

LogTag Frequently Asked Questions

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USB Installation Issues

Can I use my interface on a USB 3.0 port?

At this stage all major computer manufacturers provide USB 3.0 ports mainly to support storage devices such as external hard drives with higher speed requirements. On some computers driver incompatibilities between some of the controlling hardware and the LogTag interface drivers could exist, which is unfortunately outside LogTag's control.

Although we have tested LogTag Interfaces on USB 3.0 ports of different computer manufacturers without issues we would still advise using USB 2.0 ports where available. There is no advantage of using LogTag interfaces on a USB 3.0 port.

I am having difficulties communicating to my USB interface.

USB Device Driver Installation can sometimes fail due to reasons that are outside the control of LogTag Recorders LTD. We would advise to read through the special manual on USB installation published on this website.

Occasionally the drivers de-register themselves, which is an issue of the operating system. In this case, simply unplug the USB interface and plug it back again (for at least 10 seconds), this should resolve the issue.

It is highly unlikely that a USB interface is faulty.

Are the USB interface drivers certified by Microsoft?

Yes, the drivers have been certified in versions 1.7R14 and later.

Older versions of LogTag Analyser used the unsigned drivers, and we strongly recommend you update your software to the latest version. Functionally both drivers are identical, which is why they will not be automatically installed when you upgrade from a version prior to 1.7R14. You may still upgrade your drivers to the signed version by selecting the optional hardware upgrade (FTDI USB interface) as part of the Windows Update feature. If you wish you can also update the drivers by selecting "Update Driver" through the Windows System Device Manager.

Please note this needs to be completed separately for every USB port with an interface connected.

You must have at least Windows XP or Windows Server 2003 Operating Systems installed for the drivers to be available through Windows Update. Drivers for Windows 8 are not yet available through Windows Update.

The LogTag Analyser Installer asks for all USB devices to be disconnected - what do I do?

When the LogTag Analyser Installer determines that the USB drivers need to be updated while one or more USB interface cradles are connected, it will prompt the user to disconnect them.

You will only need to remove your LogTag USB equipment, having other USB devices like Mouse, keyboard or memory sticks connected during this process is OK. Once you have disconnected the USB interface cradles, the button in the installer will allow you to continue with the installation.

However, if the USB drivers do not successfully unload, because for example the Analyser software is running, when you click the button, the installation software will prompt you to disconnect the USB interface cradles again. To force the USB drivers to unload, please follow the manual removal steps described in the next question.

How do I uninstall my LogTag Interface cradle USB Interface drivers completely?

Following steps are required to uninstall USB interface drivers completely:

1. With USB interface cradle plugged into the computer, Open "Control Panel" - "System"
Select the "Hardware" tab in "System Properties" and select the "Device Manager" button. Scroll to the "Universal Serial Bus controllers" entry, expand the list by clicking on the "+" symbol". Right click any "USB Interface" entries and select the "Uninstall" command from the popup context menu.
2. Open "Control Panel" - "Add/Remove Programs", highlight the LogTag USB interface drivers and select "remove"
3. Delete usbint.inf and usbint.pnf
4. Delete ftdibus.sys from Windows/system32/drivers folder
5. Delete all DLL's starting with "ftdi" from Windows/system32 folder.

Software Installation/Uninstallation issues

Can I use LogTag Analyser with Windows 8?

Starting with version 2.3r18, LogTag Analyser is compatible with Windows 8, however on 64-bit versions the native mail application will not work with the "Send mail" and "Request Help" functions of the LogTag Analyser Application. If you need this functionality you will need to install a 32-bit mail client such as Windows Live Mail, which is available for free from Microsoft.

Please note that the drivers are not yet available from Windows Update, so you must install the software before you plug any interfaces into your PC.

Can I use LogTag Analyser with Windows 7?

Yes, LogTag Analyser versions 1.9r12 and later are fully compatible with Windows 7 in both the 32-bit and 64-bit versions.

The USB Interface drivers are now available through the Windows 7 update feature as well as being installed as part of the software installation. The detection process is faster when installing the drivers from a local disk, so if you install the software before you plug the interface into a USB socket you can skip the Search for drivers on Windows Update.

We recommend that any version prior to 1.9r11 be upgraded through the "Help-Check Internet for Update" facility from within LogTag Analyser.

Can I use LogTag Analyser on an Apple Mac?

You can use LogTag Analyser versions 2.0r17 and later on an Apple Mac computer, however you must use a virtual machine software such as VMWare Fusion, Parallel Desktop or similar. You can find a summary of the steps in the document about "Installing LogTag Analyser on an Apple Mac", which you can download from here.

