

# Tinytag Transit 2

## Manual





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## WARNINGS

- If this equipment is installed or used in a manner not specified by the manufacturer then the protection provided by the equipment may be impaired.
- This equipment contains a lithium battery. Danger of explosion if the battery is incorrectly fitted. Do not cut open, incinerate, recharge or expose to temperatures in excess of 100°C (212°F).
- The battery should be replaced by a trained technician using the battery supplied in the appropriate manufacturer's service pack.
- This equipment should only be interfaced to a UL or CSA listed computer with RS232 levels of not more than  $\pm 12V$ .
- This equipment should only be interfaced to equipment which is powered by a Safety Extra Low Voltage Supply. The maximum voltage levels are to be 30V rms, 42V peak or 60Vdc and separated from hazardous voltages by double or reinforced insulation. For the United States consider a Safety Extra Low Voltage Supply to be a Class 2 source as defined in the National Electrical Code. If the unit is connected to a computer outdoors the computer must also comply.
- This equipment should be used within the temperature range and other environmental conditions specified in this manual.

## GETTING STARTED

To use the Tinytag Transit 2 data logger you will need the following items:

- A copy of the Tinytag Explorer software
- A USB Inductive Pad **OR** a Tinytag Transit / Talk USB Download Cable

You will first need to install the Tinytag Explorer software, as described in the software's quick start guide, and then install the USB inductive pad or cable's drivers as described in that item's quick start guide.

To use the Tinytag Transit 2 with an inductive pad it is simply as case of positioning the logger in the centre of the pad as shown below.

To use the Tinytag Transit 2 with the download cable, simply remove the unit's lid and plug the cable into the unit's jack socket as shown below.



For further information on how to start the data logger recording, and to view recorded results, please see the Tinytag Explorer quick start guide.

# FEATURES

## Memory Type

The Tinytag Transit 2 has a non-volatile memory, which means that the unit's battery can be replaced, once the unit has been stopped, and the data held on it will be retained.

## Total Reading Capacity

The TG-4080 can store a total of 8,000 readings. If Minimum and/or maximum values are selected (see Reading Types overleaf) then the memory is split equally between the different reading types selected.



**All of the following features are programmable and are set in the logger using the Tinytag Explorer software. For further information on programming a data logger, please see the Tinytag Explorer quick start guide**

## Logging Interval

The frequency at which the data logger will record can be set from once a second to once every ten days. Additionally the logger has two logging modes, seconds mode and minutes mode.

*Continued . . .*

# FEATURES

By default the unit is set to record in minutes mode and in this mode the logger can be offloaded whilst recording, and current readings can be taken without stopping the unit. When set to record in second mode the unit has to be stopped before either of these functions can be performed.

## Reading Types

By default, the TG-4080 is set to record the temperature at the end of every logging interval, but it can also be set to record the minimum and maximum values over a logging interval as well, or any combination of the three.

## Trigger Start

The Tinytag Transit 2 has a trigger start option that allows a user to set up a data logger as they wish it to record, and then start it remotely at a later time by passing a magnet across the back of the unit.

The position of the unit's trigger start switch is indicated by the . . . markings on its base. The switch itself is positioned between the two sets of markings and when a magnet is passed between them, the green LED on the front of the logger will light briefly to indicate that the unit has been activated. Before the logger is "triggered" the green LED will be flashing once every eight seconds; after it will flash once every four seconds.



# FEATURES

## Delayed Start

Setting a delay start gives the user time to get a unit to the measurement location before it starts logging. Two type of delay can be set, a relative time (e.g. one hour from now) or an absolute time (e.g. midday tomorrow). The maximum delay that a logger can be set for is 45 days, and if no delay start is selected the logger will start recording immediately.

## Stop Options

The logger can be configured to stop in one of three different ways; when it's memory is full; after a set number of readings or to continue to recording indefinitely. The first option is useful if you want to ensure you don't record over any important data, the second if you only want to record for a short period and the third if you want to leave the unit logging continuously .



