grid Collections - Working Area:

Horizontal

Vertical

How Many Collections in this Template:

Single String

Multiple Strings

How many Strings:

Dimensions of each String Collection:

All Collections and the same length

Specify length of each Collection

Step 2: Specify each of the String Collections

Collection Details:

Collection number: of total:

Optional reference name for Collection number Y:

(max 30 char)

Length of each String:

Step 3: Save the new Template

Optional reference name for this Template:

Template saved as:

Step 1: Specify the File Structure.

- i. Select either *String* or *Grid*.
- ii. If *Grids* are selected, the *Working Axis* options become active.
 - a. Horizontal - sets for measurements to be taken across rows.
 - b. Vertical - sets for measurements to be taken down columns.
- iii. Select the number of collections of *Strings* or *Grids* in this template. The options are either *Single* or *Multiple*. If *Multiple* is selected, the quantity selector will become active.
 - a. Use the up or down arrows to select between 2 to 100.
 - b. The template dimensions can be set to all the same length or the length can be specified for each *String* or *Grid*.

Once the above has been set, click on the *Done : proceed to Step 2* button.

Step 2: Specify each of the *String* or *Grid* collections depending on what has been chosen.**String:**

1. Select the length of each *String* using the up and down arrows to set the value from 1 to 100.

Grid:

Step 2: Specify each of the String Collections

Collection Details

Collection number: of total:

Optional reference name for Collection number 4:

[max 30 chars]

Length of each String:

<< >>

Done: proceed to Step 3

1. Adjust the *Vertical depth of Grid number 1* using the up and down arrows to set the value from 1 to 100.
2. Adjust the *Horizontal width of Grid number 1* using the up and down arrows to set value from 1 to 30.

Step 2: Specify each of the Grid Collections

Collection Details

Collection number: of total:

Optional reference name for Collection number 1:

[max 30 chars]

Vertical depth of Grid number 1:

Horizontal width of Grid number 1:

<< >>

Done : proceed to Step 3

To optionally add a reference name for *Collection number 1*, check the text box and type a name up to 30 characters long. Save the settings of *Collection number 1* by clicking '**Save Collection 1**' button.

The next steps are dependent on the file structure selected in Step 1:

1. If Single-String or Single-Grid was selected:
This completes Step 2. '**The Done : proceed to Step 3**' button will become active.
2. If Multiple-String or Multiple-Grid was selected:
 - i. With all *Strings* or *Grids* the same length, all remaining collections will automatically be preset to the same length as *collection number 1*. The up/down value selection boxes will be greyed-out inactive and the '**Done : proceed to Step 3**' button will become active. Each remaining collection can be optionally named before proceeding. If they are not named at this stage then they can be later edited when the template is opened.

- ii. If the *Strings* or *Grids* have different lengths then the number of vertical and horizontal measurement points must be set in at each stage. Also, a name can be optionally added at each step.



- iii. Use the **<<** and **>>** keys to toggle between the different collections to make any changes.
- iv. When finished, click on **'Done : proceed to Step 3'** button. This button only becomes active after the last **'Save Collection'** button has been clicked.

Step 3: Save the New Template

1. The template can be given a descriptive name for easier identification. This reference name will appear on the *Datalog tab* when the template is opened.
2. Now click **Save as Template** button. A standard File-Save dialog will pop up. Navigate to your required sub-directory, and enter a name for the new file. The file will be saved as <new name>.ttx

Note: Tritex Communicator templates are saved as text files with .ttx file extension [*.ttx]. These files should not be edited, except by Tritex Communicator program, to prevent incompatibility.

This completes the generation of a *Datalogging Template* file. Click **Close** to close the wizard or click **Start Again : New Template** if you wish to generate another template.

5. Tritex Communicator Installation

The installation process is in 2 parts :

- installation of *Microsoft .NET Framework 3.5 SP1* operating system code
- installation of *Tritex Communicator* program

