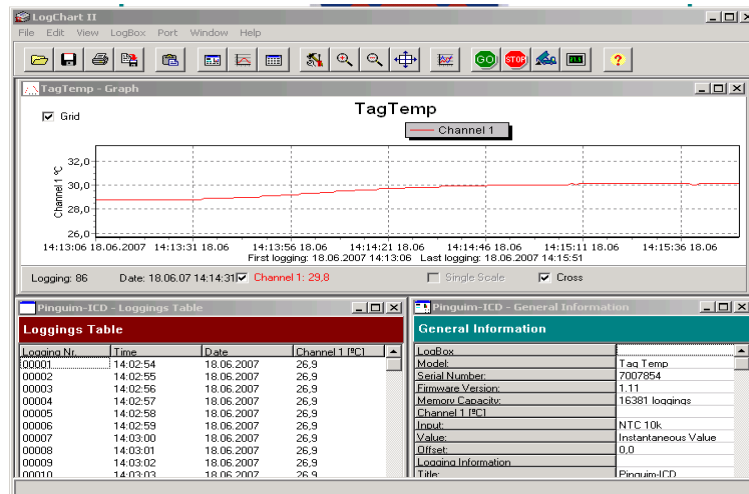
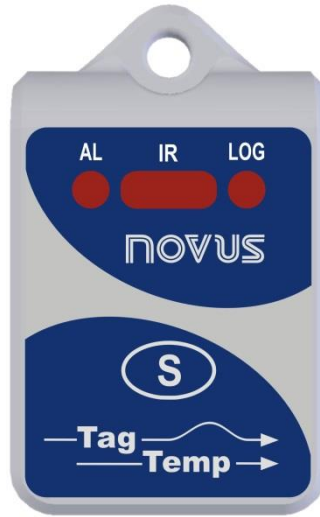


INSTRUCTION MANUAL

TagTemp Temperature Data Logger



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1. FOREWORD

Dear customer,

We thank you for having purchased the **Temperature Data Logger TagTemp** and are very glad that you decided in favour of a product of **B+B Thermo-Technik GmbH**. We hope this product will fully satisfy you and will assist you effectively in your work.

This Device has been developed to be technically highly up-to date. This product has been designed in accordance with the regnant european and german national directives and rules. For a proper and effective usage of the product the customer shall observe the following Operating Instructions. In the case that against one's expectations any troubles occure which you can not resolve yourself, please contact our service centers or your salesperson. We go after giving you rapid and competent help to minimize the risk of long time outfalls.



The following operating Instruction are an indispensable part of of this Product. It contains important advices for the starting up and further use of the device.

2. GENERAL INFORMATION

This documentation contains informations which must be paid in attention to assure a highly effective and secure use of the supplied product

Please read through the following instructions and make yourself familiar with the handling of the product before you insert it in your processes. Keep this document always readily to hand so you can consult it by need.

2.1. Labels

Sign	Meaning	Notice
	Advice	It is necessary to read the following advices before beginning the operations. The used symbols in the manual acts first of all as eye catcher for security risks. The symbols does not replace the security advices. The text must be read to the end.
	Necessary to observe	This symbol designate important advices and tips that are necessary for the success of a workstep. They have to be followed in order to get good results.

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Warning Signs	Meaning	Warning Signs	Meaning
	This symbol advises the user of danger for persons, material or environment. The text gives informations that must be necessarily followed to avoid any risks		Caution against electro-magnetic fields (BGV A8, GUV-V A8/W12)
	Caution against hot surfaces (BGV A8, GUV-V A8/W26) and hot liquids or oder substances		Caution against severe cold (BGV A8, GUV-V A8/W17)
	Caution against liquids and hot substances		Caution against dangerous high electrical voltage (BGV A8, GUV-V A8/W08)
	Caution against dangerous explosif substances (BGV A8, GUV-V A8/W02)		Caution against dangerous explosif atmosphere (BGV A8, GUV-V A8/W21)
	Caution agaist mobile engines (W29)		Electronic waste
	Caution against moving parts		

3. SECURITY ADVICE

The B+B Therm-Thechnik GmbH assumes no liability for damages occurred through failure to observe these security advices. A usage non conforme to the instructions given in this manual can damage the device

Body and property damages

- The use of the measurement system must be restricted to qualified personal.
- The system is not adequate for use in atmosphere with explosion danger.
- Do not use the system in a high electric or magnetic field area.

