CYCLOPS L

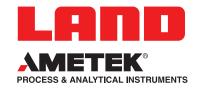
LOGGER SOFTWARE USER GUIDE

PUBLICATION N° 809653 LANGUAGE: ENGLISH



① Cyclops 100L, Cyclops 160L, Cyclops 390L, Cyclops 055L













IMPORTANT INFORMATION - PLEASE READ

Health and Safety Information



Read all of the instructions in this booklet - including all the WARNINGS and CAUTIONS - before using this product. If there is any instruction which you do not understand. DO NOT USE THE PRODUCT.

Safety Signs



WARNING

Indicates a potentially hazardous situation which, if not avoided, could result in death or personal injury.



CAUTION

Indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury to the user or users, or result in damage to the product or to property.

NOTE

Indicates a potentially hazardous situation which, if not avoided, could result in damage or the loss of data.

Equipment Operation

Use of this instrument in a manner not specified by Land Instruments International may be hazardous.

Read **and understand** the user documentation supplied **before** installing and operating the equipment.

Protective Clothing, Face and Eye Protection

It is possible that this equipment is to be installed on, or near to, machinery or equipment operating at high temperatures and high pressures. Suitable protective clothing, along with face and eye protection must be worn. Refer to the health and safety guidelines for the machinery/equipment before installing this product. If in doubt, contact Land Instruments International.

Electrical Power Supply

Before working on the electrical connections, all of the electrical power lines to the equipment must be isolated. All the electrical cables and signal cables must be connected exactly as indicated in these operating instructions. If in doubt, contact Land Instruments International.

Storage

The instrument should be stored in its packaging, in a dry sheltered area.

Unpacking

Check all packages for external signs of damage. Check the contents against the packing note.

Lifting Instructions

Where items are too heavy to be lifted manually, use suitably rated lifting equipment. Refer to the Technical Specification for weights. All lifting should be done as stated in local regulations.

Contact Us

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Email: irsales@ametek.com combsales@ametek.com Web: www.ametek-land.com

For further details on all LAND/Ametek offices, distributors and representatives, please visit our websites.

Return of Damaged Goods

IMPORTANT If any item has been damaged in transit, this should be reported to the carrier and to the supplier immediately. Damage caused in transit is the responsibility of the carrier not the supplier.

DO NOT RETURN a damaged instrument to the sender as the carrier will not then consider a claim. Save the packing with the damaged article for inspection by the carrier.

Return of Goods for Repair

If you need to return goods for repair please contact our Customer Service Department. They will be able to advise you on the correct returns procedure.

Any item returned to Land Instruments International should be adequately packaged to prevent damage during transit.

You must include a written report of the problem together with your own name and contact information, address, telephone number, email address etc.





0034

Design and Manufacturing Standards

The Quality Management System of Land Instruments International is approved to BS EN ISO 9001 for the design, manufacture and on-site servicing of combustion, environmental monitoring and non-contact temperature measuring instrumentation.



Approvals apply in the USA



This instrument complies with current European directives relating to Electromagnetic This instrument compiles with current European and English Compatibility 89/336/EEC and Low Voltage Directive 73/23/EEC.



The Quality Management System of Ametek Motors (Shanghai) Co. Limited is approved to ISO9001:2008 for the Design and Manufacturing of Motors and the Manufacturing of Gas Analysers.

Operation of radio transmitters, telephones or other electrical/electronic devices in close proximity to the equipment while the enclosure doors of the instrument or its peripherals are open, may cause interference and possible failure where the radiated emissions exceed the EMC directive.

The protection provided by both CE and IP classifications to this product may be invalidated if alterations or additions are made to the structural, electrical, mechanical or pneumatic parts of this system. Such changes may also invalidate the standard terms of warranty.

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Cyclops L

Logger Software





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INTRODUCTION



1 Introduction

1.1 General Introduction

This publication provides the information required to install and operate the Cyclops Logger Software.

