

PLANNER

Shipslog Safety Instructions

Shipslog Safety Instructions

© 2013 Planer plc

Planer plc reserves the right to alter products and their specifications without notice.

Good practice demands that in critical applications, reliance should not be placed on a single source of data. Hard copies and backup copies should be routinely kept.

You may freely copy and distribute this document in any form provided that the document is reproduced in full and includes these notices. Individual pages and forms may be freely copied for the purposes of implementing any instructions with the documentation. You may not make modifications or create derivative works. Any modification to these conditions requires the written permission of Planer plc.

Product names and designations that are referred to in this document may be either trademarks and/or registered trademarks and are recognised as the property of their respective owners.

This information is provided without warranty, express or implied, and including but not limited to any implied warranties in respect of merchantability or fitness for any purpose, except to the extent that such provisions are held to be void, in violation of applicable law or unenforceable in a specific jurisdiction.

Part Number: MA008019 Issue: 5.0 0 Printed: March 2013

Table of Contents

1 Introduction	1
1.1 Safety	1
1.2 First aid	2
2 Operating the Shipslog	2
2.1 Installing the software	2
3 Specification	3
3.1 Measurement	3
3.2 Data logging	3
3.3 Alarm generation	3
3.4 Control and indication	4
3.5 Battery	4
3.6 Vessel performance	4

1 Introduction

The **ShipsLog**TM is a temperature monitoring system for samples transported in liquid nitrogen vapour shippers. It provides traceability for the temperature of the samples and can provide alarms at predefined setpoints during the transit period.

The **ShipsLog** monitor is supplied either fitted to the top of the vapour shipper's cover or with a flying lead for positioning within the sample area.

Samples may be transported in the knowledge that on arrival at the destination, the recipient can quickly check the LED display and confirm whether the temperature experienced by the samples has deviated outside of the predefined limits. The full temperature history can also be downloaded to confirm the exact temperature pattern throughout the journey.

The logger is user-programmable via PC software. The logging process can be started either by using the PC software or by using the magnetic swipe key provided. By using the PC software, the data can be analysed by both sender and receiver.

1.1 Safety

 **Warning**

Failure to comply with these instructions could result in personal injury.

- Retain these instructions for future use.
- Operating the system in a manner not specified within in this manual or under conditions outside of the specifications may result in the protection offered by the equipment being impaired.
- Also follow the safety instructions accompanying the dry-shipper with which the **Shipslog** is to be used.
- This product contains a lithium battery that can present a fire, severe burn and explosion hazard to users if misused. Do not attempt to recharge, disassemble, heat above 145 °C, incinerate or expose contents to water.
- Avoid nitrogen build up. Anywhere liquid nitrogen is used must be well ventilated to reduce the risk of nitrogen build up. Small volumes of liquid nitrogen convert to very large volumes of gas. This can result in drowsiness, or in extreme cases, asphyxiation.
- When liquid nitrogen is used in confined spaces, oxygen-deficiency alarms must be installed. Guidance on ventilation requirements are given in *BCGA Code of Practice CP30, The safe use of liquid nitrogen dewars up to 50 litres*.
- When there is a risk of reduced or insufficient ventilation when a room is unoccupied, then alarms to indicate oxygen deficiency must be installed and positioned outside of the room so that operators are aware of the hazard before entering. The operational status of such an alarm should also be visible from outside the room.
- If liquid nitrogen is used in an area that requires forced ventilation, an alarm to indicate its failure should be fitted.
- When dispensing or potentially being exposed to liquid nitrogen, protect the face with a shield and wear gloves, boots and a protective apron. Prevent spillage into shoes and onto unprotected parts

Shipslog Safety Instructions

of the body.

- Handle vessels containing liquid nitrogen carefully. Liquid nitrogen boils at -196°C and both liquid and gas can cause rapid and severe frostbite. Delicate tissue, e.g. the eyes, can be damaged by an exposure to the cold gas, which may be too brief to affect the skin of the hands or face.
- Stand clear of boiling and splashing liquid nitrogen and its gas when filling a dewar at normal room temperature or when inserting objects (such as a pump) into the liquid.
- Use tongs or wear cryogloves when handling cold or hot objects. Cryogloves are available as an accessory from Planer plc. During operation, freezer chambers and contents may get cold enough to cause frostbite.
- Only use vessels designed for working with liquid nitrogen.
- User servicing is limited to cleaning. All other servicing must only be undertaken by suitably qualified engineers.

1.2 First aid

IF IN DOUBT, SEEK IMMEDIATE MEDICAL ATTENTION.

If any quantity of liquid nitrogen comes into contact with the skin or eyes, immediately flood that area of the body with large quantities of unheated water, apply cold compresses and seek medical attention. If the skin is blistered or there is any possibility that eyes have been affected, the patient should be taken immediately to a doctor or hospital for treatment.

2 Operating the Shipslog

In order to use the unit, the **ShipsLog for Windows 32** software must first be installed. See Installing the software.

Once the software has been installed, the online help files contain full instructions on using the **ShipsLog** product. Please ensure that you are familiar with its operation before continuing to use the product.

2.1 Installing the software

In order to use the unit, the **ShipsLog for Windows 32** software must first be installed. This software can be downloaded from the Planer website at <http://www.planer.com>. From the website, follow the link to **Support > Downloads > Products > ShipsLog** section to locate the download link for the **Shipslog** software.

When you have downloaded the file, unzip the files to a suitable temporary folder on your PC. To install the software, execute the file **Setup.exe**, located in the folder where you unzipped the files and then follow the on-screen instructions.

When the installation has completed, launch the **ShipsLog for Windows 32** application and then select **Help | ShipsLog Operation** from the main menu.

3 Specification

3.1 Measurement

Range	-200 °C to 0 °C (PC program display units user selectable: °C, °F or K)
Probe type	Platinum resistance, PT100 Class B
Resolution	Approximately 1.0 °C over whole operating range.
Accuracy	±1.5 °C at 0 °C, rising to ±2.5 °C at -200 °C, including uncertainty due to measurement resolution and probe errors of the PT100 Class B probe supplied.
Calibration	Traceable to NAMAS standards/ Semi-automatic user calibration possible using PC calibration pack. Calibration certificate printed automatically.

3.2 Data logging

Number of points	8192
Logging interval	30 seconds to 99 minutes in 30 second intervals.
Logging resolution	0.1 °C
Maximum number of logs	Unlimited, up to total log capacity.

3.3 Alarm generation

High alarm level	-200 °C to 0 °C in 1.0 °C steps.
Low alarm level	-200 °C to 0 °C in 1.0 °C steps.
Alarm delay period	0 to 99 logging intervals.

3.4 Control and indication

Manual control	Magnetic start/stop switch using supplied fob (PPL number MG007992)
Communication	RS232 Serial communications to custom PC program.
Programming	Using custom PC program.
Indicators	3 x LED indicators Yellow: normal Orange: warning Red: alarm

3.5 Battery

Type	Lithium Thionyl Chloride; internally fitted; factory-replaceable only.
Life	Approximately 3 years in normal operation. Battery-life remaining indication via PC program.

3.6 Vessel performance

Please refer to your vessel documentation for details.



Note

Use of the ShipsLog for the SC4/3V could result in an increase in the liquid nitrogen evaporation rate of 22% and this may affect the hold-up time of the system..