5.1. Microsoft .NET Framework 3.5 SP1 Installation

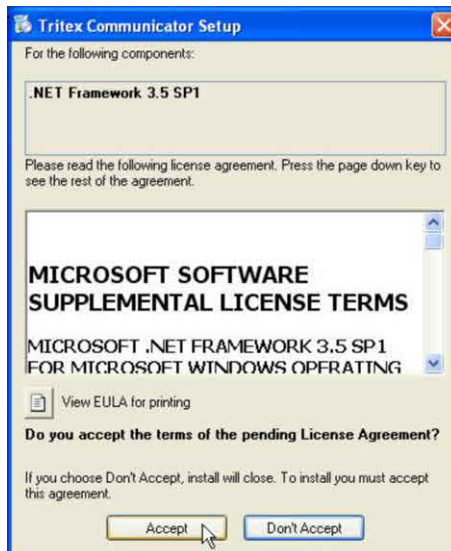
If *Microsoft .NET Framework 3.5 SP1* is not already installed on your computer then this needs to be installed first – there are two options:

1. Recommended option: Download .NET Framework 3.5 SP1 from the Microsoft website. This option will ensure that .NET Framework 3.5 SP1 is installed with the latest updates and hotfixes from Microsoft.
2. Alternative option: Cancel the install process and install .NET Framework 3.5 SP1 from the Tritex installation CD. The install process can then be restarted and *Tritex Communicator* only will be automatically installed.

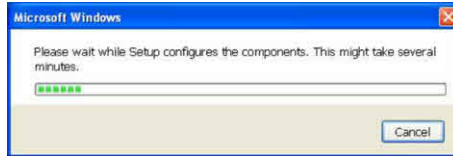
Note: If *Microsoft .NET Framework 3.5 SP1* needs to be installed and you have an active internet connection, the process will happen automatically when you insert the Tritex installation CD in your DVD/CD reader - otherwise double-click the file *setup.exe* to begin installation.

5.1.1. Downloading .NET Framework 3.5 SP1 from Microsoft Website

- i. You must first accept the Microsoft License Agreement by clicking the '**Accept**' button:



- ii. The download and install processes will now occur automatically and will take several minutes, depending on download speed.



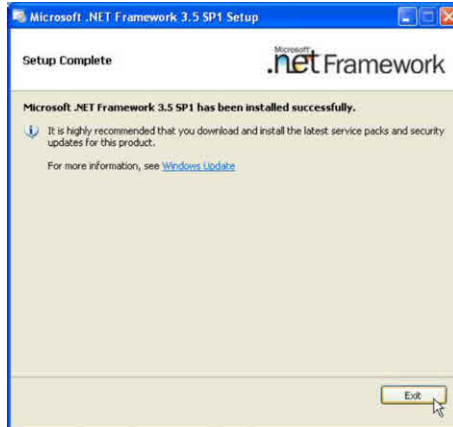
- iii. If the download and install is successful the popup windows will close automatically, and the install process for *Tritex Communicator* program will now begin.

5.1.2. Installing .NET Framework 3.5 SP1 from Tritex Installation CD

- i. Insert the CD in your computer - the install process will begin automatically.
- ii. Cancel this process and open *Windows Explorer* instead.
- iii. Manually install by double-clicking on the file \Microsoft .net 3.5 sp1\dotnetfx35.exe.
- iv. Accept the Microsoft License Agreement by first checking acceptance of the terms of License Agreement.
- v. Click the **'Install'** button.



- vi. The install process may take a few minutes.
- vii. When the *Setup Complete* screen appears, click on the **'Exit'** button.



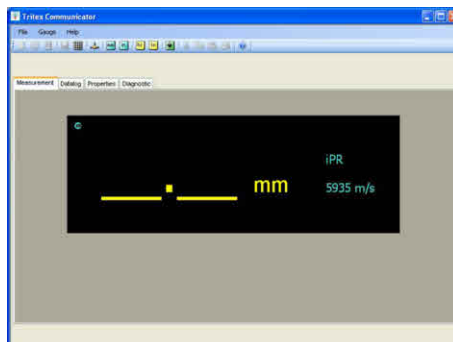
- viii. If the *Microsoft .NET Framework 3.5 SP1* install is successful, the install process for *Tritex Communicator* program will continue immediately.

5.2. Installing Tritex Communicator

- i. The install process will begin with a security warning – click the '**Install**' button to accept and continue.



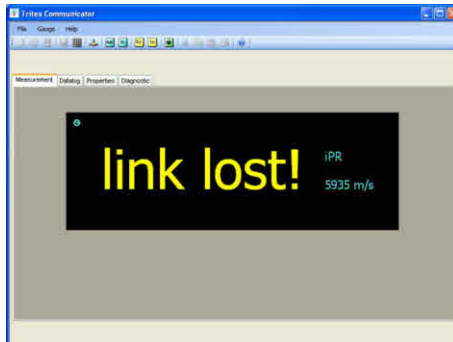
- ii. *Tritex Communicator* program will now install from CD to your hard drive and should only take a few seconds. When complete, the program will automatically launch.



