

LogTag®

TEMPERATURE LOGGER TRED30-16R QUICK START GUIDE

WHAT HARDWARE DO YOU NEED?

- LogTag® TRED30-16R Temperature Logger.
- External Probe (ST100X-XX).
- LogTag® LTI/USB Interface Cradle.
- PC running Windows 7 or later, or Windows® 2008 Server or later.

WHAT ABOUT SOFTWARE?

LogTag Analyzer software is available for download from LogTag Recorders website.

- Once the installation is complete, a new icon will appear on your desktop.

INSTALLING THE INTERFACE CRADLE

- Plug the Interface Cradle into a USB port.
- USB drivers will install automatically. Your operating system will inform you when installation is complete.



CONFIGURING THE TRED30-16R

The Logger must be configured before you can take readings.

- Start the LogTag Analyzer software.
- Insert the Logger into the Interface Cradle with the blue label to the front. You will hear a click as the contacts engage. There is no need to remove the Probe.
- The screen will show 'A new LogTag has been detected... Please wait...'
- If a Logger has been used previously, a chart will appear.
- Select 'LogTag - Wizard' to bring up the configuration wizard. The 'Welcome and general instructions' will be displayed.
- Click on 'Next'; LogTag Analyzer will scan for a recorder, once found the configuration options will be displayed.

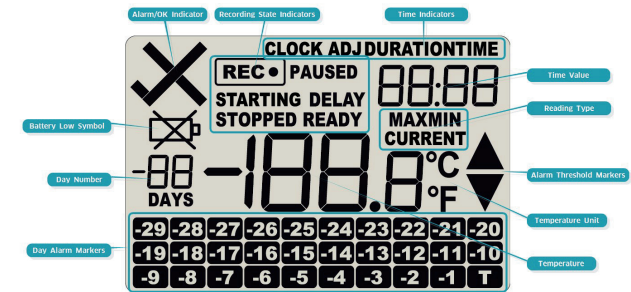
The screenshot shows the 'Action List' on the left with three steps: 1. Locate and identify LogTag(s), 2. Configure LogTag(s) for next use, and 3. Prepare LogTag(s) for next use. The main area is titled 'User ID: My Vaccine Shipment' and 'LogTag battery: OK'. It contains various settings for recording (e.g., 'Record readings continuously'), alarms (e.g., 'Trigger alarm when readings above/equal 10 °C'), and password requirements. Navigation buttons like '< Back', 'Next >', 'Close', and 'Help' are at the bottom.

The screenshot shows the 'Advanced Options' dialog box with several checked options: 'Clear and reset alarm when STOP/Clear button pressed', 'Alarm remains on even if readings return to non-violation range', 'Pause alarm/statistics processing for 2 readings when button pressed (20 Minutes)', 'Temperature display unit: Celsius', 'Switch off display after 30 seconds (Power save)', 'Allow logging stop with STOP button', 'Allow reset of logger with START button', and 'Show total summary days collected'. 'OK', 'Cancel', and 'Help' buttons are at the bottom.

min/duration statistics and alarm triggers for the configured paused duration. This allows the user to review current statistics or clear an alarm without causing a false alarm or statistic while handling the Logger.

- The Logger can display temperature in units of °C or °F, select the units you require.
- The option 'Switch off the display after 30 seconds (Power save)' will extend battery by automatically deactivating the display after 30 seconds of no button activity, button activity will temporarily reactivate the display.
- The Logger can be configured to allow the user to Stop and/or Re- activate the Logger, tick which options are required.
- Click 'OK' to exit the Advanced dialog, returning to Configuration Options.
- Click 'Next' and the Logger will be configured.
- When configuration is complete remove the Logger from the Interface Cradle.
- If you wish to configure more Loggers with the same configuration profile, insert the next Logger into the Interface Cradle and click 'Again'. Repeat until all Logger are configured.

DISPLAY OVERVIEW



The temperature can be displayed in °C or °F.

Battery test is performed hourly-

Reading type:-
CURRENT = The temperature of the last reading taken.
MAX = The maximum reading in a given 24hour period.
MIN = The minimum reading in a given 24hour period.

displayed when battery tested LOW.

Above/below limit markers:-

- ▲ Up arrow marker appears when the temperature displayed is above the upper alert limit.
- ▼ Down arrow marker appears when the temperature displayed is below the lower alert level.
- ✕ appears when an alarm is triggered.

State indicators:-

- READY STARTING** Ready to start recording. Preparing to start recording. If a delayed start is configured then displays time remaining to start recording.
- RECORDING PAUSED** Recording. Max/Min statistics collection paused due to button press activity.
- STOPPED** Recording has stopped.