Can I use LogTag Analyser with Linux?

You can use LogTag Analyser versions 2.0r17 and later on a computer running Linux OS, however you must use the translation layer software WINE (see <http://www.winehq.org/>). You can find a summary of the steps in the document about "Installing LogTag Analyser on Linux", which you can download from here.

Can I use LogTag Analyser in a Citrix environment?

You can use LogTag Analyser versions 2.0r17 and later in a Citrix environment, however there are certain restrictions. You can find a summary of the requirements in the document about "Installing LogTag Analyser in Citrix environments", which you can download from here.

How can I uninstall LogTag Analyser completely?

Open "Control Panel" - "Add/Remove Programs", or "Control Panel" - "Programs and Features"; highlight "LogTag Analyser" and select "remove".

If you are removing version 2.3 or higher, you also need to remove the USB drivers: highlight "USB Interface Cradle Drivers" and select "remove"

On some occasions this may not remove every single file from your computer. In that case please delete following files also:

- all LogTagIO*.dll files in #Windows#\System32 folder
- The 'User profile.dat' file from C:\Documents and Settings\#USER#\Application Data\LogTag
In VISTA and Windows 7 this file is located in C:\Users\#USER#\AppData\Roaming\LogTag

HELP - have accidentally switched to a different language and now I don't know where I am!

Exit the LogTag Analyser software and delete the file "User Profile.dat" from C:\Documents and Settings\#USER#\Application Data\LogTag. In VISTA and Windows 7, this file is located in C:\Users\#USER#\AppData\Roaming\LogTag. You may need to change the display settings in Windows Explorer to be able to navigate to this file.

(Note: The Windows search feature will likely not find this file, however you can quickly navigate to the Roaming profile location by typing "%APPDATA%" into the Windows Explorer Address Bar). Please refer to the Windows Operating System's online help.

Once this file is deleted, the software menus will be displayed in the language set in the Regional Options of the operating system (if LogTag Analyser software supports this language, otherwise in English). Please note, that other settings you may have made like Communication port settings or default chart parameters will be lost.

I need to copy my settings to a different PC - how can I do that?

This application note explains how to distribute user settings to multiple PC's, copy user settings from one PC to another and from one user to another on the same PC.

LogTag Communication Issues

The LogTag Access Wizard reports "COM1, COM2, COM3, COM4 not found"

The LogTag Access Wizard reports "COM1, COM2, COM3... COMXX already in use"

What do I do?

This error means that LogTag Analyser cannot find an attached interface or LogTag product. In the following example:

Location	Interface Model	LogTag ID
✗ COM1	Already in use	
✗ COM2	Not found	Not found
✗ USB	LTI/USB	Not found

- COM1 cannot be used for attaching an interface (most likely this is a modem port or similar)
- COM2 is available for use, but no interface was detected. If you are using an RS232 interface on COM2, but it is not found by the software, the most likely cause is the plug not being inserted correctly.
- A USB interface was found in one of the USB ports, but no logger was detected.

If you only use USB interfaces we recommend you go to "Options" - "Communication Ports" and remove the tick in front of the Communication ports you are not using. This will also speed up your download process as the software no longer uses these ports.

Why can't I see any interfaces in the LogTag Access Window?

Each time you configure or download a LogTag via the menu, all available communication ports are checked for interfaces with LogTag products. LogTag Analyser restricts this search to ports that can physically have an interface attached, and are also enabled in the communication options.

If you cannot see any interfaces in the access screen, and the progress bar stalls at 0% you should check the following:

1. All interfaces have been disabled or disconnected: in this case select "Edit - Options - Communication Ports" and enable the interfaces you wish to communicate to. Plug any disconnected USB or RS232 interfaces back into the PC.
2. Communication ports have been enabled that may no longer be present. For example, if a Bluetooth device or a LAN manager device has created virtual COM ports, LogTag Analyser will still try to communicate to these ports, although they may no longer be present. In this case it will take significant time (minutes) for the Operating System to report back that this port is no longer present, and it may seem as if LogTag Analyser "hangs".
3. There is an issue with the USB driver. You can execute a small utility that will re-install the USB drivers on your computer. This utility can be downloaded from [here](#). You need to make sure you have all USB interfaces disconnected when running the utility. Also, to prevent these drivers from being replaced with a newer version, you need to disable your internet connection when you re-attach the USB interfaces, or disable automatic driver downloading from Windows update.

The download progress bar stops before it reaches 100% with an error message.

