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INSTALLATION AND OPERATION GUIDE FOR EL-USB-CO

WARNING

PLEASE READ THROUGH THIS MANUAL, WHICH SHOULD BE KEPT FOR FUTURE REFERENCE. PASS ON TO THOSE WHO USE THIS DEVICE.

DO NOT ATTEMPT TO USE THE EL-USB-CO WITHOUT READING AND UNDERSTANDING THE DOCUMENTATION. CARBON MONOXIDE MONITORING IS A COMPLEX PROCEDURE. IF THERE IS ANY DOUBT AS TO THE SAFETY OR APPLICATION - STOP! CONSULT A QUALIFIED EXPERT.



WARNING CARBON MONOXIDE

The EL-USB-CO is a professional measuring instrument, designed to record Carbon Monoxide (CO) gas levels for later analysis. It is not an alarm/safety/warning device and should not be used in this capacity for the following reasons:

- The lights and sound emitted by the EL-USB-CO to indicate a high level of CO do not provide adequate warning to those in the surrounding area that a high level of CO has been recorded.
- The battery life of the EL-USB-CO during audible and visual indication of a high level of CO will rapidly diminish and will therefore only be active for a short period of time.
- The EL-USB-CO takes a sample reading at intervals as set by the user for recording/monitoring/analysis purposes. Dangerous levels of CO will not register with the device until a sample reading is taken.

- Due to the limitations of the device as a professional instrument, it is left to the user to set the light and sound alarms indicating the presence of CO. Therefore the instrument can be set up to provide NO form of warning.

Carbon Monoxide is poisonous. It is a clear, colorless gas that has no smell or taste and can be lethal even in very low concentrations. It can injure or kill people and animals who are not adequately warned of its presence.

In areas where the safety of humans and animals is a concern we insist that a domestic or industrial CO detector/alarm, designed to a nationally approved quality standard, with features such as a high decibel alarm or siren and a clear visual warning, specifically designed to provide adequate warning of dangerous CO levels, be installed, used and maintained.

If you have any queries about this product please contact the appropriate sales office:

UK sales e-mail: sales@lascar.co.uk

US sales e-mail: us-sales@lascarelectronics.com

IMPORTANT INFORMATION

Always operate EL-USB-CO and replace its batteries according to these instructions.

The EL-USB-CO has a facility to indicate when a preset level of CO is exceeded. It does this by flashing a red LED. The factory default is set so that the indicator is enabled for CO level of 50ppm or greater, with sounder also enabled. It is possible to change these settings in the EL-USB-CO software, but any such changes are made entirely at the user's risk. The EL-USB-CO will take a reading at a set interval selected from a drop down list. The LED and sounder will be triggered if a level of gas exceeds the level set, ONLY at the time the logger takes a sample.

Due to the limitations of the device as a professional measuring instrument, the lights and sounds emitted by the device and the strength of the battery are not sufficient to adequately warn people in the same vicinity or building of potentially dangerous levels of carbon monoxide gas. Carbon Monoxide gas can be lethal even in small doses or concentrations, can injure, or even kill animals or people who are not adequately warned of its presence.

It is therefore highly recommended that a domestic or industrial carbon monoxide detector/alarm designed with a nationally approved quality standards and/or features, such as a high decibel alarm or siren and a low battery indicator, specifically designed to provide adequate warning of dangerous carbon monoxide levels, be properly installed, used, and maintained in areas occupied by humans or animals.

EL-USB-CO is not authorized for use as a critical component in life support devices or systems without the express written approval of the Managing Director of Lascar Electronics Ltd.

The **EL-USB-CO** is designed to be used on non-life saving, analysis projects only. It is designed so that analysis of areas with the potential for Carbon Monoxide presence can be carried out for your own interest, not to give peace of mind or save lives. This product is not intended to detect any parameter other than CO. It is not a fire, methane, propane, butane, natural gas or any other combustible gas detector – although it is possible that these gases could affect a reading of CO if these are also present.

EFFECTS OF CARBON MONOXIDE

As a guide, the following levels are often quoted in the United Kingdom:

ppm CO	Time exposed	Symptoms
50	N/A	Safety level as specified by the Health and Safety Executive (HSE) in the UK
200	2 - 3 hours	Slight headache, some may experience slight dizziness, nausea, chest tightness, fatigue, lack of concentration, memory loss
400	1 - 2 hours	Headache worsening to a severe headache with prolonged exposure, dizziness, nausea, fatigue, tightness across the chest, memory loss, lack of concentration
800	45 minutes	Headache, dizziness, nausea, convulsions within 45 minutes. Unconscious within 2 hours. Death can occur within 2 - 3 hours

The levels at which Carbon Monoxide (CO) affect humans will vary from person to person.

