PROfiler
Temperature Profiling System

Key Benefits

- ✓ Accurate to ±1°C (±1.8°F)
- ✓ Robust and simple to use data logger and software
- ✓ Real time multi-node <u>two way</u> RF telemetry
- ✓ Rapid process set-up and profiling
- ✓ Profile prediction

- ✓ 6 Type-K Thermocouple channels
- ✓ Windows 95/98/NT® user friendly data analysis software
- ✓ Sample period 0.1 second to 10 minutes
- ✓ Re-chargeable (2hr fast charge)

Thermal Profiling

An incorrect temperature profile in a reflow or wave soldering process is proven to cause failures in both electronic components and printed circuit board assemblies.
The most effective way to assess the thermal shock to components and the PCB is to measure the actual on-board temperatures as it travels through the soldering machine.
PROfiler is a six channel high accuracy RF temperature profiling system which allows temperature profiles to be gathered and viewed in real time.
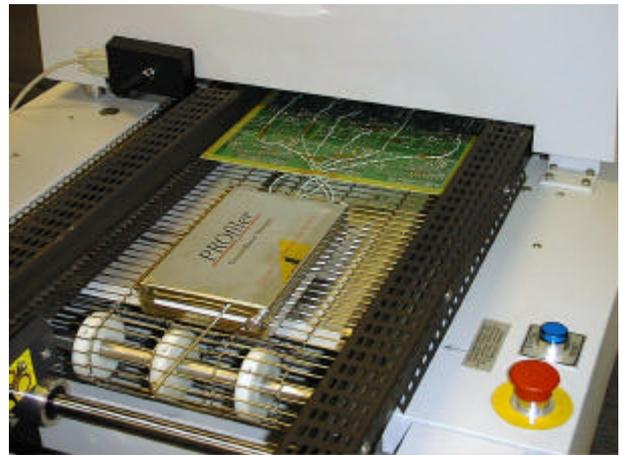
Realtime temperature profiling on 6 channels.

High Performance Data Logger

The standard *PROfiler* data logger unit is fitted with six Type-K thermocouple channels, offering unprecedented measurement accuracy.
Using high performance data acquisition circuitry and digital filtering techniques, accurate profiles can be gathered with high levels of 50-60Hz Mains noise rejection.
At least 10000 data points per channel can be held within the loggers memory, whilst the RF real time telemetry system offers the benefits of seeing the profile as it happens.
A two way RF protocol is used between the datalogger and PC, resulting in zero data loss during transmission, therefore all the data you see is 'real' data.
The data logger unit is fitted with Ni-Mh rechargeable batteries and uses intelligent battery management to optimise use between recharges.

Data Analysis Software

The *PROfiler* analysis software will run on any PC with Microsoft Windows 95/98/NT® installed, utilising one standard serial communications port.
Using RF telemetry a full screen temperature / time graph can be displayed in real time allowing process engineers to make rapid process decisions and minimise production down time.
Profiles can also be gathered and stored by the data logger for download at a later time to a PC. Once a profile has been captured it can be analysed with easy to use software tools and saved to disk for future reference. A report sheet can also be printed detailing process parameters, logger details and the captured profile for total traceability of your soldering process.
An optional prediction software module is also available which enhances the offline capabilities of the system.

Technical Specification

Accuracy	±1 °C (±1.8°F)
Resolution	0.02 °C (0.036°F)
Number of channels	6 Type-K
Sampling period	100mS to 10 mins.
Storage	65000 data points
Measurement range	-150°C to 600°C
	-238°F to 1112°F
Logger Size	143x111x15 (mm)
	5.6 x4.4 x0.6 (inch)
Thermal Barrier Size	202x135x28 (mm)
	8.0 x5.3 x1.1(inch)

Standard Equipment

- Six channel data logger with RF Telemetry
- Rugged Thermal barrier
- PC Analysis Software and download lead
- Six Type-K Thermocouples and leads
- Batteries and charger unit

Options

- Non RF version

Thermal Protection

To protect the *PROfiler* data logger unit from the harsh high temperature environment, a robust thermal barrier manufactured from stainless steel is used, which is suitable for most process requirements.