The equipment must only be used, maintained and serviced by suitably trained personnel, capable of carefully following the procedures and quidelines given in this User Guide and associated publications.

All User Guides, Installation Guides and Manufacturer's Instruction Leaflets supplied should be read thoroughly before proceeding with any operations detailed within them.

1.2 About the Cyclops Logger Software

The Cyclops Logger Software allows you to connect a Cyclops Portable thermometer to a personal computer or mobile device and view, analyse and record live temperature readings.

When connected to a Cyclops thermometer, the Logger software records instantaneous temperature measurements each time the thermometer trigger is pressed.

The Cyclops Logger Software also allows you to:

- load stored data from any Cyclops L model thermometer;
- manage route configurations i.e. set up a sequence of measurement points covering your plant or process.

Connection between the Cyclops thermometer and the computer can be either wireless (via Bluetooth), or via a USB cable between the thermometer and the computer.

1.3 About this User Guide

This User Guide covers both the PC version and the mobile version of the Cyclops Logger Software. The majority of illustrations relate to the PC version of the software, with mobile version illustrations labelled accordingly. The functionality of the screens is identical in both versions of software.

END OF SECTION

INSTALLATION



2 Installation

2.1 Minimum PC Installation Requirements

To use the Cyclops Logger Software, the following minimum platform specification is required:

Processor : Dual Core Pentium or Equivalent

Memory: 2GB

Hard Drive: 250MBOptical Drive: DVD/CD

Graphics Card: 256MB or GreaterNetwork: 10/100 Ethernet Card

Screen Resolution: 1024 x 768 pixels

Operating System: Windows XP SP3 32-bit, .NET Framework 4.0

2.2 Supported Operating Systems (PC & Mobile)

PC Operating Systems

- Microsoft Windows XP SP2 32 bit
- Microsoft Windows Vista 32 bit
- Microsoft Windows 7 32 & 64 bit
- Microsoft Windows 8 32 & 64 bit

Mobile Operating Systems

Android v4.1 (or later)

2.3 Installing the Logger Software

The Cyclops Logger Software is supplied on CD.

- Insert the CD into the CD-ROM drive on your computer.
 If your system supports **Autorun**, the Setup program will start automatically.
- 2) If your system does not support Autorun, select the CD-ROM drive and root directory, then double-click on **Setup** to start installation.

2.4 Connecting the PC to your Cyclops Thermometer

Connection between the Cyclops thermometer and the computer can be either wireless (via Bluetooth), or via a USB cable between the thermometer and the computer.

Note

If you plan to connect to the Cyclops via Bluetooth, ensure that Bluetooth is enabled on your computer.

- 1) Turn on the Cyclops thermometer and ensure Bluetooth is enabled in the Cyclops (Refer to the Quick Start Guide or User Guide provided with your Cyclops).
- 2) Open the Cyclops Logger Software.

The Cyclops Logger Software automatically searches for Bluetoothenabled and USB devices. When a device is found, it is presented in the Logger Software window (Fig. 2-1).



Fig. 2-1 Search screen

If the required device is not displayed, you can click on the Cyclops thermometer button to search again.



3) When the required device is listed, click on its details in the list. The initial Logger Software screen is displayed.

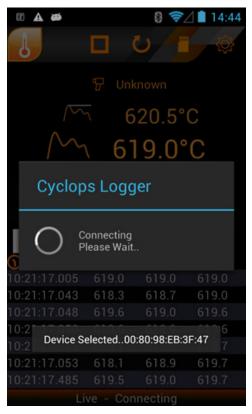


Fig. 2-2 Connecting dialog (Mobile software)

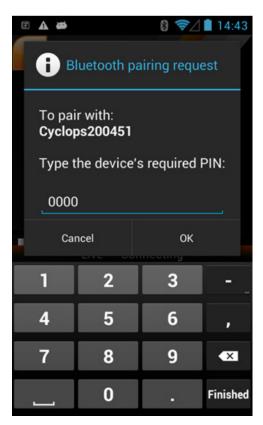


Fig. 2-3 Bluetooth pairing request dialog (Mobile software)



Fig. 2-4 Licensing window

2.5 Pairing the Cyclops Thermometer with an Android device

 Open the Logger software. If the software doesn't automatically search for devices then select the Cyclops button.