- iii. Within 5 seconds a warning will pop up which indicates that the program has not yet found a Tritex gauge connected - click the 'OK' button to remove this popup.



- iv. The *Measurement* tab screen will now show **link lost!** message confirming that there is no gauge connected.



6. Serial to USB Adaptor Driver Installation

In order to connect a Tritex gauge to a PC, device drivers for the *Serial to USB adaptor* supplied with your kit must be installed.

The Multigauge 3000 Underwater Gauge will be supplied with an *RS422 to USB* converter. The Multigauge 4000 ROV gauge will be supplied with either an *RS422 to USB* or an *RS232 to USB* converter, depending on choice at purchase. The standard converter supplied is the *RS422 to USB*.

6.1. RS422 to USB Adaptor Driver Installation

The supplied *RS422 to USB adaptor* cable requires drivers to be installed in a 2 part process:

1. Installation of *USB RS422 Serial Converter* driver
2. Installation of *USB Serial Port* driver

6.1.1 Installation of USB RS422 Serial Converter Driver

Plug the *RS422 to USB adaptor* into any spare USB socket on your computer and installation of *USB RS422 Serial Converter* begins with *Found New Hardware Wizard*.

- i. Click the **'No, not this time option button'**.
- ii. Click the **'Next>'** button.



- iii. Click on the **'Install from a list or specific location (Advanced) option'**.
- iv. Click on the **'Next>'** button.



- v. Click on the **'Search for the best driver in these locations'** option.
- vi. Click on the **'Search removable media (floppy, CD-ROM...)' checkbox**.
- vii. Click on the **'Next>'** button



- viii. The *USB Serial Converter* driver will now be installed.
- ix. Click **'Finish'** when complete.

The second part of the process will now begin:

6.1.2. Installation of the USB Serial Port Driver.

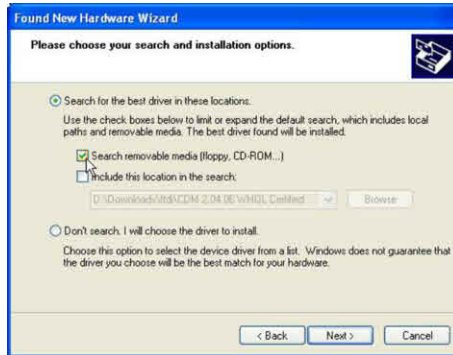
- i. Click the **'No, not this time option button'**.
- ii. Click **'Next>'** button



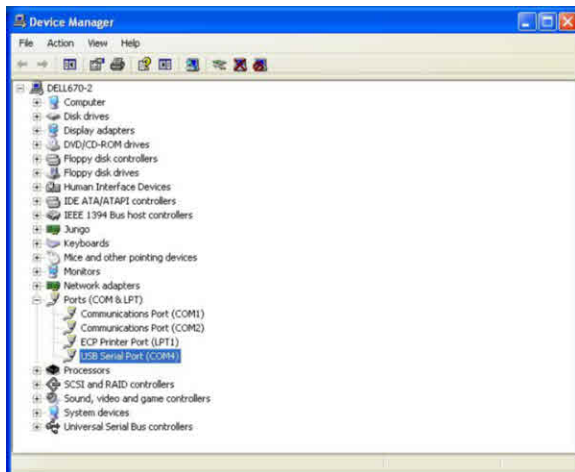
- iii. Click on the **'Install from a list or specific location (Advanced)'** option.
- iv. Click on the **'Next>'** button



- v. Click on the **'Search for the best driver in these locations'** option.
- vi. Click on the **'Search removable media (floppy, CD-ROM...)'** checkbox.
- vii. Click on the **'Next>'** button.



- viii. The *USB Serial Port* driver will now be installed.
- ix. Click **'Finish'** when complete.
- x. The *RS422 to USB adaptor* is now installed as a serial COM-port on your computer - confirm the installation and identify the assigned COM-port number.
 - a. Open *Device Manager* by clicking from the Windows Start menu. Click Start / Control Panel / System / Hardware / Device Manager
 - b. Open the *Ports (COM & LPT)* list and check that the *USB Serial Port* entry shows the newly assigned COM-port number.