Ensuring of product security

The system must be operated only within the limits given in the technical Datas
Exposing the system to hot temperatures (higher than the operating temperature) will cause damages in the electronic circuits and also damage the housing.

4. WASTE AND DISPOSAL ADVICE

Please return the device to B+B Thermo-Technik GmbH after expiration of its lifetime

5. USAGE ACCORDING TO PURPOSE

Please use the product only for the purposes for which it is conceived. In case of doubt, please first contact B+B Thermo-Technik GmbH

TagTemp Temperature Data Logger

6. PRODUCT DESCRIPTION

TagTemp is a small portable electronic temperature data logger. Its internal sensor measures local environment temperature and logs the values in an electronic memory. Logged data, or ACQUISITIONS, can be later viewed and analyzed on a PC where they can be opened in tabular and graph forms.



The configuration and data transfer can be fulfilled **only** with the IrLink communication wand which is supplied with **Logchart-II** software. The software enables to set up the logger operation mode. It is also used for viewing acquisitions. Other parameters such as end of measurements, logging interval, etc., are easily defined through the **LogChart-II** software. Acquisitions can also be exported to be analyzed in other applications, such as spreadsheet programs.

1.1. Supply voltage

The Temperature Data logger TagTemp is a highly autonome temperature measurement device. It is supplied with a built-in 3.6 V lithium battery (CR2032).

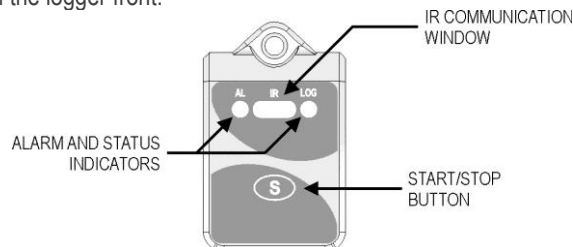
6.2. Unpacking

The following items must be included in the package:

- The electronic logger TagTemp;
- A CD-ROM with the Logchart-II software and a USB driver;
- Quick logger operation guide.
- The present operating instructions
- Optional : a communication interface (upon request)

6.3. Identification

The identification label is on the logger body. Check if the features described are in accordance with your order. The following elements are shown in the logger front.



Start/stop button (S)

This button “wakes up” the logger whenever a communication between logger and PC is intended to start. It can also be configured to start or stop the temperature measurement process.

IR communication Window

PC - Logger communication area. During download, the communication interface must be directed towards this window.

Status indicator (LOG)

While in stand-by (not logging) or after a series of measurements, it flashes once, during logging twice at every four seconds.

Alarm Indicator (AL)

Warns the user as to alarm conditions. Whenever an alarm situation takes place it will flash once at every four seconds, until a new configuration is applied to the logger.

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7. OPERATION

It is only possible to operate the logger after the Logchart-II software is installed to a PC, according to the steps described in **Logchart-II Software** section of this manual. The communication between logger and PC is performed with the aid of the **IR-Link wand**.

Requirements:

- A PC system or a Laptop with Windows® 2000- or XP
- CD-ROM device
- A free USB interface (or optional a RS232 port)



The logger must be “waken up” before communication is attempted. To do so, press once the **Start/Stop** button. The logger starts flashing the **Status Indicator** according to its current status:

One flash every four seconds (stand-by) indicates the logger is waiting to start measuring or that a series of measures was concluded and the logger is waiting for a new command.

Two flashes every four seconds indicates measures ongoing.



To minimize battery consumption the logger deactivates the LED's and the communication interface after about 30 seconds of user inactivity. To reactivate it press again the **Start/Stop** Button

The logger operation mode set up is defined in advance by using the **LogChart-II** software. Each setting must be defined and the consequences observed. The logger starts and stops logging as defined in settings.