- 2) From the Device list, select the Cyclops you want to connect.
- The Connecting dialog will appear (Fig. 2-2).
 The Bluetooth pairing request dialog (Fig. 2-3) appears momentarily, and the pairing will be completed automatically.
 After the connection is made, the status bar will update to show Connected. The Cyclops is now paired with your Android Device.

2.6 Licensing your Software

When you first install the Cyclops Logger Software it is provided with a 30-day trial license. After the 30-day trial period has expired, you will still be able to use the Logger Software, but you will not be able to save any data. When AMETEK Land supply the Cyclops Logger Software, you will receive an **Activation Code**. This activation code is used to license the software as described below.

1) Open the **Information** screen by clicking on the Info icon in the main screen.



- To access the License Information screen, click on the License link.
 The License Information window displays licensing information for your software.
- 3) In the **License Information** window (Fig. 2-4), enter the **Activation Code**.

The system will check to see if a valid activation code has been entered, if it is valid, a tick is displayed \checkmark .

4) Enter your details in the **User Information** fields, then press **Send**. If your computer is connected to the AMETEK Land licensing server, you will receive a **License Key** automatically.

If your computer is **not** connected to the licensing server, you will be prompted to save the registration details to an *.xml file and send these to AMETEK Land via email. You will subsequently receive a License Key via an email from AMETEK Land.

4) Enter the **License Key** in the required field and select the **Activate** option.



The software is now licensed.

5) When you have specified the required licensing options, click on the tick to save these settings and exit the **License Information** screen.



END OF SECTION

USING THE CYCLOPS LOGGER SOFTWARE



Fig. 3-1 Initial Logger Screen



Fig. 3-2 Typical measurement screen





Using the Cyclops Logger Software

When you first open the Cyclops Logger Software, the initial viewer screen is displayed as shown in Fig. 3-1.

To take a temperature reading from the Cyclops thermometer, press the instrument trigger or the Trigger icon on the Viewer screen.



9

Note

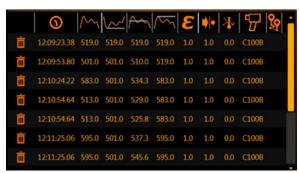
If your thermometer is not a Cyclops L model (i.e. it is an earlier Cyclops xxxB model), the remote trigger is not displayed in the Logger screen. You must use the trigger on the Cyclops thermometer itself to take readings.

Each time you press the Trigger icon (or trigger on the thermometer), readings are added to the views in the Logger.

There are two main areas in the Cyclops Logger interface (Fig. 3-2): The Table View and the Trend View The Table View displays a list of the recordings taken each time the thermometer trigger is pressed. The table lists the information in the following format:

Cyclops model

Route number (if applicable)



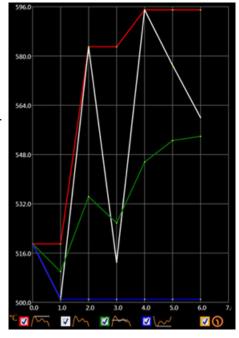
\odot	The time of the reading
	Instantaneous temperature value
\bigvee	Valley temperature value
A	Average temperature value (not applicable to Cyclops 055 models)
	Meltmaster temperature value (Cyclops 055 models only)
	Peak temperature value
$\boldsymbol{\varepsilon}$	Emissivity value of the target
• •	Window transmission value of the measurement location

Background temperature value at the measurement location

The Trend View displays a colour-coded trend line for each type of measurement taken i.e. Peak, Instantaneous etc.

You can switch the display of each trend on or off by ticking/unticking the appropriate checkbox.

The horizontal axis can be set to display either each trigger press on the thermometer, or the date and time.