If the progress bar stops, there is a communication issue between the logger and LogTag Analyser, and LogTag Analyser subsequently retries to get the correct information from the logger. In most cases where the communication is not successful this will be followed by an error message "Internal error \$4" or "LogTag failed to respond [20]". Please see Error Messages below for assistance regarding these error messages.

You should also disable all communication ports currently not in use by selecting "Edit - Options - Communication Ports" and removing the check marks for the unused ports.

The communication progress bar stalls.

If the progress bar stalls, LogTag Analyser may be trying to communicate with a BlueTooth COM port that has no interface attached. Please disable all unused COM ports. If you exclusively use USB interfaces, you can select "Disable all serial interfaces" from the Edit - Options - Communication Ports dialogue.

Disable serial ports

This will speed up communication, as LogTag Analyser will not need to check for connected serial interfaces.

Configuring a LogTag

My LogTag cannot be re-configured!

Some LogTags are purchased as single trip loggers and cannot be reconfigured once used. This will be shown by a lock symbol Lock next to the USB interface in the Configure screen. The LogTag will need to be returned to your distributor to have the lock removed. There may be a charge for that.

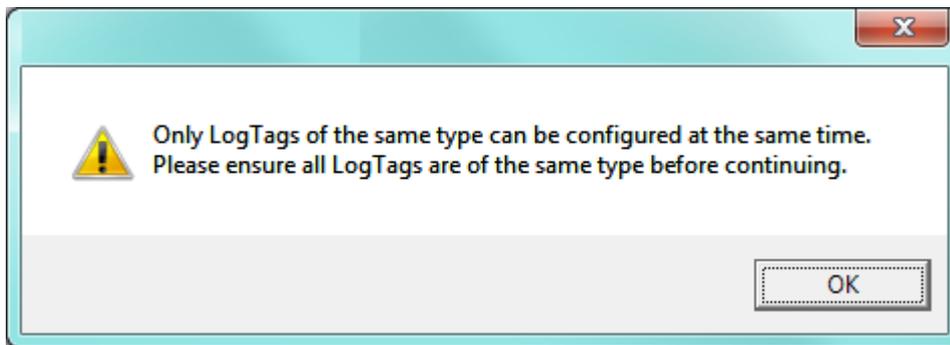
I can start a LogTag by pressing the start button, how do I stop it logging?

Logging cannot be manually stopped on the LogTag itself. If you want a LogTag to stop recording at a specific time, select a specific number of readings or select a specific time period to be covered in the "configure for next use" screen. The LogTag will then stop recording data when that point is reached. If you choose "Record Readings Continuously", the oldest recording will be overwritten once the memory of the LogTag is full, and the LogTag can only be stopped by re-configuring or hibernating it with the LogTag Analyser Software. An exception to this are TRID30-7 and TRED30-7 loggers, which can be stopped with the Start/Stop/Clear button, but this feature must be enabled when the loggers are configured.

Tip: Use the "Inspection Mark" feature to indicate when a load has safely reached its destination. When the "Start-Mark" button is pressed while logging is in progress, an inspection mark is inserted in the recorded data. This enables confirmation that the load has been manually checked at certain times in the journey, and also enables the recipient of the shipment to show when the load arrived at its destination.

What happens if I press the "Again Button" with a different type of LogTag?

You cannot reconfigure different types of LogTag with the "Again" button. A warning message such as in this example will be displayed:



If you have many different loggers that require setting with the same or similar configuration parameters we recommend setting up configuration profiles for each type. If you want to configure units with the same configuration as used for the last trip use the quick-reconfigure function. This function is described in more detail in the User Guide.

What exactly is Pre-Start fail-safe logging?

This function allows the LogTag to record temperature data even if the "Start" button is not pressed.

When a logger is configured for push button start using LogTag Analyser software the user has to press the "Start" button to initiate data collection. This is usually done when the LogTag is placed in the consignment of goods. If, however, the user forgets to press the "Start" button, the logger will still collect data in "pre-start" mode, and this data can be viewed in the normal way using LogTag Analyser.

Pre-Start logging can be enabled or disabled when configuring the logger. Pre-start logs do not count towards the total number of readings configured. In other words, you cannot expand the memory size by utilising pre-start logging.

If a LogTag is configured to take readings up to its memory capacity and has pre-start enabled, the pre-start readings will no longer be available once the Start button has been pushed AND the LogTag has completed its intended full logging cycle. The pre-start readings will be overwritten to ensure the "main" recordings can use the complete memory.

I want to start recording at a specific date and time, but the Software won't let me do that!

Earlier versions of LogTag Analyser did not support recording from a set date and time. Later versions do, so please upgrade to the latest version and you will be able to select "Date and Time" as a startup option in the configuration screen.