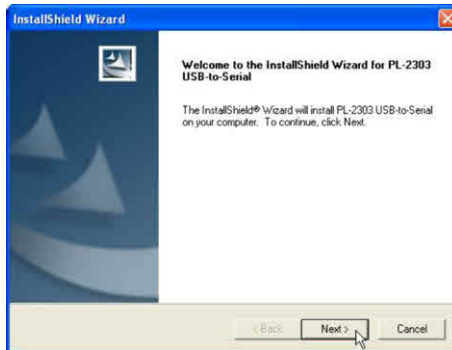
- xi. The *RS422 to USB adaptor* is now successfully installed, and the assigned COM-port number can be used in the Tritex Communicator - Settings... menu to enable communication with the gauge.

6.2. RS232 to USB Adaptor Driver Installation

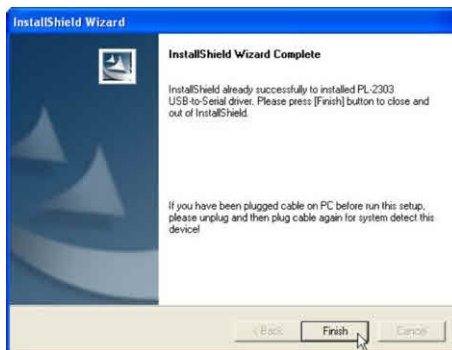
The supplied *RS232 to USB adaptor* cable requires drivers to be installed from the Tritex installation CD – begin installation with the adaptor not connected to your computer.

6.2.1. Installation on Windows XP

- i. From the Tritex installation CD - double-click on the Setup file- \RS232 to USB Adaptor\Driver\Win98_XP\Setup.exe.
- ii. The welcome screen for *PL-2303 USB-to-Serial* should appear.
- iii. Click on '**Next>**' to continue:

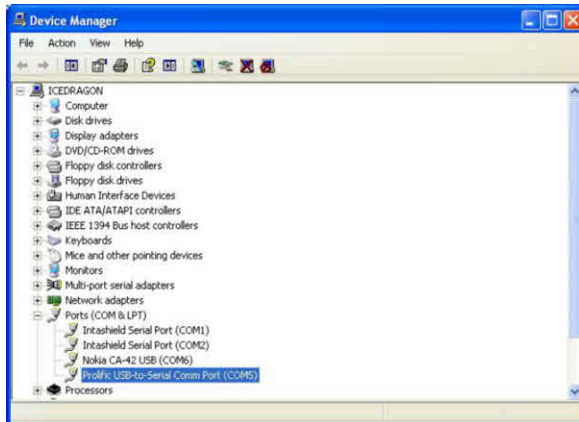


- iv. The driver software will now install. When complete the *InstallShield Wizard Complete* screen will appear.
- v. Click '**Finish**' to complete the process.



- vi. The *RS232 to USB adaptor* is now installed as a serial COM-port on your computer. Confirm the installation and identify the assigned COM-port number:

- a. Plug the adaptor into any spare USB port on our computer.
- b. Open *Device Manager* by clicking from the Windows Start menu- Start / Control Panel / System / Hardware / Device Manager.
- c. Open the *Ports (COM & LPT)* list. The *Prolific USB-to-Serial Comm Port* entry shows the newly assigned COM-port number.

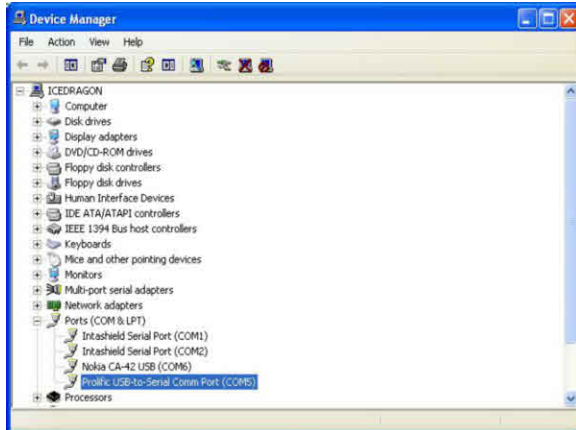


- vii. The *RS232 to USB adaptor* is now successfully installed, and the assigned COM-port number can be used in the Tritex Communicator / Settings... menu to enable communication with the gauge.