3.1 Working with previously stored files

1) To open temperature data files that have been stored on your system, press the **Folder** icon.



A window is displayed in which you can select a previously stored file. Files are stored in either *.CSV or *.XML format.

2) Select the required file and press Open. The temperature data will be loaded into Cyclops Loggers software. The name of the selected file will be displayed in the status bar at the bottom of the Logger screen.

3.2 Refreshing the Display

To clear the current readings from the display and start taking readings again, press the **Refresh** icon.



3.3 Storing your temperature readings on your computer

To store the temperature readings on your PC, press the **Save** icon



By default, the readings will be stored in the folder **C:\Cyclops Data**. The **Settings** menu allows you to specify a different location for the storage of temperature readings. There is also an option to save readings automatically. For more details of the Settings options, see Section 4.

END OF SECTION

MENU OPTIONS

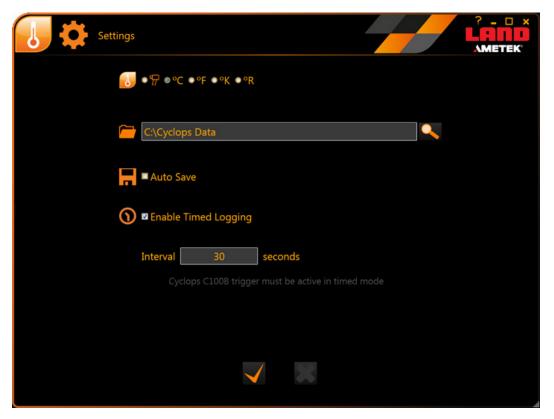


Fig. 4-1 Settings screen



Menu Options

You can configure the Logger software to suit your requirements. The options available in the menu are:



Settings - allows you to specify temperature units, file storage location, enable timed processing and remote processing;



Routes - accesses the **Route Management** screen which allows you to setup and edit measurement routes for your Logger software;



Background - accesses the **Background Correction** screen which allows you to enable background correction, take a background temperature measurement, specify the target emissivity and set a window correction value, if required;



Cyclops Data - allows you to download route data and/or temperature measurement data from your Cyclops to your PC. You can also clear all data from your Cyclops.



Chart Settings - allows you to select which temperature measurement trend lines are displayed, and specify whether the horizontal axis displays **Sample Number** or **Sample Time**. This option is only available on Android devices. In the PC software, these options are available on the Trend View display;



Information - displays version information for the Logger software and the Cyclops. Also provides links to **License** your software, and view the online help for the Logger software.

4.1 Settings

1) Click on the Settings icon. The Settings screen is displayed (Fig. 4-1).



- 2) Select the required temperature units (°C, °F, K, °R). Alternatively, you can use the instrument units i.e. the units currently selected in the Cyclops thermometer.
 - The text input field alongside the Folder icon displays the location in which temperature records will be stored on your computer. The default location is **C:\Cyclops Data**.
- 3) To specify a different location for the storage of temperature readings, press the Search icon.



- 4) Browse your computer and select the required folder.
- 5) If the **Auto Save** option is selected, each new value measured by the thermometer will be automatically saved to the location specified above. Additionally, if **Auto Save** is selected, you will have the option of specifying whether the data is saved in **XML** or **CSV** format.
 - If Auto Save is **not** selected, you will need to press the Save icon on the main Logger screen to save the readings to your computer.





Fig. 4-2 Route Management screen



6) The Timed Logging option allows you to take readings automatically at a predefined interval. To switch on timed logging, tick the **Enable Timed Logging** option and specify the logging time **Interval** in seconds. You can specify an interval between 1 and 60 seconds, in steps of 1 second.

NOTE

The Cyclops must be continually sending data (i.e. trigger pressed or in latch mode) for the timed logging mode to function.

Timed logging will only work with the Cyclops L range of thermometers, built from 2014 onwards. Instruments built prior to this date will require the trigger to be pressed in order to record temperature measurements.

8) When you have specified the required settings, click on the tick to save these settings and exit the **Settings** screen.