Using LogTag Products

Can we use a LogTag to measure temperature of liquids?

LogTag products are not rated for direct immersion into any liquid. A waterproof enclosure is available for some models. TREX-8, TRED30-7 and TREL-8 models are fitted with an external sensor. The stainless steel tip of the external sensor is suitable for immersion.

Can we fit an external temperature sensor to a TRIX-8?

Sorry, external temperature sensors can only be fitted to TREX-8, TRED30-7 and TREL-8 models.

How fast will a TRIX-8 react to a change in temperature?

The most common industry standard expression for temperature reading stabilisation time is the 'T90'. This is defined as the typical time taken of a given sensor in a given environment (e.g. moving air, still air, liquid etc) to register 90% of an immediate step change in temperature.

The T90 of TRIX-8 is typically less than 5 minutes in moving air of 1m/s.

As the thermal step response is basically dependent on the latent heat of the two thermal masses involved (the LogTag and the surrounding environment) and the rate of thermal transfer between them, the T90 is the same irrespective of the difference of temperatures though at extremes (water freezing and boiling points for example) the environment does not behave homogeneously thereby changing the rates of thermal conduction and therefore changing the resulting T90 value.

For example: in a situation of a 25°C step change say starting at 10°C and moving to 35°C in moving air of 1m/s, the TRIX-8 will typically register 90% of the step after less than 5 minutes - i.e. $0.9 \times 25 = 22.5 \rightarrow 10 + 22.5 =$ registering 32.5°C within 5mins.

The T90 for a 15°C step in 1 m/s moving air (say 10°C to 25°C) will be the same. $0.9 \times 15 = 13.5^\circ\text{C} + 10 =$ registering 23.5°C within 5mins.

T90 is different in slower moving air or still air, though air is never totally 'still' when a temperature difference exists as convection will take place.

What is the hibernate feature?

LogTags can be hibernated via LogTag Analyser by selecting Hibernate from the LogTag menu. When hibernated, all logging functions are suspended, all indicators are turned off and internal components are switched to low power. This reduces the current consumption on LogTags to very low levels, equivalent to around 1/10th or less than during normal operation. If units are hibernated between uses, for example when the unit is not required for another trip straight away, the battery life can be significantly extended. Recorders are automatically 'woken up' from hibernation if they are placed in an interface and accessed, and do not automatically return to the hibernate state. The green LED will blink every 8 seconds to indicate its 'awake' status, any previously recorded data, however, will no longer be accessible. Note that recorders may wake up from hibernate if static discharges into the contacts of the recorder as a result of handling the recorder after it has been hibernated.

What do the different light patterns on the LogTag mean?

The LogTags LED's signal a number of different events or status information. The table below contains a summary of the light patterns you may come across during use.

Signal	Sequence	Occurrence
LogTag wake-up signal	Sequence of four alternate flashes of green-red LED's	<ul style="list-style-type: none"> Displayed after configuration has been successfully applied to the LogTag. When a LogTag is woken up from hibernation.
		Not to be mixed up with...
LogTag start-up signal	Sequence of sixteen alternate flashes of green-red LED's	<ul style="list-style-type: none"> Displayed when the LogTag starts its recording cycle.
Mark signal	Sequence of five simultaneous flashes of green and red LED's	<ul style="list-style-type: none"> Displayed when pressing start/mark button while recording to indicate an inspection mark in the software. Displayed directly after the start-up signal following a push button start where a recording delay has been configured. In this instance the start-up signal is repeated when the actual recording begins.
Logging active, no alert present	Single flash of green LED every 4 seconds (approx.)	<ul style="list-style-type: none"> Indicates LogTag is recording. <p>This is not displayed when pre-start is active and the main logging cycle has not yet started. It is also not displayed when the green LED has been turned off in the configuration screen.</p>
Logging finished, no alert present	Single flash of green LED every 8 seconds (approx.)	<ul style="list-style-type: none"> Indicates LogTag has finished recording. <p>This is not displayed when the green LED has been turned off in the configuration screen.</p> <ul style="list-style-type: none"> Will also be displayed when unit has been woken up from hibernation.
Alert condition present	Single flash of red LED every 4 seconds	<ul style="list-style-type: none"> Displayed when the LogTag has detected an alert condition and the Alert LED has been activated. <p>If an alert is present you cannot determine if the unit is still logging or has finished its log cycle. The Alert LED will flash every 4 seconds to ensure an alarm condition is not overlooked.</p>
Communication	The green LED will flash occasionally	<ul style="list-style-type: none"> During communication with the interface the green LED will flash occasionally; no information is conveyed in this.
Start button press	Red LED glows faintly	<ul style="list-style-type: none"> This is by design but conveys no information.