7.1 Drivers and software installation

In the **Ir-Link3/RS232** model there is a RSR232/Ir communication interface. It must be connected to the serial port at the PC.

In the **Ir-Link3/USB** model there is a USB/Ir communication interface, which must be connected to the available USB port. Windows will request the proper driver installation, which is found in the CD-ROM that is provided with the logger.

The drivers installation steps may vary according to the machine, even for the same version of an operating system. The following screenshots and steps are only to provide guidance.



1. Insert the CD shipped with the logger in the CD-ROM drive.
2. Connect the communication interface IrLink-3 to the PC USB port. Windows® will acknowledge the presence of new hardware and a few seconds later it will start the driver installation process.
3. The “found new hardware wizard” will be displayed, and you will be asked if you want to install the driver from the Windows Update website. Select “**No, not this time**”, and then click **Next**.



4. Select “Install from a list or specific location (Advanced)” and click “Next”.



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5. Select “Search for the best driver in these locations” and **check** “Search removable media”. Click “Next”. If installation files are not in a CD, check “Include this location in the search” and show the file path.
6. If a prompt warns you that it does not support Windows® XP or that signature verification failed, click “Continue anyway”.
7. The interface driver files will be copied to the PC and after a few seconds a screen is displayed informing you that the software installation has been concluded. Click “Finish”.
8. In some situations, the steps described above may be repeated again. Follow the same procedures.

In later uses of the interface, Windows® may require the driver installation again. In this case, the same installation wizard will be displayed, and you will have to select the option “Install software automatically (recommended)”, as the driver may already be in the computer.

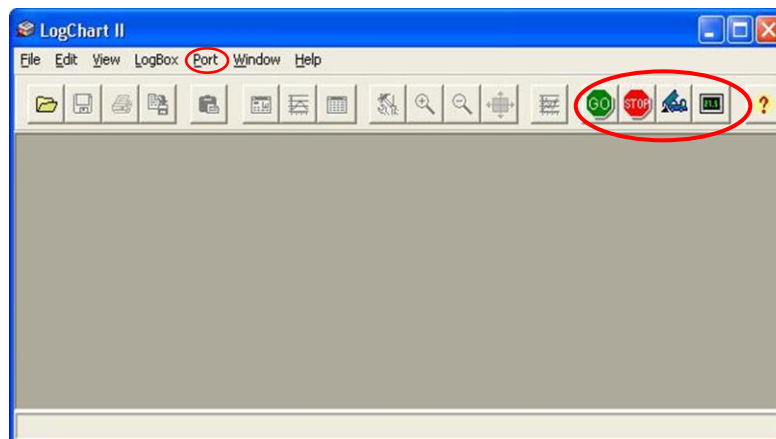


Logchart-II Software installation:

- Insert the supplied CD-ROM in the CD-drive of the PCs/Laptop.
- The software installation wizard will start automatically. If it does not, please run the **LC_II_Setup.exe** program provided from your CD drive. To do so please follow the steps below:
- From the start menu of Windows run Windows Explorer. Choose the CD drive
- Double click on the icon **LC_II_Setup.exe** to run the setup program.
- Follow the steps described in the Setup wizard
-

7.2 Running LogChart_II

When you open Logchart-II by double clicking on its icon the following main window is displayed



Next, select the serial port that the communication interface will use in the “Port” menu.

If using a serial port check which serial is available. Usually COM2 is free, once the mouse uses COM1. In the case of **Ir-Link3/USB** choose **USB port**. The chosen port will be chosen by default next times the LogChart II is initiated. When a valid port is selected, the buttons showed below are highlighted.

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To display the configuration setup dialog box

Stops any running measurements



Press to view online the 10 last logged values

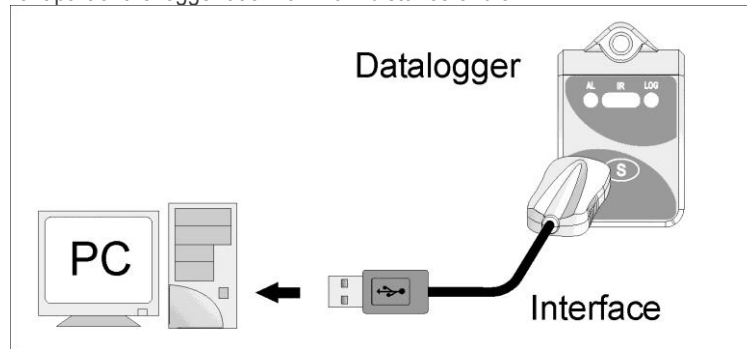
Press this button to download the actual contents of the logger's memory

7.3.

