Grant
DATA LOGGING

Squirrel
OQ606

Logger manual

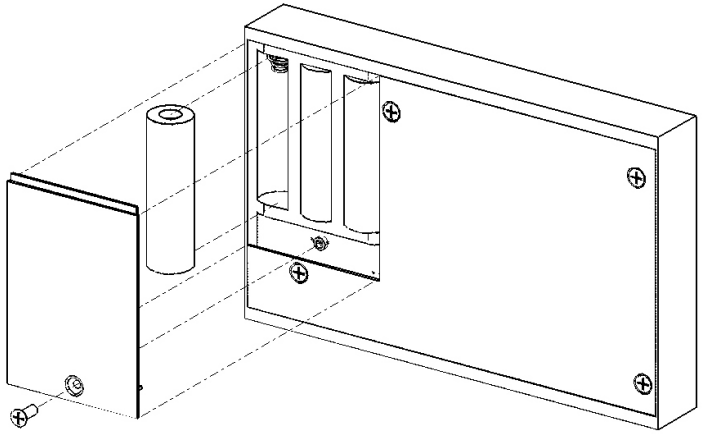
Contents

1. Operating the OQ606 without a PC

1.1 Installing Batteries

The Squirrel uses three AA* size batteries located under its removable battery cover. To change the batteries:

① Remove the fixing screw for the Squirrel battery cover.
② Lift the battery cover away from the body of the logger:
③ Fit the new batteries to the clips, noting that the orientation is marked with a + symbol on the circuit board:
④ Refit and secure the battery cover.

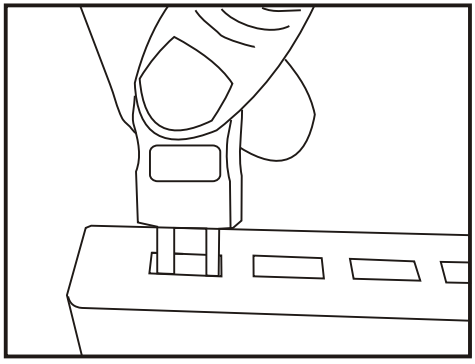


⚠ **Maximum operating temperature for AA alkaline batteries supplied is 50°C*

2. Connecting the probes

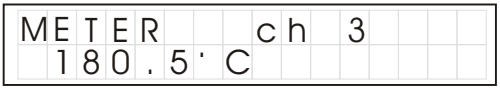
The OQ606 will be supplied complete with up to six probes, each with an integral cable.

The OQ606 is fitted with six thermocouple K-type connector sockets. Connect each probe to an input socket, as shown below. The logger will recognise which channels are being used. If no probes are connected, the Squirrel will not start logging.



Note that each plug has a wide terminal and a narrow terminal. Ensure that the plug is orientated correctly before making the connection.

The logger display confirms which probes are connected. Press the Func button on the logger twice to obtain the METER display showing details of the first probe, which will look similar to the following:



Repeatedly press the Set button to scroll through the details of each probe in turn, confirming that the probes are working correctly.

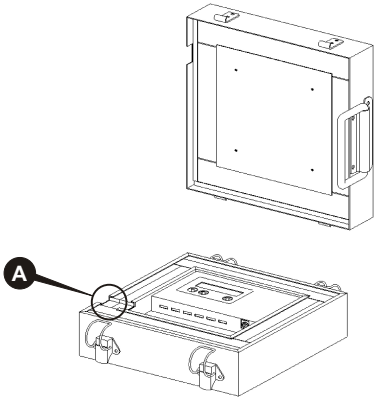
3. Thermal barrier

3.1 Thermal barrier

The thermal barrier enables the use of the OQ606 at elevated temperatures.
Place the OQ606 in the insulating box, ensuring that the probe leads are not trapped but are passed through the barriers cable guide (A).

Model number CI606-Q
Physical details:
Dimensions (l x w x h) 230 x 230 x 110mm.
Weight 4kg
Thermal characteristics: 250ºC (482ºF) for 45 minutes.

Other time/temperature combination boxes are available on request. Please call us to discuss your requirements.



WARNING: To ensure that the Squirrel logger does not exceed its maximum operating temperature it should always be placed inside its protective thermal barrier before being placed into the oven.

Do not touch surfaces which become hot during high temperature operation.

3.2 CI606-Q Thermal Barrier Performance

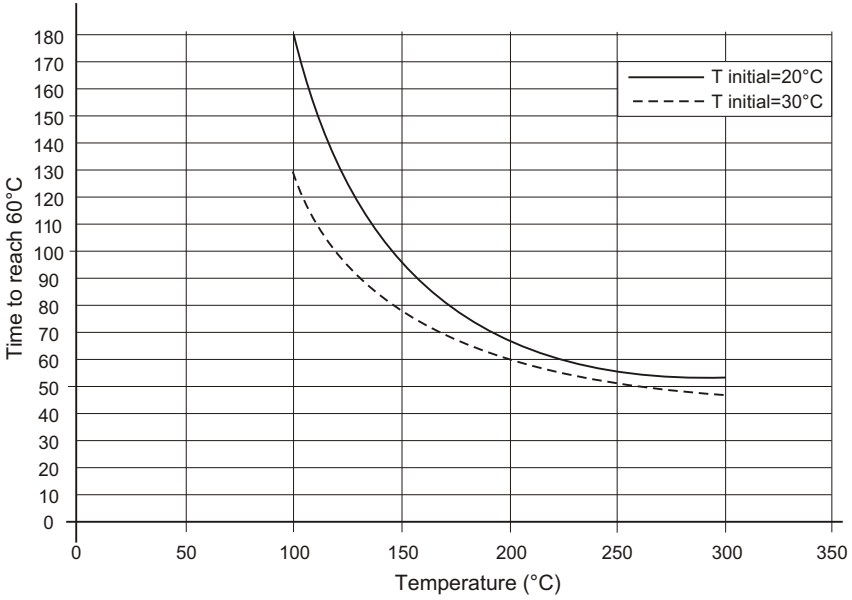
Dimensions: (230 mm/230 mm/100 mm)