Can LogTags be used in an environment with Gamma radiation?

Although we have no test data or specifications for the components used in a LogTag it seems generally accepted that CMOS semiconductor components may have marginal performance above 5 kilorads of Gamma radiation dose. Typically most commercial (i.e. non rad-hardened) electronics will fail for doses greater than 10-50krad. Depending on the intensity of the radiation the failure could be just a memory corruption, temporary loss of function or permanent damage/loss of function.

Providing metal shielding for the logger (such as a lead container) will lessen the impact of the radiation.

What happens if there is an electrical current between the contacts - will that damage the LogTag?

The contacts are isolated from the critical internal component such that incidental static discharge will not harm the LogTag. Deliberate application of a full mains voltage (100-240 volts AC or 12-24 volts DC) to the LogTag, however, will cause permanent damage.

How can I change the temperature units from °C to °F?

If you simply wish to change the unit used to display reports and graphs in LogTag Analyser, select Edit - Options - General Settings and use the drop down list next to Show temperatures in to select the desired temperature unit.

If on the other hand you wish to change the display units on a LogTag model showing temperature on a built in display, you will need to reconfigure the unit using LogTag Analyser; click on the Advanced Options button in the LogTag Configure window and select the desired temperature units in the Temperature display unit drop down box.

LogTag Batteries

How long does a LogTag's battery last?

Unfortunately there is no clear cut answer to this question. Battery life is affected by many different factors:

- If the logger is permanently used in very cold temperatures (<20°C for example) battery life is reduced as the battery needs to work considerably harder to deliver the required power
- If the logger is permanently used in very hot temperatures (>50°C for example) the battery's internal self-discharge increases as does the average current drawn by the electronics, hence battery life decreases
- If the download rate is high, battery life decreases
- If the alert LED blinks often, more power is used and battery life decreases
- If the logging rate is high, more power is used and the battery life decreases
- If the logger is hibernated between uses, battery life increases, as the power consumption between trips is kept to a minimum.

It should also be noted that not all battery cells have exactly the same characteristics. Although they are manufactured to stringent quality specifications, some cells have naturally longer life than others due to the processes used in their manufacture.

Each data sheet contains an estimate for typical battery life in normal conditions; this is based on monthly download and 15 minute logging. Clients have reported shorter battery life for applications of frequent downloading (twice a day) with relatively rapid logging (every minute or less), but also well exceeding the specifications, particularly if they are hibernated between uses.

How can I tell if a LogTag's battery is low?

LogTag Analyser displays the current battery condition of a recorder during configuration and also after download.

TRIX-8, TREX-8 & HAXO-8 models contain a simple battery diagnostic circuit, which measures the battery voltage and returns 'OK' or 'LOW'. This is just a status and it is not possible to calculate a %remaining battery life from this data. The point at which the battery reports 'LOW' is typically when around 15%-20% capacity is left, which in normal operating conditions is equivalent to around 3-4 months of typical use.

SRIC-4, TRIL & SRIL designs contain a battery life monitoring system. These products not only return the actual battery voltage to the software, but also keep track of their activities so LogTag Analyser can calculate a '% battery life remaining' value, once the battery capacity falls below 50% of its original value. TRID30-7 and TRED30-7 models report high or low based on battery voltage.

An incorrect low battery indication can occur if the recorder is still very cold during communication, as it is more difficult for the battery to deliver power at low temperatures due to the chemistry used. The battery condition is therefore more representative when reported at room temperature, around 20°C.

What happens if I keep using a LogTag which shows a low battery?

If a LogTag reports a battery as 'OK' during configuration, there is typically enough operational life left to complete a trip before being completely exhausted. Sometimes such a trip can even last several months, as the battery threshold that triggers a 'LOW' reading has enough safety margin built in to allow for the battery to go 'low' during the trip. If, however, a product shows 'LOW' when being configured or downloaded, it should not be used again, but discarded in accordance with local regulations.

If you continue to use the recorder despite a LOW battery warning, there may not be enough power left to correctly record and store data, or to communicate with a PC. Often this leads to data corruption and sometimes complete data loss. For SRIC-4, TRIL & SRIL models the software can calculate the estimated % remaining at the conclusion of a configured logging trip and block configurations that can result in a battery being empty before the trip end.

Can the battery in LogTag recorder products be recharged or replaced?

All LogTag recorder products have non-rechargeable Lithium-Metal type batteries. You must not attempt to recharge these batteries.