Configuring the logger



Make sure the communication interface is connected to the PC port selected. The interface must be constantly directed towards the communication window on front part of the logger at a maximum distance of 0.5 m.



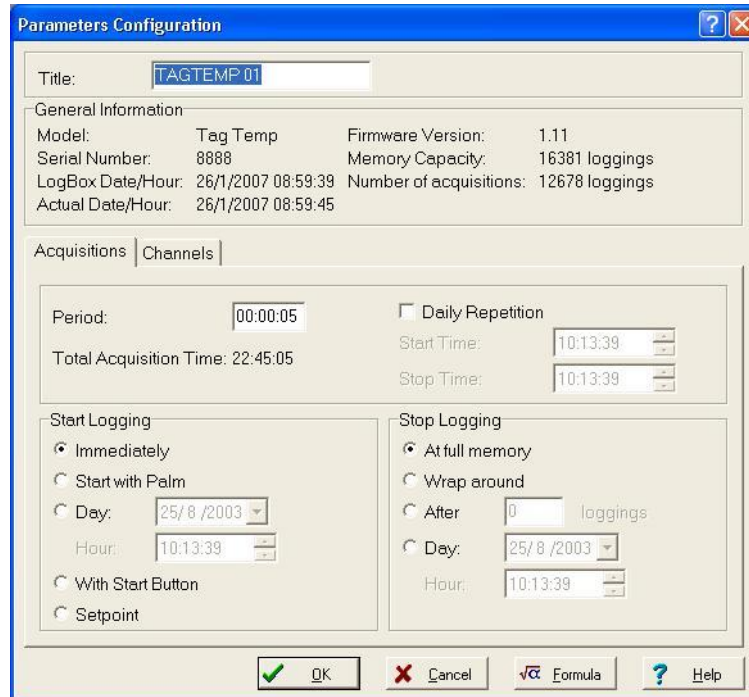
The logger must be first "woken up" by pressing once the **Start/Stop (S)** button on its front side. After the serial port is selected, click the "GO" button:



The following **Parameters Configuration** dialog box is then displayed

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In this dialog box the user can define the logger operation mode and also obtains general information about the device. The different fields and their meaning are listed in the following:

Title	In this field, the user identifies the logger by assigning it a name.
General information	Area with information about the logger, such as Model, Serial Number, Logger Date/Time, PC Date/Time, firmware version, memory capacity and number of acquisitions stored in memory, etc. In this field, time is constantly updated while the communication between logger and computer is taking place
Acquisition	Register card where a series of parameters that define the acquisition process are determined.
Period	Defines the interval between readings: The minimum interval is one (1) second and the maximum is eighteen (18) hours. Note: When the type of value logged is maximum or minimum values (see Value), the minimum interval possible is 10 seconds.
Daily Operations	Here the user defines the time at which daily logs will take place
Estimated time	This field informs the user how long it will take to fill totally the memory, under the conditions set up during configuration.
Start of readings	Readings can be started in one of five different modes
Immediately	Measurement starts as soon as set up is ready and sent (OK) to the logger.
Start via Palm	Measurement starts with a command sent via a PDA, which runs the software Log Chart Palm-OS.
Date	Readings start at a predefined date and time.
Via Start/ Stop	Measurement starts and ends by pressing the Start/Stop button, in the frontal part of the logger, for two seconds.
Setpoint	Acquisition starts when a temperature setpoint is reached. In this option, the setpoint value is defined in the Channels field, where the Alarm parameter is replaced by setpoint.
Stop loggings	Defines the event that initiates the end of measurement. The following options are possible.
Full Memory	Measurement is stopped when the memory is full (16 000 values).