The time (in HH:MM) can be current time, time remaining to start of a delayed start or duration of a given max min value above or below the specified limits. The value displayed is indicated by the following:-

- TIME DELAY** = displaying Current Time.
- TIME DELAY** = displaying DELAYED START time remaining.
- DURATION** = displaying duration of a given MAX or MIN statistic above/below the limits on a given day.

The display is organized with a table of 'day alarm indicators' segments named 'Today' to '-29d' which are switched on when a given day has an alarm trigger present.

The day number of the currently selected day statistic is displayed when in review mode. TODAY is day 0, yesterday is day '-1'. Can be configured to display the total number of days collected while recording.

CONFIGURATION OPTIONS

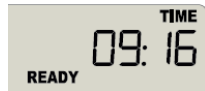
- User ID - user can enter details about each Logger.
- Select 'Push button start' or 'Date/Time start' depending on requirements.
- Enter the start Date and Time if selected.
- Tick 'Enable pre-start logging'. Enabling this function causes the Logger to start taking readings immediately after configuration (useful in case the user forgets to press the Start button).
- Select recording mode - Continuously (overwrites old readings when memory is full) or Reading for a specific time (note that changing the recording interval automatically re-calculates the recording duration).
- Enter a start delay if required (allows the Logger to stabilise before recording starts).
- Set a upper temperature alert value and tick 'Trigger alarm' if you require a visual upper 'ALARM' to show on the Loggers display once triggered.
- Set a lower temperature alert value and tick 'Trigger alarm' if you require a visual lower 'ALARM' to show on the Loggers display once triggered.
- You can also setup various trigger conditions for both the upper and lower alarms, single violation or a set of consecutive violation readings or a total of violation readings encountered (called accumulative).
- (Optional) Activate an audible alarm to provide extra feedback when an alarm event has been registered.
- If you wish to control future configuration of this Logger enable 'Configure requires a password' and enter a password. You can also control future downloads; enable 'Download requires a password'.
NOTE: Passwords are case sensitive.
- Click 'Advanced options' to view and change the Loggers advanced features including the 'Pause' function, stopping and re-activation, clearing and preserving alarms, power save and temperature units displayed (°C or °F).
- If enabled, any button activity will prevent readings being processed for max/



STARTING THE LOGGER

If the Logger has been configured with a Date/Time start, it will start automatically.

Only when the display shows **READY** can the Logger be started manually. Press and hold the **START** button. Continue to hold while **STARTING** flashes on the display; release the button when the flashing stops (after approx 5 seconds).



The Logger will now display the delayed start time remaining (if configured). This example shows a start delay of 30 minutes remaining.



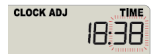
At the end of the delayed start (if configured) the Logger will start collecting data and show the symbol **REC** on the display.

PAUSED FUNCTION

If enabled, any button activity will suspend processing of readings and the Logger will display **PAUSED**. This allows the user to review the statistics or clear an alarm without causing an invalid reading, alarm or statistic.

SETTING THE DISPLAY CLOCK

LogTag Analyzer sets the Loggers internal real time clock to the configuration PC's time however the user can manually change the display clock if required. Press and hold the **◀** and **●** buttons together continuously for 8 seconds. During this period the display will flash **CLOCK ADJ**. Release the buttons when the flashing stops to enter 'clock adjust' mode.



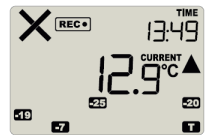
The minutes will flash. Press **◀** to increment the minutes and **●** to accept the minute changes and to start editing the hours. The hours will now flash, press **●** to increment the hours and **◀** to accept and store the new time. If recording is active a clock change event will be recorded with the next logged reading, which will be displayed in the downloaded data.

RECORDING DISPLAY

During recording, the display shows the temperature of the last reading taken, the current time, battery status and a combination of alarm status and history. A reading is taken and the display updated every logging interval as configured in LogTag Analyzer. Following are some examples:-



Here the display shows that alarm events occurred 7, 19, 20 and 25 days ago. The current temperature is over the upper limit (indicated by the **▲**) but has not been over for long enough to trigger an alarm.



20 minutes later the over temperature has triggered an alarm. The **X** symbol and the **T** marker day alarm are shown.



The next day, the temperature has returned to the acceptable range but the alarm remains present. The day summary has shifted by 1 day as the time has gone through midnight.

CLEARING AN ALARM

When an alarm event has occurred, the **X** symbol is displayed.

To clear the **X** symbol from the display, press and hold the **Clear ●** button until the **X** symbol stops flashing then immediately release.

Alarm events continue to be displayed in the history area of the display and can be reviewed with the day statistics.