Table of Results:

T initial =20°C	
T oven (°C)	Time to reach 60°C
100	180 minutes
150	95 minutes
200	68 minutes
250	58 minutes
300	52 minutes

T initial=30°C	
T oven (°C)	Time to reach 60°C
100	130 minutes
150	77 minutes
200	60 minutes
250	51 minutes
300	46 minutes

Note: T initial is the initial temperature of the thermal barrier before placing it in the Oven.



4. Logging

4.1 Commencing logging

This section describes the operation of the Squirrel OQ606.

The Squirrel OQ606 oven logger measures temperatures over a preset time period. The recording period depends on the recording interval and the number of runs that have been configured.
The logger is pre-programmed by Grant with default values which allow you to use the logger without using software to programme it .
Default settings allow the logger to be started and stopped manually with the logger buttons. The defaults are as follows: the logging interval is every two seconds, logger memory is set to record up to eight runs each of three hours and a default 'Product Cure' specification of 180ºC (356ºF) for 10 minutes is installed.
Results of a run can be evaluated immediately afterwards by directly connecting the logger to a portable printer (specified by Grant). In addition, the logger can be programmed with 'Product Cure' specifications.

4.2 Overview of the operating buttons

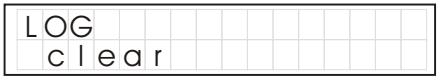
The operating buttons allow the setup of all of the major functions of the logger.

Func	Sel	Set
selects the function.	chooses the channel or sub function.	changes any of the settings.

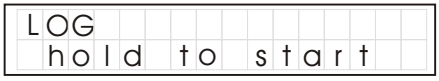
4.3 To start logging

To switch the data logger on, press Func . If the data logger is left on it will automatically switch off after 20 seconds.

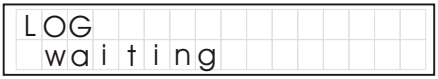
Press Func until the following is displayed:

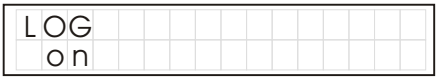


Now press and hold Set to start logging:



When the display changes to show that logging is waiting to start or has started, the button may be released. The display will then turn off within 20 seconds to conserve power.

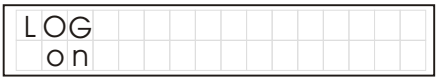




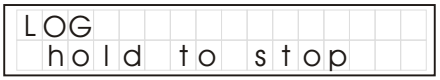
4.4 Stop logging

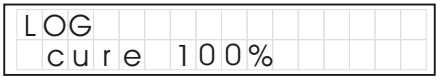
Manually stopping the logger will override any preprogrammed automatic 'stop trigger'. After recording has stopped, the screen will indicate whether the latest run has met its Cure Specifications (if programmed). For more graphical analysis, either print the results to a portable printer or download the run into the software for detailed analysis.

Press Func to wake up the logger:



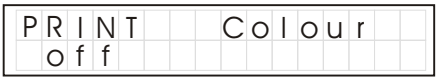
Hold Set to stop logging:



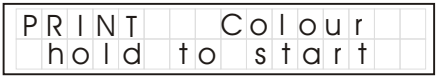


4.5 Print run

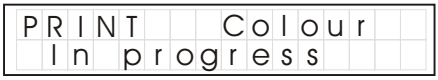
Press Func until the following is displayed



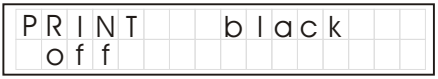
Now connect the logger to the printer with the printer cable (LC74) and the serial to parallel converter, (connect converter power supply and check that the power indicator light is on) press and hold the **set** button to Start printing:



When the display changes to show that printing has started, the button may be released. The display will then turn off within 20 seconds to conserve power.

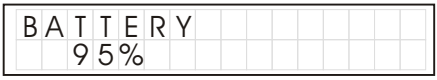


WARNING: The Squirrel OQ606 cannot print in colour when connected to the Hewlett Packard Hp350 portable printer, so users must ensure that this printer is loaded with a Black ink cartridge. However when connected to most other HP DeskJet printers the Set button can be used to select either the 'Black' or the 'Colour' print mode, as shown below.



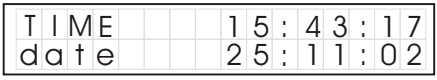
4.6 Battery life indication

This displays the approximate percentage of remaining capacity. The estimated battery life assumes default settings. The battery life estimate assumes that the working temperature will be between -20°C (-4ºF) and +65°C (149ºF). At -30°C (-22ºF), the battery life can be decreased to 10% of normal. Three AA cells should give 200 hours operation using the logger default settings



4.7 The TIME and date function

This displays the real time and date on two lines. The time clock is in a 24 hour format (HH:MM:SS). PaintView or PaintWise32 automatically informs you if the logger clock needs updating.



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