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Wrap around	Readings are continuous, replacing the oldest records with new ones as the number of readings exceeds the memory capacity.
After	The logger stops readings after a number of readings defined in the corresponding field is reached.
Date	Readings stop at user-predefined date and time. In case the logger memory capacity is reached before the date defined, readings are also stopped
Channels	Register Card with parameters related to temperature measurement
Unit	Defines the unit of the value measured: °C or °F
Value	Defines how the value measured will be registered. 3 Options are available:
Instantaneous	The logger takes one measurement at the end of the measurement interval defined in "Period" field and save the resulting value in the internal memory. The minimum interval in this case is 1 seconds.
Maximum	The logger takes 10 equidistant measurements within the predefined measurement interval and saves the highest value (Maximum) in the internal memory. In this option the minimum interval between measurements (Period) is 10 seconds.
Minimum	The logger takes 10 equidistant measurements within the predefined measurement interval and saves the lowest value (Minimum) in the internal memory. In this option the minimum interval between measurements (Period) is 10 seconds.
Offset	Gives the user the possibility to automatically correct the values logged.
Alarm	Defines limit values that, when exceeded, characterize an alarm condition. Alarm events are informed to the user through a flashing mode of the Alarm Indicator LED.



After filling all the fields select OK and settings will be sent to the logger
Note: After clicking the OK button all previous settings and previous data logged are lost.

8. DATA TRANSFER AND VISUALISATION



Data collected are sent from logger to PC. Data can be collected any time, at the end of the acquisition process or while they are being acquired. If data collection takes place during the acquisition process, the process will not be interrupted, following the logger configuration.

It is important to "wake up" the logger before starting communication.

8.4. Offloading data

Data offload is accomplished by clicking the button **Offload Data**:



During data transfer, a status bar indicates remaining data to be transferred. Data offloading time is proportional to the number of readings logged.

8.5. Visualizing data

At the end of values transfer, data are automatically displayed in a graphical format.

8.6. Chart view

It is possible to select a region of the chart to zoom in. Zoom commands can be accessed through the **View** menu or through zoom icons from the task bar.

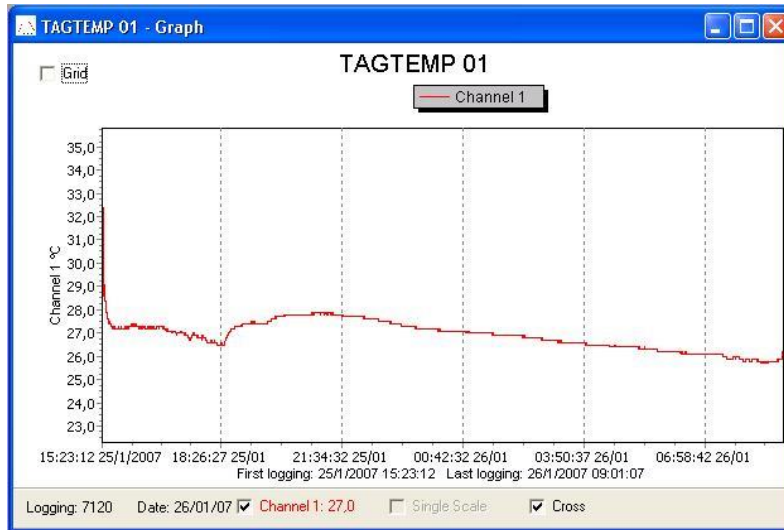
It is also possible to select an area from the chart to zoom in by clicking and dragging the mouse, thus creating a zoom region starting from the upper left corner on the chart area.

The graphic curves can be vertically dragged with a right-click and dragging the mouse up and down



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8.7. Sheet view

To display measurements in a tabular form, press the icon **Table View**:



Values are presented in a tabular form, listing the measurement time and value.