Note

ppm is an abbreviation of the industry term, parts per million – if a gas is measured at 100ppm, there is a concentration of one-hundred parts to one-million parts of other gases (usually free air).

Carbon Monoxide effects are dependent on time and this should be considered at all times in any project involving measurement of this gas. A large amount of Carbon Monoxide over a short time will kill you, but exposure to a small amount of CO over a longer period of time may have a considerable effect and could cause long term health problems.

The effect of Carbon Monoxide exposure varies greatly from person to person, depending on age, overall health, concentration of exposure, and length of exposure.

Persons suffering from any health problems, the elderly, children and babies, pregnant women and pets can be affected by Carbon Monoxide poisoning more rapidly than others. These groups may experience symptoms sooner than others.

Each country or region has differing views and opinions on what are considered safe or dangerous levels of Carbon Monoxide. It is the responsibility of the EL-USB-CO user to ensure that the best advice is taken and, where applicable, suitable levels respected. People who spend a lot of time in indoor areas are more likely to be exposed to any lower levels of potentially dangerous Carbon Monoxide over time. This is true whether measuring at a home, workplace, boiler room or any other area.

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CARE INSTRUCTIONS

How to care for your Carbon Monoxide (CO) Data Logger

To keep your Carbon Monoxide Data Logger in good working order, follow these simple steps:

- Regularly check LED operation and battery.
- Regularly check that the grill is clear of any obstructions.
- Sensor life is 4 years. Once this time has expired replace the unit.

Battery Replacement

- We recommend that you replace the battery every 3 months, prior to logging critical data, or if the sounder has activated.
- The EL-USB-CO does not lose its stored readings when the battery is discharged or when the battery is replaced; the data logging process will however be stopped and cannot be re-started until the battery has been replaced and the logged data has been downloaded to PC.
- Only use 3.6V 1/2AA lithium batteries. Check with your supplier that the battery you are ordering is 'press fit' and is not fitted with solder tags. Before replacing the battery, remove the EL-USB-CO from the PC.

Note

Leaving the EL-USB-CO plugged into the USB port for longer than necessary will cause some of the battery capacity to be lost.

What you should NOT do

- **DO NOT** use near solvents, chemicals, aerosol sprays and alcohol based products
- **DO NOT** ignore the indicators. The alert could be warning you of high levels of CO
- **DO NOT** install in excessively dusty, dirty or greasy areas such as kitchens, garages and furnace rooms. Dust, grease or household chemicals can contaminate or coat the data logger's sensor causing the logger not to operate properly
- **DO NOT** obstruct the grill located at the base of the data logger. Place the data logger where furniture or other objects do not obstruct the flow of air to the sensor
- **DO NOT** continue to use if the sensor is out of date
- **DO NOT** ignore any warning messages in the software

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EL-USB-CO

LED Indicators



Red LED Green LED

🟢	Green single flash every 30 seconds Logger primed and ready to start
🟢	Green single flash every 10 seconds Logging in progress, last stored value OK
🔴	Red single flash every 10 seconds Logging in progress, the last stored reading is equal to or exceeds the warning threshold (if latching is turn on, then a stored value is equal to or exceeds the warning threshold). Will flash once every second when audible warning is enabled
🟢	Green single flash every 20 seconds Low battery, logging in progress, the last stored value OK
🔴🟢	Red/Green single flash every 20 seconds, latching turned on Logger is full, warning threshold exceeded during logging (will flash once every second when audible warning is enabled)
🟢	Green double flash every 20 seconds Logger is full, last stored value OK
⬜	No LEDs flash Battery inserted, but no logging exercise started or battery dead

By default, latching is disabled. The red LED will not flash after the logged CO level has returned to normal. Instead, the green LED will flash.

Latching can be turned on via the control software. The red LED will then continue to flash, even after the logged CO value has returned to normal. The red LED will effectively have latched into its warning condition. This feature ensures that the user is notified that the warning threshold has been exceeded, without the need to download the data from the logger.

Audible warning

The EL-USB-CO has a sounder which will issue an audible warning in the event of any alarm threshold being exceeded. By default the sounder is enabled, however it can be disabled in software during configuration of the EL-USB-CO.

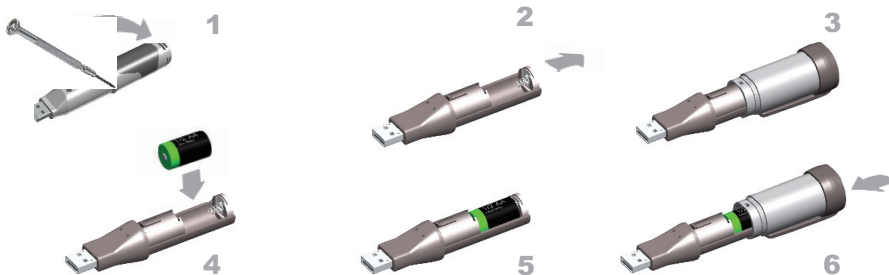
The audible warning will sound approximately once per second when the warning threshold has been exceeded. The audible warning will only work with the cap correctly fitted.