Following models have user replaceable batteries:

- TRID30-7R
- TRED30-7R

They use a commonly available battery (CR2032); to safeguard your data we recommend you use a reputable, branded battery. Detailed instructions for battery replacement can be downloaded from [here](#).

Following models cannot have their batteries replaced:

- SRIC-4
- SRIL-8, TRIL-8
- TRID30-7F, TRID30-7FW, PTID30-7F
- TRED30-7F, PTED30-7F

For the remaining models the battery change process will involve opening the case; it requires some dexterity, soldering equipment and some electronics soldering experience:

- TRIX-8
- TRIX-16
- HAXO-8
- TREL-8
- TREX-8

Downloading, Viewing and Saving Data

I made annotations to my chart and changed the graph title before I saved it, but now they have disappeared - what did I do wrong?

LogTag Analyser versions prior to 1.5 cannot save any annotations directly to a file. This is a result of FDA Chapter 21 CRF Part 11 which prohibits a change to the *.ltd file data once downloaded from the LogTag. From version 1.5 onwards annotations are stored in a separate annotation file, which satisfies the FDA requirements. This file allows annotations and Graph titles to be stored and retrieved for viewing later.

What causes some of the data points on the charts to be non-validated? What is non-validated data?

LogTag products automatically insert error detection codes into the log memory while they record. This assists in detecting corruption and/or manipulation of data. These error detection codes are saved with the file so any attempts to manipulate data in a saved file are also detected.

Non-validated readings occur when a block of readings fails a data integrity check; these readings can be displayed differently on the chart and data list. There are a number of reasons why data can become non-validate:

- A communication error occurs during data transfer from the LogTag to the PC
- Problems occurred during logging where either the readings or the error detection code was not correctly written to memory due to a low battery
- The LogTag was operated in an environment far beyond the production specification (i.e. very cold or very hot or in a heavy industrial environment with high electro-magnetic fields present).

Only in very rare cases is this a result of a memory fault in the LogTag.

My older network files get overwritten, but I have the Option "Always create a unique copy of files" enabled.

Some Network Attached Storage Devices (NAS Drives) use versions of SAMBA (Server Message Block) file servers which do not correctly report back whether a file exists or not. Consequently, LogTag Analyser will overwrite an already existing file with the same name, regardless of the settings made in the Automation options. To check if your server displays this behaviour, set the appropriate storage location in the Options dialogue, configure a LogTag for 30 seconds logging and download the LogTag twice a few minutes apart. The second download should create a file with "...copy 1" attached at the end of the file name. If you cannot see this additional file in the storage location, you should select a different storage folder to maintain the integrity of your data.

It is always good practice to include a field element into the file name that differentiates the file by its date or trip number.

How is the downloaded data stored and how can this data be accessed if I send it to another person?

Downloaded data are stored in a LogTag Data file (*.ltd), which is a proprietary secure format that is tamperproof. This is a requirement in many applications and standards (such as the FDA 21 CFR Part 11 in the US).

*.ltd files can only be accessed and viewed by LogTag Analyser software, so if another person wishes to view the data on different computer then either they need to install LogTag Analyser (which is free for download and use) or the data needs to be exported to another format.

LogTag Analyser stores data in a folder which can be set in the Options, where you can also choose to automatically store data upon downloaded. LogTag Analyser can export data either manually or automatically to formats capable of being imported by other applications such as MS Excel, however, data exported this way are no longer secure/tamper proof.

I want to view data in Microsoft Excel - how can I export the data?

LogTag Analyser has the option to save *.csv files, which can be read directly into Microsoft Excel. Please see your MS Excel documentation if you have difficulties with this step. To create a *.csv file there are three options you can choose from:

In LogTag Analyser, select "Edit - Options" and select "Export and Reports". Tick the selection box next to "CSV (Comma delimited)" files. From now on anytime you download a LogTag, a CSV file will automatically be saved together with the ltd file in the directory chosen in "File and Folder settings". This is usually the "My Documents\My LogTag Data" folder.

If you wish to export a previously saved file to Excel, open that file, select "File - Save as...", and in the drop down box "Save as type" at the bottom select "CSV (Comma delimited)". The file extension will be automatically be added. You can also select a list separator if you do not wish to use the default Windows separator.

When you are viewing any data or summary tab simply select "Edit - Copy" and paste it directly into an Excel spreadsheet

Servicing LogTag products

Can LogTag recorders be calibrated?

All LogTag data logging products can be calibrated and then adjusted (re-calibrated) with an application called "LogTag Calibrate". In this context, calibration is the process of checking a given instrument against a reference with a calibration table of values and errors being generated. Any instrument with a readout can be calibrated. What clients usually want is the ability to "adjust" a LogTag. Adjustment (or recalibration as it is sometimes called) is when an instrument is adjusted to read in accordance with a reference instrument. The readout of the instrument after the adjustment is the same as the reference instrument.