Logginq Nr.	Time	Date	Channel 1 [°C]
00001	15:23:12	25/1/2007	27,4
00002	15:23:17	25/1/2007	27,4
00003	15:23:22	25/1/2007	27,4
00004	15:23:27	25/1/2007	27,4
00005	15:23:32	25/1/2007	27,4
00006	15:23:37	25/1/2007	27,4
00007	15:23:42	25/1/2007	27,4
00008	15:23:47	25/1/2007	27,4
00009	15:23:52	25/1/2007	27,4
00010	15:23:57	25/1/2007	27,4
00011	15:24:02	25/1/2007	27,6
00012	15:24:07	25/1/2007	28,1
00013	15:24:12	25/1/2007	29,0
00014	15:24:17	25/1/2007	30,0
00015	15:24:22	25/1/2007	32,4
00016	15:24:27	25/1/2007	31,6
00017	15:24:32	25/1/2007	31,0
00018	15:24:37	25/1/2007	30,8
00019	15:24:42	25/1/2007	30,6
00020	15:24:47	25/1/2007	30,3

8.8. General information sheet

This window shows some information about the logger whose data were just read and its configuration. The screen can be displayed by pressing the **Parameter Viewing** icon:



General Information	
LogBox	
Model:	Tag Temp
Serial Number:	8888
Firmware Version:	1.11
Memory Capacity:	16381 loggings
Channel 1 [°C]	
Input:	NTC 10k
Value:	Instantaneous Value
Offset:	0,0
Logginq Information	
Title:	TAGTEMP 01
Interval between readings:	5 sec
Total Number of Loggings:	12850
Start Logginq:	Immediately
Stop Logginq:	At full memory
Download Time:	sexta-feira, 26 de janeiro de 2007 at 09:14:03
First logginq:	quinta-feira, 25 de janeiro de 2007 at 15:23:12
Last logginq:	sexta-feira, 26 de janeiro de 2007 at 09:13:57

8.9. Exporting data

Logged data can be exported to different file formats, for further analysis. To export, access File/Export or click the

icon:



and store/open the data in the desired format.

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9. MOST FREQUENTLY FOUND PROBLEMS

The LED is not flashing: The LED flashing light is intentionally weak, and it can be difficult to see in clear environments. Be sure it is really not flashing

Communication with the logger fails: Make sure:

- ✓ the COM port is correctly selected
- ✓ there are no other programs using the same port during the communication attempts.
- ✓ there is no physical obstacle blocking the IR signal.
- ✓ the cable is well connected to the PC.
- ✓ the port selected does not present any problem.

✓ 10. MAINTENANCE

The housing can be cleaned with a wet cloth. Do not use chemical solvents. With the exception of exchanging empty batteries the logger is widely maintenance free.

11. QUESTIONS?

If you still have other questions concerning this product or an other product of B+B Thermo-Technik GmbH, contact us at :

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12. TECHNICAL DATA

Features	Values
Measurement Range	Temperature: -20.0 °C to 70.0 °C.
Accuracy	± 1 °C @ 25 °C. ± 2 °C max. in the whole measurement range.
Measurement resolution	0.1 °C
Memory capacity	16 000 (16 K) logs
Measurement Interval	1 second min. 18 hours max.
Supply	3.6 V lithium battery (CR2032), built-in
Estimated autonomy	Higher than 1 year, with one weekly data reading. Frequent logged data readings may shorten battery life.
Operating temperature	From -20°C to 70°C
Case / Body	Polycarbonate
Protection	Suitable for products with protection level IP67.
Dimensions	30 x 47 x 0.47 mm
Logger-PC data transfer time	According to the number of logs. 40 seconds for 16,000 logs.
PC Interface	Ir/USB or Ir/Serial
LogChart-II software operation environment	Set up Software for Windows 95, 98, NT, 2000 and XP. Menus in Portuguese, English or Spanish. Sets up, reads and displays data on the screen. Data Logger for the record of up to 16 000 temperature values
TagTemp 0568 0037	
IrLink 3 0568 0036	Infrared communication interface with USB connector. To use with the loggers TagTemp and LogBox serie
CE-Conformance	2014/30/EU
Electromagnetic conductivity	EN 61326-1

The technical information given in this documentation has been controlled very carefully. Their aim is to inform the customer about the product and its possible applications and should not be taken as an insurance of any properties. The user shall examine this information relatively to the intended application. Trademark rights of third persons has to be respected.

This edition replaces all previous versions