4.2 Route Management

The **Route Management** screen allows you to set up measurement routes for your plant or process. You can add locations to each route.

This feature is particularly useful if you have multiple locations on your plant or process which you need to monitor on a regular basis. You can set up a route in the Logger software which incorporates a sequence of these locations, and take measurements in a predetermined sequence.

You can download route data and readings into a spreadsheet, and compare these to readings taken previously on the route. This can help identify any irregularities or trends in the condition of the locations being measured.

For each location on a route, you can specify the following:

- Description of the location;
- Emissivity value for the target being measured at the location;
- A window correction factor (if applicable), for locations where the target is being viewed through a window or viewing port;
- Notes to describe the location.

4.2.1 Creating a Route

1) To open the **Route Management** screen, click on the **Routes** icon.



The Route Management screen is displayed (Fig. 4-2).

2) To start creating a route, click on the **Add Route** icon



- 3) To edit a route, double-click on the name.
- Type in the name for your route (An on-screen keyboard is provided in 4) the mobile device Logger software).
- To add a location to the route, click on the **Add Location** icon 5)





Fig. 4-3 Background Correction screen

Note

If Background Correction is enabled and the connected instrument is a Cyclops L type, the current emissivity will be read from the instrument for the background correction calculation. If the instrument is not a Cyclops L type, you will be prompted to set the emissivity to 1.0.

If background correction is enabled and the connected instrument is a Cyclops L type, the current window correction value will be read from the instrument for the background correction calculation. If the instrument is not a Cyclops L type, you will be prompted to set the window correction to 1.0.



- 6) To edit the details of a location, double-click on it.
 Use the on-screen keyboard to specify a name for the location.
- 7) You can specify an **Emissivity** value and **Window Correction Value** (if applicable) for each location. You can also add **Notes** for each location.
- 8) Repeat steps 5 to 7 until you have added all the required locations to the route.

Note: You can delete a location (or a route) by clicking on the corresponding Delete icon.



9) To save the route, click on the **Save Route** icon The route will be saved into the logger memory.



10) To load a route into the memory of the Cyclops thermometer, select the required route and click on the **Export** icon.



The route will be loaded into the memory of the Cyclops thermometer.

Note: This option is only available when using a Cyclops L thermometer.

Each route in the Cyclops memory is denoted by a numbered icon



11) When you have specified the required route options, click on the tick to save these settings and exit the **Route Management** screen.



4.3 Background Correction

The **Background Correction** screen allows you to take a reading with the Cyclops thermometer and then use this for background compensation of the subsequent readings.

The **Background Correction** option can be switched on or off, as required.

1) To open the **Background Correction** screen, click on the **Background** icon



The **Background Correction** screen is displayed (Fig. 4-3).

- 2) To turn on background correction, tick Enable Background Compensation. When background correction is enabled, the background temperature will be saved with all readings.
 The latest instantaneous value from the instrument will be shown on the page and will update as the trigger is pressed.
- 3) To save the currently displayed instantaneous value as the background temperature correction value, click on the **Save** icon.



- 4) If background correction is enabled, you can specify a **Target Emissivity** for the background, in the range of 0.10 to 1.00 in 0.01 steps.
- 5) Additionally, if background correction is enabled, you can specify a **Window Correction** in the range of 0.800 to 1.200 in 0.01 steps.
- 6) When you have specified the required options, click on the tick to save these settings and exit the **Background Correction** screen.