Please discuss any requirements for calibration with your local distributor. All LogTag products are designed to operate to the published accuracy over the typical product life, provided they are operated in the rated environment defined in the product specification. Temperature calibration therefore should not be required, unless it is a third party requirement for the application in which the loggers are used. Due to the nature of the RH sensor it is advised that RH calibration is performed every 6-12 months, depending on the environment the logger is subjected to.

What do I need to do to replace the soldered battery in a LogTag?

You will need a replacement battery and a replacement front label. The battery and label are custom made and must be purchased from Rollex Medical or an authorised distributor. Please note that due to airline regulations it is increasingly difficult to ship batteries from our warehouse, and you may incur significant expenses for such a shipment.

PLEASE NOTE THAT ALL NECESSARY SAFETY PRECAUTIONS MUST BE IN PLACE. THESE INCLUDE BUT ARE NOT LIMITED TO PROPER ANTI-STATIC PRECAUTIONS, EYE PROTECTION AND SOLDER FUME EXTRACTION. ROLLEX MEDICAL WILL NEITHER WARRANT NOR ACCEPT LIABILITY FOR ANY DAMAGE OR HARM CAUSED AS A RESULT OF PERFORMING THE FOLLOWING SERVICE OPERATION.

The process is as follows:

1. Hibernate the LogTag with the LogTag Analyser software
2. Remove the front label, remove the countersunk screws and open the case
3. De-solder the battery from the PCB
4. Replace the foam dot on the battery
5. Solder the new battery in place, watch out for correct polarity
6. Re-assemble the case (reverse process of above dis-assembly)
7. Fit a new front label
8. Test the logger function correctly

Rollex Medical also strongly advises recalibration of the product as a general product performance validation, following a battery change.

The cost of the replacement components plus the cost of labour and calibration to do this job is typically significantly higher than the cost of a replacement logger. However, if you wish to proceed, you can enquire about the cost of a replacement battery and label with your local distributor.

Why should I re-calibrate a logger after a battery change?

LogTag recorder products that have had their case opened have potentially been exposed to electrostatic effects. In addition, units that had their battery replaced may not have been correctly hibernated or may have suffered from memory corruption if battery voltage was critically low during use. They should therefore be validated for correct operation and performance after the battery change. The preferred way of doing this is by way of recalibration, where ideally the product should be exposed to its full temperature measuring range.

Does LogTag Recorders offer a recycling system? Can we return LogTags with empty batteries for disposal?

LogTag Recorders don't operate any return or recycling programme. The cost of recovering components exceeds the cost of replacement by far. Loggers which have reached the end of their working life should be disposed of in accordance with local regulations.

Please contact your local distributor, who may operate a recycling, rental or leasing system.

Error Messages

I am getting an error message "Internal error \$4:USB.0012345"

I am getting an error message "LogTag failed to respond [20]" - what do these mean?

"Internal error \$4" and "LogTag failed to respond [20]" are very general error messages which simply mean that LogTag Analyser found an interface and detected the presence of a LogTag product inside the interface, but was unable to establish communication. The letters and numbers after \$4 represent type and serial number of the interface. Often this error will disappear by simply repeating the action you were performing when the error occurred, but sometimes it can be a bit more difficult to locate the cause.

Here are some scenarios in which these errors could occur and what to do to rectify the issue:

- There is poor electrical connection between the LogTag contact pads and the interface pins; this can happen if the contact pads are dirty or have been exposed to a corrosive environment. Usually this can be corrected by cleaning the contact pads on the LogTag. Use a soft, damp cloth. For stubborn stains you can also use a soft pencil eraser.
- There is a "stuck" contact pin inside the interface; look inside the slot, there should be three contact pins visible, they should slide in and out with moderate resistance when force is applied (e.g. with the end of a pencil). Make sure all pins move freely.
- There is not enough power being supplied to the interface (USB); We have seen this error when USB interfaces are used on unpowered USB hubs with other equipment also connected. USB ports have a limited ability to supply power and we would always recommend to connect the USB interfaces directly to the computer or to use a powered hub.
- Communication has been interrupted prematurely; sometimes a user will remove the LogTag from the interface too early, which will cause this error to be displayed. In this case simply re-do the action with the LogTag connected properly throughout the communication.
- The USB port is defective; Try a different port and see if the error persists.