The audible warning will sound once every 60 seconds when there is a low battery condition. This indicates that the battery must be replaced.

EL-USB-CO SET UP GUIDE

Step 1. Battery Installation

Before using the data logger you will need to insert the 3.6V 1/2AA battery provided, following the instructions below. Replacement batteries available from www.lascarelectronics.com, PN: BAT 3V6 1/2AA.

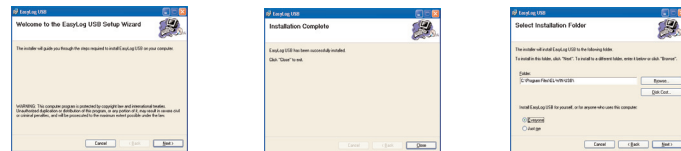


WARNING

Handle lithium batteries carefully, observe warnings on battery casing. Dispose of in accordance with local regulations

Step 2. Software Installation

Install the Software and USB driver as per instructions for installation on the following pages of this guide.



Step 3. Follow the on-screen instructions



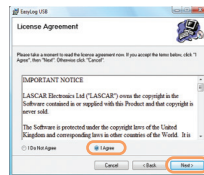
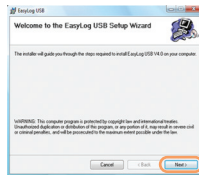
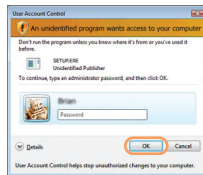
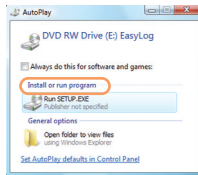
Step 4. Remove EL-USB-CO from the USB port

Remove the EL-USB-CO from the USB port, fit the cap securely, and place the logger in the area where CO levels are to be recorded. Note the warnings detailed in the 'Care Instructions' section of this guide when placing the EL-USB-CO.

START HERE

Windows™2000/XP/VISTA(32-bit)

Important: Leave the CD in the drive while installing your drivers

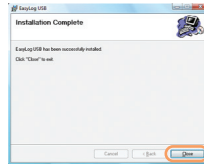
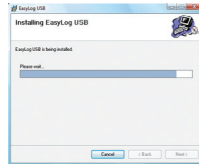
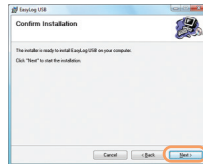
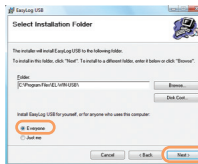


1. Insert the EL-WIN-USB Configuration Software CD into the CD drive of your computer. If the CD does not automatically load, navigate to the CD and double click "Setup"

2. Installing software requires administrative privileges. Accept the "User Account Control" request, enter password if necessary

3. Click "Next"

4. Read the "IMPORTANT NOTICE", select "I Agree" and "Next"



5. Select "Everyone", click "Next"

6. Click "Next" to start the Installation.

7. EasyLog USB is being installed

8. Click "Close". An icon will now be placed on your desktop



NOTE - A progress bar will be displayed until the installation is complete

You have installed the EL-WIN-USB Configuration Software successfully. You now have to install the USB hardware driver. Please refer to the relevant section depending on the Windows platform you are using

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WINDOWS™2000

USB Driver Installation

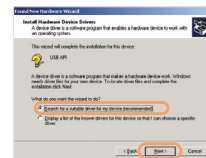
Important: Leave the CD in the drive while installing your drivers



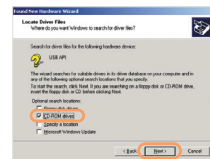
1. Insert the USB data logger into a USB port on the computer. The following screens should automatically appear. Windows™2000 refers to the data logger as "USB API" until the end of this installation



2. Click "Next"



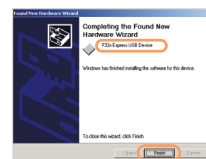
3. Select "Search for a suitable driver for my device (recommended)" then click "Next"



4. Select "CD-ROM drivers" only, then click "Next"



5. Click "Next"



6. Windows™2000 now refers to the data logger as the "F32x Express USB Device" then click "Finish"

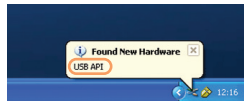
You have successfully installed the necessary software and driver for your EL-USB data logger. For further information return to Step 3 on page 8 of this guide.

