

Applies to: TGP-0605 Tinytag Plus High Sensitivity Shock Logger (0 to 5g)
TGP-0610 Tinytag Plus Shock Logger (0 to 100g)
TGP-0650 Tinytag Plus Vibration Logger (0 to 50mm/s)

Tinytag Shock and Vibration Data Loggers

This document describes what Tinytag shock and vibration data loggers record, common applications the units are used in and provides general information about the units. More specific, technical information on these data loggers can be found on their product data sheets.

General

Tinytag shock and vibration loggers record the magnitude of impacts and vibration experienced along one axis, running through the logger's lid to its base.

Loggers are sensitive to limited movement from other directions, this is reduced to less than 5% of the reading value.

If monitoring is required on more than one axis, more than one data logger can be used and the results can be combined into the same graph, after the recording run has been completed, using the Tinytag Explorer software (data can also be easily exported from Tinytag Explorer into other applications, such as Microsoft Excel, for analysis there) .

Shock Loggers

What does a Tinytag Shock logger record?

A Tinytag shock logger records the maximum acceleration the unit sees during every logging interval and the results, which are accelerations, are displayed in g.

Common Applications

Tinytag shock loggers are commonly used by logistics companies, museums and art galleries to ensure that their property is not being mishandled whilst in transit.

Data loggers can be attached to packing cases and left to record over the duration of a shipment. In the event of damage to the item being shipped, the unit can be downloaded and the graph produced - which shows recorded readings against time - used to work out when an impact occurred, and from that who was responsible for the consignment when it happened.

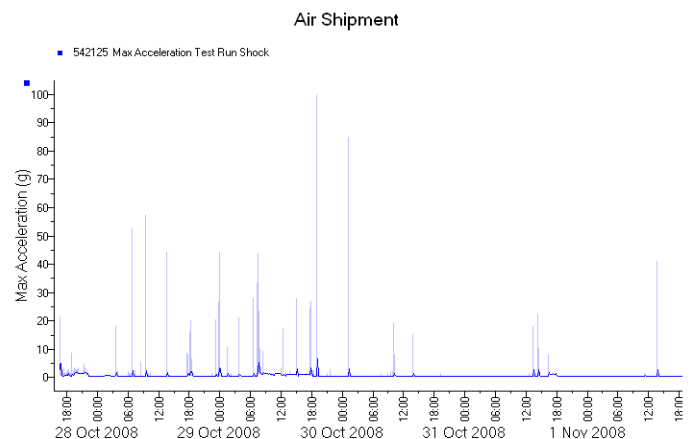
Shock loggers can also be used to record if and when damage occurs during building work. Loggers can be left near the source of the disruption and downloaded in the event of damage to an item or the building to work out when, and possibly how, it happened.

Should I use a normal or a high sensitivity shock logger?

Generally, for shipment and building work monitoring, the standard 0-100g TGP-0610 shock logger should be used.

The TGP-0605 high sensitivity 0-5g shock logger should only be used in specialised applications where low-level shocks are of importance (for example, the unit is sensitive enough to pick up low level shocks such as a finger tapping a desk).

Applications where the high sensitivity units have been used in include the monitoring of movement in turtle nests and the movement of stained glass windows.



Vibration Loggers

What does a Tinytag Vibration logger record?

A Tinytag vibration logger records the value of the vibration the logger is seeing at the point when the reading is taken.

Vibration loggers record velocity so the units are displayed in mm/s.

These units are limited to measuring vibrations in the 20Hz to 1KHz range.



Common Applications

Like the shock logger, Tinytag vibration loggers are commonly used to monitor applications where building work is taking place. The vibration logger can be used to show periods of abnormal or excessive vibration that may be damaging to items and the surrounding environment.

Vibration data loggers are also useful for condition monitoring, where it is anticipated that a fault may develop on a piece of machinery over time. The logger is first used to obtain a base line period of "good" data to compare any problem readings to. This can be used to determine when a fault has occurred.

These loggers can also be used to tell when a piece of machinery is in use. The logger can be attached to the device to be monitored and the recorded data will show periods of activity and rest.

Warnings

-  Loggers must be mounted securely to the item being monitored to avoid reading errors being induced by the logger moving itself.
-  Tinytag shock and vibration data loggers contain sensitive electronics and which may be influenced by strong electromagnetic signals. Units should be kept clear of any sources of electromagnetic interference, especially mobile phones, when logging.

Further Information

Further information on Tinytag shock and vibration data loggers can be found on unit's individual product data sheets that can be downloaded from:

<http://www.geminidataloggers.com/logger-datasheets>

If you should have any questions that are not covered by the above, please contact your supplier or Gemini Technical Support.

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