- The LogTag's battery is critically low
- The LogTag has just been removed from a cold environment. Lithium cells and in fact all batteries typically exhibit a lower battery voltage in cold conditions, sometimes significantly lower, so downloading units that have come e.g. directly out of a freezer could show communication problems. In that case it may pay to wait until the unit has acclimatised to room temperature or slightly above.
- There was water in the unit; different LogTag models have different ingress protection and are not waterproof. If water got inside the unit, it will keep working for a time, but eventually the communication will cease to work.
- The LogTag has been subjected to strong EMC fields or radiation, causing a corruption in its internal memory.

I am getting an error message "Internal error \$1" - what does it mean?

The "Internal error \$1" message will appear if you try to communicate with a model that is newer than your current version of LogTag Analyser supports. LogTag Recorders LTD continually expand the range of products, adding new models and improved functionality for existing models. When your version of LogTag Analyser reads one of those loggers and cannot interpret the data inside, it will display this error message.

To communicate with this logger please update your LogTag Analyser software. You can either use the "Check Internet for Update..." functionality from the Help menu in LogTag Analyser, or download the updated version from the Download Page. The version available for download will always support all models currently sold by LogTag Recorders LTD.

I received an error message with a number - what does this mean?

The following table describes the error code values, their meaning and possible remedies. If problems do persist, please check that you have the latest version of the software available, which can be confirmed through the "Check for updates" command in the "Help" menu.

Value	Definition	Possible Resolution
\$0	Operation completed successfully	
\$1	General failure	Obtain and install a newer version of the software. If problem persists please contact support for further assistance.
\$2	Unable to communicate - No access to the communication port	Unplug the interface for at least 10 seconds and then re-plug interface. Try connecting the interface to a different port socket.
\$3	File/disk error while accessing LogTag information within a file.	Use disk validation and repair tools, like scandisk or chkdsk, to attempt to repair the issue. Obtain and install a newer version of the software. If problem persists please contact support for further assistance.

\$4	Unable to communicate - No Response from LogTag	See separate description above. If unsuccessful, replace or return to distributor
\$5	Unable to communicate - Communication Port not responding	Check that an interface is connected, if not disable the usage of the port in the Options. Uninstall the port and then restart the computer. If using a converter, like a USB-RS232 cable, try using a LogTag USB interface cradle.
\$6	Memory allocation error	Software has run out of RAM to operate successfully. Close some applications that are currently running. Increase the physical amount of RAM in computer.
\$7	Invalid parameter in communication	An internal error. Obtain and install a newer version of the software. If problem persists please contact support for further assistance.
\$8	The hardware and/or operating system of the system accessing the library method does not support the system requirements of the library.	Check that the system meets minimum requirements of the software. Update IE from Microsoft.
\$9	Password required but not supplied	Software was unable to gain secure access to the LogTag. Obtain and install a newer version of the software. If problem persists please contact support for further assistance.
\$A	Data format error - please upgrade software	Upgrade your software.
\$B	Unsupported product - please update software	Upgrade your software.
\$C	Unsupported file - please update software	Upgrade your software.
\$D	LogTag version error - please update software	Upgrade your software.
\$E	Communications protocol error - please upgrade software	Upgrade your software.
\$F	LogTag configuration error - not supported or incorrect	Obtain and install a newer version of the software. If problem persists please contact support for further assistance. This error may require the unit to be returned for repair.
\$10	The software failed to perform the operation because the user cancelled the operation before it was completed.	Try again. Obtain and install a newer version of the software. If problem persists please contact support for further assistance.

\$11	An internal error has occurred.	<p>Close all copies of the software and/or restart computer.</p> <p>If problem persists please contact support for further assistance.</p> <p>Obtain and install a newer version of the software.</p>
\$12	LogTag Trip Usage limit exceeded	Return unit to distributor
\$13	Unable to communicate - Communication Port unsupported or Modem Port	<p>Plug the interface cradle into a different communication port on the computer.</p> <p>Contact your IT support to investigate and resolve hardware conflicts on this communication port.</p>
\$14	User Server cannot establish TCP connection	<p>Check TCP/IP network support is installed and enabled.</p> <p>Check there is an active network connection, which is able to communicate/connect to the rest of the network.</p> <p>Contact your administrator to check TCP/IP connections and settings.</p>
\$15	User Server cannot connect to locked user account	Contact your administrator to grant access to your account.
\$16	Internal error code indicating that a component of the software is out of date.	Obtain and install the latest version of the software. If problem persists please contact your distributor.
\$17	The software is unable to successfully connect to the LogTag User Server software.	Obtain and install the latest version of the software. If problem persists, contact your administrator to update the copy of LogTag User Server.