6.2.2. Installation on Windows Vista

- i. Plug the *RS232 to USB adaptor* into any available USB port.
- ii. When the *Found New Hardware* window appears.
- iii. Select the '**Locate and install driver software (recommended)**' option.
- iv. Insert the Tritex installation CD into your CD-ROM drive and click '**Next**'.
- v. When the software for this device has been successfully installed a message appears. Click '**Close**' button.
- vi. A popup message will appear in the notification area indicating the installation is complete.
- vii. Restart your computer if prompted to do so.
- viii. The *RS232 to USB adaptor* is now installed as a serial COM-port on your computer. Confirm the installation and identify the assigned COM-port number:
 - a. Plug the adaptor into any spare USB port on your computer.

- b. Open *Device Manager* by clicking from the Windows Start menu - click Start / Control Panel / System / Hardware / Device Manager.
- c. Open the *Ports (COM & LPT)* list. The *Prolific USB-to-Serial Comm Port* entry shows the newly assigned COM-port number.



- ix. The RS232 to USB Adaptor is now successfully installed, and the assigned COM-port number can now be used in the Tritex Communicator / Settings... menu to enable communication with the gauge.

7. Uninstalling

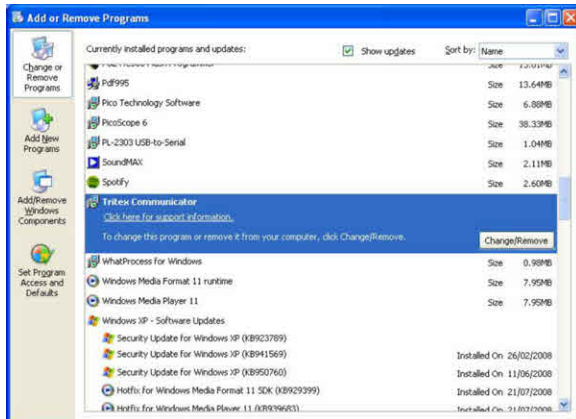
All of the following installed items can be uninstalled from your computer:

1. Tritex Communicator program.
2. Microsoft .NET Framework 3.5 SP1.
3. Prolific PL-2303 device drivers, installed for *RS232 to USB adaptor*.
4. FTDI device drivers, installed for *RS422 to USB adaptor*.

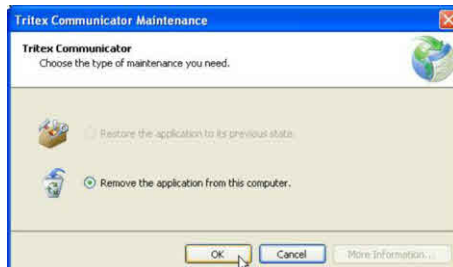
7.1. Uninstalling Tritex Communicator

Uninstall *Tritex Communicator* program using the *Add or Remove Programs* utility by clicking from the Windows Start menu.

- i. Click **'Start / Control Panel / Add or Remove Programs'**.
- ii. Click on the *Tritex Communicator* entry in the list.
- iii. Click **'Change/Remove'** button.
- iv. The *Tritex Communicator Maintenance* window will pop up.



- v. Click on the **'Remove the application from this computer option'**.
- vi. Click **'OK'** button.

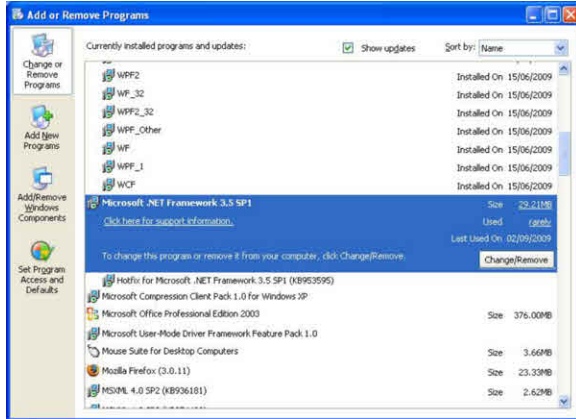


Tritex Communicator will now be completely removed from your computer.

7.2. Uninstalling Microsoft .NET Framework 3.5 SP1

Uninstall *Microsoft .NET Framework 3.5 SP1* using *Add or Remove Programs* utility by clicking from the Windows Start menu.

- i. Click **'Start / Control Panel / Add or Remove Programs'**.
- ii. Click on the **'Microsoft .NET Framework 3.5 SP1'** entry in the list.
- iii. Click **'Change/Remove'** button.