Note: The option to clear and latch alarms can be disabled see advanced options in LogTag Analyzer.

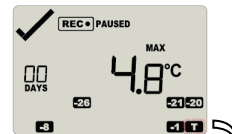
REVIEWING DAY STATISTICS

The Logger will display up to 30 days of max/min/duration and alarm statistics. If the Logger is configured to record longer than 30 days (or continuously) then the day statistics will contain up to the latest 30 days.

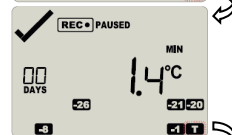
To review the day statistics press the **Review ◀** button. Each press of the button will step through the Max and Min temperatures for each day starting with today and moving backwards through the days (displayed day will flash).

Any button activity during recording will place an inspection mark in the next reading of logged data which will be displayed when the data is downloaded.

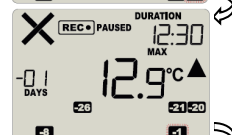
Following are some examples:-



Pressing the **Review ◀** button displays current days' **MAX** statistic. The **today** segment flashes and **DAY 00** is shown to indicate the 'Today' selection. The selected day (today) does not have any recordings outside the preset limits.



Pressing the **Review ◀** button again displays the days' **MIN** statistic. The **MIN** statistic is not below the limit and did not trigger an alarm.



Pressing the **Review ◀** button again displays the next previous days' **MAX** statistic. There are recordings that are above the upper limit. The **MAX** statistic is above the upper limit (indicated by **▲**) and the **ALARM** was triggered for a duration of 12 hours and 30 minutes.



Pressing the **Review ◀** button again displays the days' **MIN** statistic. The **MIN** statistic is not below the limit and did not trigger an alarm.

If less than 30 days of recordings have been collected, the day marker only advances as far as there is data available. After the last day for which statistics have been collected is displayed, the next press of the **◀** button rolls the summary back to the statistic for **today**. Pressing the **◀** button at any time shows the normal recording display again.

STOPPING THE LOGGER

If enabled you can stop the Logger; press and hold the **Stop ●** button.

Continue to hold while **STOPPED** flashes on the display; release the button when the flashing stops. The Logger will no longer take any readings, however you can still review the day statistics and download the logged results to a PC with LogTag Analyzer.

Note: The option to stop the Logger can be disabled, see advanced options in LogTag Analyzer.

RE-ACTIVATING THE LOGGER

If enabled, the Logger can be re-activated for re-use by either re-configuring using LogTag Analyzer or using the **Start ●** button.

To re-activate using the **Start ●** button, press and hold the **Start ●** button observing the **READY** text flashing on the display; release the button when the flashing stops. The Logger will then be ready for a push button start. Data/time start is only possible by re-configuring with LogTag Analyzer.

Re-activating the Logger will erase all previously recorded readings and statistics! Note: The option to re-activate the Logger can be disabled, see advanced options in LogTag Analyzer.

BATTERY

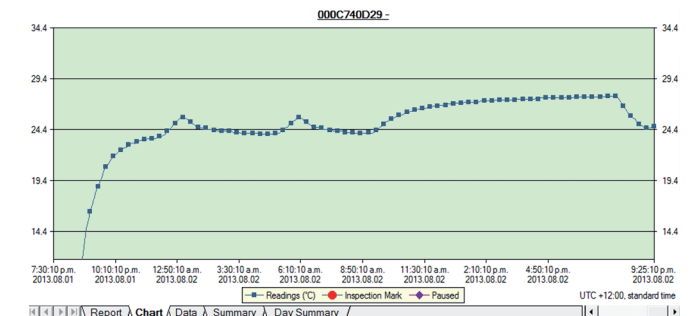
The Logger contains a Lithium Battery. Dispose or recycle the battery in accordance to your local regulations. Do not expose to extreme temperatures.



The end of battery life is indicated by a low battery symbol, the Battery/ Logger should be replaced within 30 days when this symbol appears. The TRID30-16R has a replaceable CR2032 battery. Battery access sits behind the square white label on the back of the Loggers case. Contact your supplier or check the LogTag Recorders website for further details.

DOWNLOADING DATA

- Start LogTag Analyzer software.
- Insert the Logger into the Interface Cradle.
- The screen will show 'A new LogTag has been detected..... Please wait.....'
- After a few seconds, the downloaded data will appear (by default shown as a chart, see below).
- Data can be displayed in Chart, Data, Summary or Day Summary formats by clicking the tabs at the bottom of the chart dialog.
- Data can also be saved in a number of formats including TXT, PDF, HTML and CSV for import into a spreadsheet program.



Example of a Zoomed in chart within LogTag Analyzer.