Fig. 4-4 Cyclops Data screen

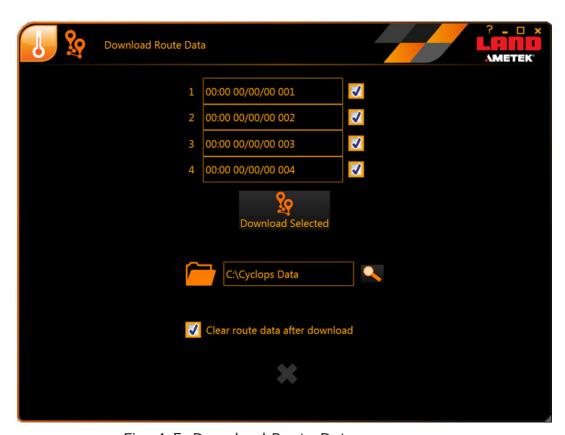


Fig. 4-5 Download Route Data screen



4.4 Cyclops Data

The **Cyclops Data** screen allows you to download route data and/or temperature measurement data from your Cyclops to your PC. You can also clear all data from your Cyclops.

1) Click on the **Cyclops Data** icon.



The **Cyclops Data** screen is displayed (Fig. 4-4).

The options available on this screen are:

- Download All this option downloads all route and temperature measurement data from your Cyclops thermometer into the Logger software.
- Download Routes the Cyclops can store up to four routes in its memory. The Download Routes option allows you to download route data from your Cyclops thermometer into the Logger software. Selecting this option displays the Download Route Data screen (Fig. 4-5). Tick the box of the required route(s) and select the Download Selected option. If you select the Clear route data after download option, the route data will be removed from the Cyclops after it has been downloaded.
- **Download Data** this option downloads all temperature measurement data from your Cyclops thermometer into the Logger software.
- **Clear Cyclops Data** this option deletes all route and temperature measurement data from your Cyclops thermometer.
- 2) When you have specified the required Cyclops data options, click on the tick to save these settings and exit the **Cyclops Data** screen.





Fig. 4-6 Information screen



Fig. 4-7 Licensing window



4.5 Information

The **Information** screen (Fig. 4-6) displays the following information:

- The Cyclops Thermometer software version information;
- The Cyclops Logger software version information;
- A License link to the software License Information window. See Section 4.7 below;
- A link to the software online Help.
 Clicking on the tick will close the **Information** screen.

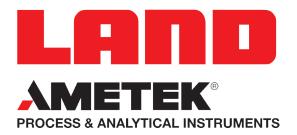


4.6 License Information

The **License Information** window displays licensing information for your software.

When you first install the Cyclops Logger Software it is provided with a 30-day trial license. After the 30-day trial period has expired, you will still be able to use the Logger Software, but you will not be able to save any data. For instructions on Licensing your software, see Section 2.7.

END OF SECTION



PRODUCT WARRANTY

Thank you for purchasing your new product. The manufacturer's 'back-to-base' warranty covers product malfunctions arising from defects in design or manufacture. The warranty period commences on the instrument despatch date from the Land Instruments International Ltd factory in Dronfield, UK.

12 MONTHS WARRANTY

The Cyclops range of instruments has a **12 months** warranty.

EXCLUSIONS FROM WARRANTY

It should be noted that costs associated with calibration checks which may be requested during the warranty period are not covered within the warranty.

The manufacturer reserves the right to charge for service/calibration checks undertaken during the warranty period if the cause is deemed to fall outside the terms of the warranty.

This manufacturer's warranty does not cover product malfunction arising from:-

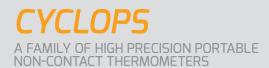
- incorrect electrical wiring.
- connection to electrical power sources outside the rating of the product.
- physical shock (being dropped, etc.) and impact damage.
- inappropriate support, physical shock & strain protection.
- environmental conditions exceeding the IP / NEMA rating of the product.
- environmental conditions outside the Ambient Temperature, Humidity and Vibration rating of the product.
- environmental contamination (solvent vapours, deposition of airborne contamination, cooling liquids of non-neutral pH, etc.).
- overheating as a result of incorrect installation.
- inappropriate modification of product (drilling holes in thermometer bodies, etc.).
- inappropriate recalibration which results in product calibration being taken outside specification.
- attempted repair by a non-authorised repair centre.

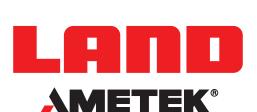
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Applies in the UK





Applies in the US

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