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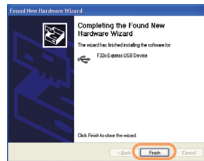
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WINDOWS™XP

USB Driver Installation

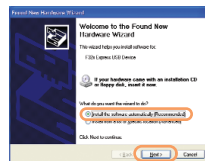


1. Insert the USB data logger into a USB port on the computer. The following screens should automatically appear. Windows™ XP refers to the data logger as “USB API” and “F32x Express USB Device” throughout this installation

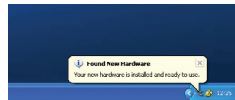


4. Installation is now complete, click “Finish”

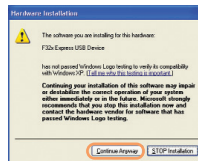
Important: Leave the CD in the drive while installing your drivers



2. Ensure the CD is in the CD drive. Select “Install the software automatically (Recommended)” then click “Next”
NOTE - A screen appears, showing files being copied to your computer



5. The Window will close and you will see the following message



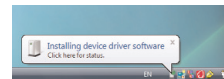
3. When this window appears, click “Continue Anyway”
NOTE - This is a feature of Windows™XP. Selecting “Continue Anyway” will not cause any adverse changes/effects on your computer

You have successfully installed the necessary software and driver for your EL-USB data logger. For further information return to Step 3 on page 8 of this guide.

WINDOWS™VISTA(32-bit)

USB Driver Installation

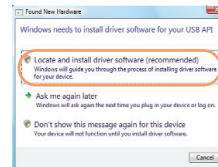
Important: Leave the CD in the drive while installing your drivers



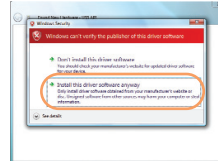
1. Insert the USB data logger into a USB port on the computer. The following screens should automatically appear



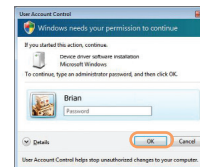
5. The above window will appear after a few seconds. Click “Next”



2. Select “Locate and install driver software (recommended)” then click “Next”



6. When this window appears, click “Install this driver software anyway”
NOTE - This is a feature of Windows™ Vista. Selecting “Install this software anyway” will not cause any adverse changes/effects on your computer



3. Installing the driver requires administrative privileges. Accept the “User Account Control” request, enter password if necessary



4. The following screen should automatically appear



7. Installation is now complete, Click “Finish”

You have successfully installed the necessary software and driver for your EL-USB data logger. For further information return to Step 3 on page 8 of this guide.

NOTE
At various times Vista may ask security questions; allow access when prompted

LASCAR'S DATA LOGGER RANGE

Lascar Model	Description	Range
EL-USB-1	Temperature	-35 to +80 °C (-31 to +176 °F)
EL-USB-2	Temperature & RH	-35 to +80 °C (-31 to +176 °F) & 0 to 100% RH
EL-USB-3	Voltage	0 to 30VDC
EL-USB-4	4-20mA	4 to 20mA
EL-USB-TC	Thermocouple Temperature	-200 to +1300 °C (-328 to +2372 °F)
EL-USB-RT	Real-time Temperature & RH	-20 to +70 °C (-4 to +158 °F) & 0 to 100% RH
EL-USB-CO	Carbon Monoxide	0 to 1000ppm
EL-USB-LITE	Low Cost Temperature	-10 to +50 °C (+14 to +122 °F)
EL-USB-2-LCD	Temperature & RH with LCD	-35 to +80 °C (-31 to +176 °F) & 0 to 100% RH

ENVIRONMENTAL DISPOSAL/WARNINGS

WEEE



This product may contain substances that can be hazardous to the environment if not disposed of properly. Electrical and electronic equipment should never be disposed of with general household waste but must be separately collected for their proper treatment and recovery. The crossed-out bin symbol, placed on the product, reminds you of the need to dispose of the product correctly at the end of its life. In this way you will assist in the recovery, recycling and re-use of many of the materials used in this product. At the end of the life of your product please contact your distributor for information on collection arrangements.

Battery disposal



Most batteries end up in landfill where their hazardous material can leach into the soil and cause harm. It is much more environmentally friendly to recycle batteries in a safe, correct manner. Follow applicable country, state, and local regulations for disposal/recycling of the 1/2AA battery supplied with your data logger.

RoHS



The Restriction of Hazardous Substances (RoHS) Directive 2002/95/EC of the European Parliament stipulates that certain hazardous substances must not be present above defined levels in products. This data logging product is manufactured to be RoHS compliant.

For further information visit: www.lascarelectronics.com/main/environmental-data-logging.php

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