On edge feed ovens with reduced aperture height or when profiling PCB wider than the thermal barrier an optional carrier is used to transport the system through the process.
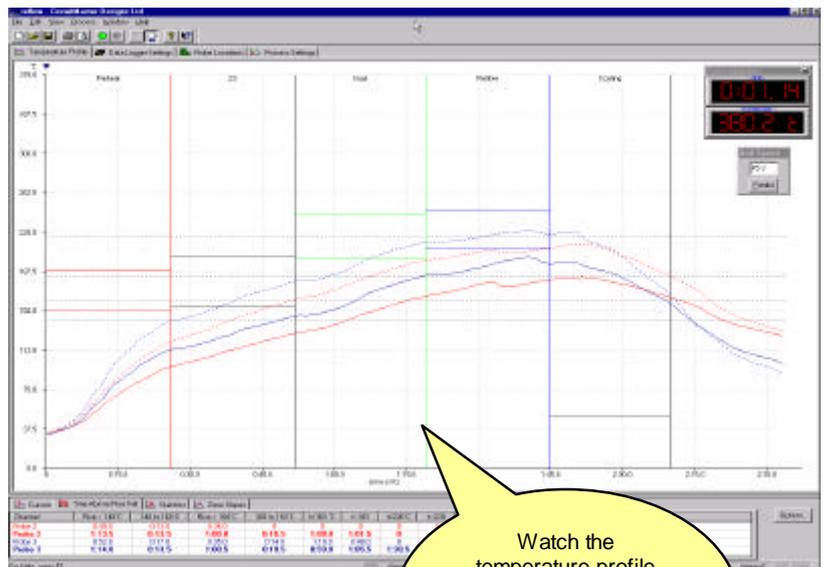
Watch the temperature profile plot out in realtime, then analyse it with easy to use software tools

Print a comprehensive report of your reflow or wave soldering process

Place and name probe icons on an image of your board for total traceability

Configure the datalogger and start a profile run remotely using the RF telemetry system
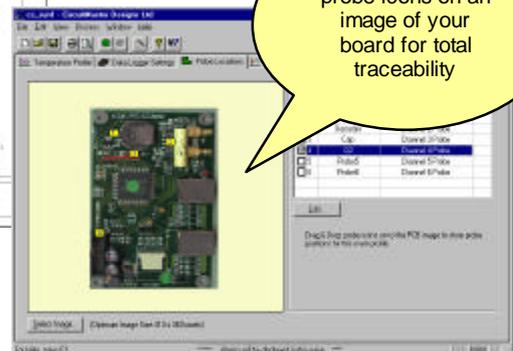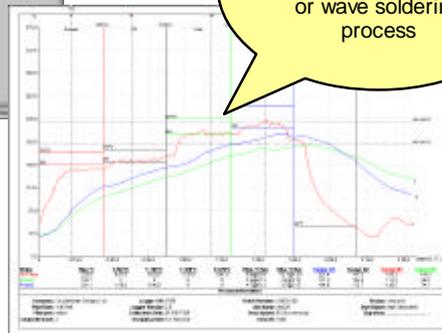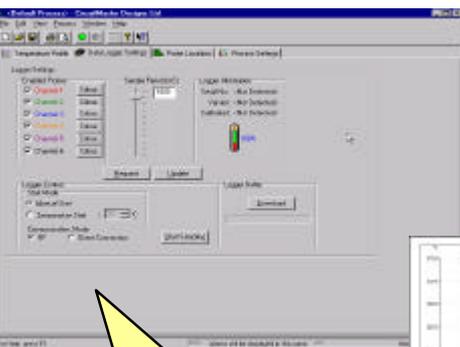
For sales & distribution information contact

CircuitMaster Designs Ltd
Kingsway West Business Park
Moss Bridge Road, Rochdale
Lancashire, United Kingdom
OL16 5LW
profiler@circuitmaster.co.uk
http://www.circuitmaster.co.uk

circuitmasterdesigns
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