# FEATURES

## Alarms

The TG-4080 has a red LED that can be programmed to flash when the temperature exceeds limits set by the customer. The user can set two independent values to trigger the flashing of the red LED, and both values can be set to latch so that a unit will continue to show an alarm even when the temperature goes back to acceptable values once again.



**A logger with latched alarms will only flash its red LED whilst the logger is recording, if the logger stops the red LED will stop as well.**

## LED FLASH PATTERNS

When logging, two status LEDs are visible through the lid of the unit. The flash patterns for these indicators are as follows:

### Flash Pattern

- A green flash every 4 seconds
- A green flash every 8 seconds
- A red flash every 4 seconds

### Indication

- Logging
- Waiting to Log (trigger or delayed start set)
- Alarm limit breached

## SPECIFICATION

<b>Reading Range</b>	-40 °C to +70 °C (-40 °F to +158 °F)
<b>Reading Accuracy</b>	<0.4 °C between 0 and 50 °C
<b>Reading Resolution</b>	0.01 °C or better
<b>Response Time</b>	10 mins to 90% FSD in moving air
<b>IP Rating</b>	IP54 (splash proof)

For more detailed information on the data loggers specification, please see the TG-4080 data sheet on our web site.

## CALIBRATION

This unit is configured during its manufacture to meet the specification quoted in this manual.

We recommend that the calibration of this unit should be checked annually against a calibrated reference meter.

A UKAS traceable certificate of calibration can be supplied if the unit is returned to Gemini for a service calibration. For further information see:

[www.tinytag.info/calibration](http://www.tinytag.info/calibration)

## BATTERY REPLACEMENT

**Battery Type** Renata CR2325

**Replacement Interval** Annually\*

\*If logging intervals of less than five seconds are used continuously, the battery life of the unit will be reduced and the battery will need to be replaced more frequently.

Before replacing the battery the data logger must be stopped.

When replacing the battery, wait at least one minute after removing the old battery before fitting the new one.

Data stored on the logger will be retained after a battery is replaced.

If used at low temperatures the data logger should be allowed to warm to room temperature before it is opened to avoid condensation forming inside the unit.



**A service kit for the Tinytag Transit 2, containing a replacement battery and servicing instructions, can be ordered from your supplier using the part number SER-9514.**

## APPROVALS

This logger complies to BS EN 12830, between -30 and +30 °C, in the following categories:

S; T; C; D; 1

This equipment complies with part 15 of the FCC rules.

Operation is subject to the following two conditions: (1) this device may not cause any harmful interference, and (2) the device must accept any interference received, including interference that may cause undesired operation.

Gemini Data Loggers (UK) Ltd. operates Quality and Environmental Management Systems which conform to ISO 9001 and ISO 14001. The scope of these systems covers the manufacture, design and supply of data loggers and their associated software, accessories and services.



## WARRANTY

- This product carries a manufacturing defects warranty of 12 months from the date of purchase. Units returned under warranty will be repaired or replaced at the manufacturer's discretion. This warranty does not cover mishandling, modification or battery replacement and is subject to the standard Terms and Conditions of Sale, a copy of which is available on request.
- **The equipment/goods are sold “as is” and with “all faults” (applies in USA). Claims under warranty should be referred to the point of sale.**

## DISPOSAL

- Data loggers, accessories and batteries should be disposed of at organised facilities, where available, in line with local regulations.
- In accordance with the WEEE directive Gemini Data Loggers (UK) Ltd. will take back and dispose of any equipment purchased directly. Equipment not purchased directly should be returned to the point of sale for disposal.



## FURTHER INFORMATION

Further information on Tinytag data loggers, software and accessories can be found on our web site at:

[www.tinytag.info](http://www.tinytag.info)

If you should have any further questions, please contact your distributor or:

### **Gemini Technical Support**

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DATA LOGGERS