- iv. The *Microsoft .NET Framework 3.5 SP1 Setup* window will pop up.
- v. Click on the **'Uninstall'** option button.
- vi. Click **'Next>'** button.

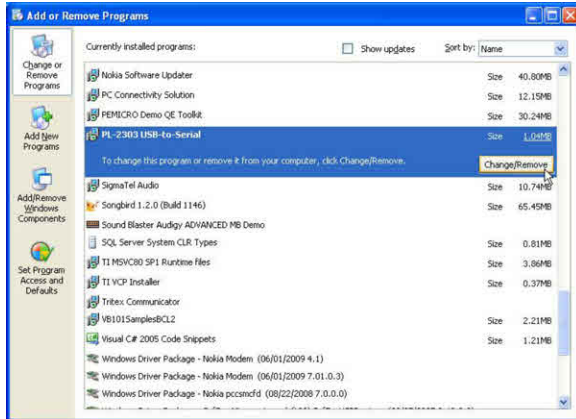


- vii. Click **'OK'** button to confirm uninstall operation.
- viii. When *Setup Complete* window appears, *Microsoft .NET Framework 3.5 SP1* has been successfully uninstalled.
- ix. Click **'Exit'** button.

7.3. Uninstalling Prolific USB Drivers

Uninstall *Prolific PL-2303 USB* drivers using *Add or Remove Programs* utility by clicking from the Windows Start menu.

- i. Click **'Start / Control Panel / Add or Remove Programs'**.
- ii. Click on the **'PL-2303 USB-to-Serial'** entry in the list.
- iii. Click **'Change/Remove'** button.



- iv. The software will now uninstall. When complete, the *PL-2303 Driver Uninstall Completed* window will appear.
- v. Click on **'Yes, I want to restart my computer now'** option.
- vi. Click **'Finish'** button.

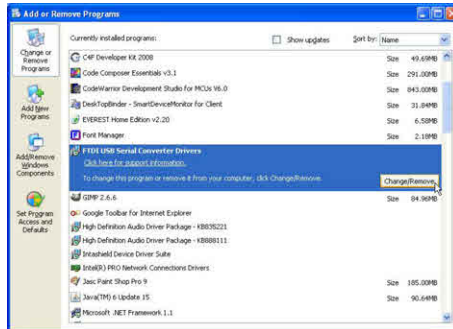


- vii. The computer will restart, with the *PL-2303 Driver* fully removed.

7.4. Uninstalling FTDI USB Drivers

Uninstall *FTDI USB* drivers using *Add or Remove Programs* utility by clicking from the Windows Start menu.

- i. Click **'Start / Control Panel / Add or Remove Programs'**.
- ii. Click on the **'FTDI USB Serial Converter Drivers'** entry in the list.
- iii. Click **'Change/Remove'** button.



- iv. If this uninstall method should be unsuccessful, use the *FTClean.exe* utility which can be found on the supplied Tritex installation CD.
 - a. Double-click on **'FTClean.exe'**.
 - b. Click on the **'Clean System'** button.

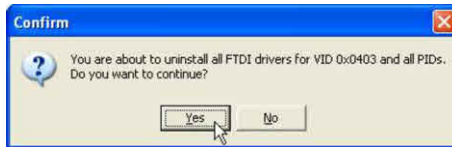


- c. Disconnect the *RS422 to USB adaptor* cable from your computer.

- d. Click **'OK'** button.



- e. Click **'Yes'** button to confirm uninstall action.



- f. Click **'No'** button to confirm cancel not required.



- g. *FTClean* utility will now remove all *FTDI device drivers* and will also remove all *FTDI device entries* from the computer.
- h. Message Status: System clean completed confirms successful clean.
- i. Click **'Exit'** button.



8. Notes

9. Contact

Telephone: +44 (0) 1305 257160

Facsimile: +44 (0) 1305 259573

E-mail: Sales@tritexndt.com

Website: www.tritexndt.com

Address: Unit 10, Mellstock Business Park
Higher Bockhampton
Dorchester
Dorset
DT2 8QJ
United Kingdom





simple . accurate . robust

Tritex NDT Ltd
Unit 10
Mellstock Business Park
Higher Bockhampton
Dorchester, Dorset
United Kingdom
DT2 8QJ

f: +44 (0) 1305 257160
f: +44 (0) 1305 259573
e: sales@tritexndt.com
w: www.tritexndt.com