G-STORM™

GSI

PREPARE FOR THE G-STORM™

G-STORM™

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G-STORM™ THE CUTTING-EDGE
THERMAL CYCLER SOLUTION

VISIT OUR WEBSITE AND EXPERIENCE
THE ENTIRE G-STORM™ RANGE

www.g-stormcycler.com

G-STORM™
GS1

THE THERMAL CYCLER SOLUTION YOU'VE BEEN WAITING FOR

G-Storm – purpose built for the demands of cutting edge molecular biology, G-Storm is the new benchmark of thermal cycler excellence.

Superb thermal performance characteristics are perfectly balanced with ease of operation ensuring that daily use is a pleasure.

Design and feel is paramount, resulting in a compact, yet robust system that will look great in your laboratory. The colour touch-screen is the heart of G-Storm's control. The user interface is simplicity itself, making programming, file management and cycler control a breeze.

A NEW ERA FOR PROGRAMMING AND CONTROL

Colour touch-screen display

A full colour VGA TFT touch-screen display (6.4 inch) provides G-Storm with an interface in which programming and control is point and click or drag and drop. Control of G-Storm is via the touch-screen using a stylus, ball pen, or even your finger! (An optional keyboard and mouse can be attached via the USB port if you prefer). The ability to adjust the angle of the screen prevents any unwanted glare from lab lights and also enables greater comfort to the user when it comes to programming and control.
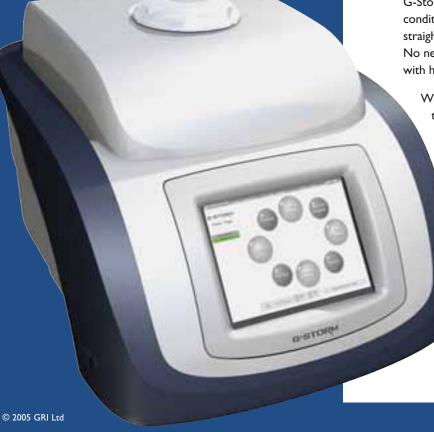
G-Storm software – simple yet powerful

If you are new to molecular biology, programming a thermal cycler for the first time can be a daunting prospect. This is not the case with G-Storm's interface! Novices through to experts find G-Storm's software intuitive and easy to learn yet powerful enough to handle the most complex of protocols. Users have the choice to enter known programs manually or utilise the fabulous Program Wizard. The program wizard function and inbuilt primer algorithms remove the requirement to manually calculate the ideal protocol for your experiment. Simply enter your primer sequences or melting temperatures (TM's) and let the wizard do the rest! Manual programming utilises drag and drop principles, and the icon driven commands enable quick, clear and intuitive protocol inputs. Even utilising G-Storm's gradient function effectively is simple. Optimal conditions from any gradient protocol can be converted straight into a standard protocol with only a single click! No need to re-program or revert back to scraps of paper with hand written temperature gradients!

Within G-Storm's software, administrators may select the operating language of the system, a function which may prove invaluable with more collaborations between labs resulting in a demand for a multilingual cycler.

At present, G-Storm may be run in English, French, German, Spanish and Italian languages.

A site license for G-Storm's programming software interface is also provided free of charge for use on PC's, enabling experimental design and programming from your desktop. Protocols can be transferred via memory stick to and from your PC straight onto G-Storm.

"The G-Storm GS1 is everything you need from a thermal cycler."

G-Storm is changing the way molecular biologists think about using thermal cyclers. With so many features available from one machine combined with incredible ease of use, you will be blown away!

Multi-Sensor block technology

Each thermal block within G-Storm has 4 independent temperature control sensors and 8 peltier heating units, ensuring that temperature control and uniformity across the block surface is accurate and reproducible time after time, cycle after cycle. With features such as Active Sample Cooling (ASC) ensuring that samples are cooled until heated lid reaches its target temperature, therefore reducing non-specific primer binding and extension, the G-Storm is protecting your samples, even before your protocol has begun.

A gradient feature for protocol optimisation is standard on all blocks (48, 96, 96 combi and 384 well) ensuring that you get the very best data from your starting biological material. The gradient range is user programmable from 4°C to 30°C across the thermal block (gradient can be run within a temperature range of 30°C to 80°C).

G-Storm's "Home Page" is central to the control of the cycler's various functions. Select the various options, including Program Wizard, New Program, Run Program, on the touch-screen and let the software take you through a logical process that enables you to do what you want to do in easy, simple to follow steps.

The icon driven, drag and drop programming is simplicity itself. Simply select the command that you require, drag it into the program window and enter your parameters when prompted. This method enables both complex and simple protocols to be visualised during programming by selecting the "profile" option.

The superb "Program Wizard" function uses primer sequences or primer melting temperatures to calculate your protocol for you. By entering this information, product length and any other "special" information, over just five steps, the wizard will present an ideal program based on this information within a few clicks, you are ready to go!

"The thermal cycler solution for cutting-edge molecular biologists."

FINALLY, A CYCLER THAT MAKES THINGS EASY!

G-Storm is probably the easiest thermal cycler to use whilst offering probably the most advanced protocol monitoring currently available. The status of the cycler is always visible with actual and target temperatures displayed graphically in real-time. Lab books and GLP reporting provide additional data vital for accreditation or validation for use in labs where quality control and monitoring is paramount.

Easy to operate and maintain

Internal performance protocols ensure that your cycler is performing as it should and provide peace of mind that your experimental data is sound and accurate.

Thermal blocks within G-Storm exchange in seconds without tools or the need for a specialist engineer, such a feature reduces any potential downtime to an absolute minimum. The USB port accepts memory sticks for program transfer / export and even operating software upgrades from the web or e-mailed directly to your from your local service team.

Quality assured

- NIST/UKAS traceable calibration procedures
- Password control – allows access to various reports
- Administrator, User and guest levels enable programs to be written, edited, protected and run according to status.
- Power failure options – continue or halt
- Barcode reading option
- Encrypted GLP documentation produced with every program run.

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G-STORM™ GS1 TECHNICAL SPECIFICATIONS

Thermal blocks

Block materials	Modular anodised aluminium blocks with 4 thermistor sensors
Traceability	NIST traceable temperature calibration
Blocks available	48 Well gradient block for 48 x 0.2ml tubes
	96 well gradient block: for 96 well plates or 96x 0.2 ml tubes
	96 well gradient combi block: 96 x 0.2 ml tubes or 48 x 0.5 ml tubes
	384 well gradient block high throughput block: for 384 well plates

Thermal block characteristics

Temperature range	4°C - 99°C
Temperature control	Calculated mode with plate and tube control algorithms
Volume range	5-100µl
Block Accuracy	+/- 0.4°C (20-99°C)
Block Homogeneity	+/- 0.4°C
Ramp Rate (heating)	Up to $3°CS^{-1}$
Ramp Rate (cooling)	Up to $3°CS^{-1}$
Gradient temperature range	30°C - 80°C (All Blocks)
Max/min gradient span	30°C / 4°C
Sample-overshoot	<1°C

Heated lid

Lid temperature range	80°C - 120°C, (selectable with 1°C increments)

User interface

Screen type	6.4 inch TFT colour VGA touch-screen with angle adjust (Stylus supplied. Suitable for ball-pen or finger use)
Data input	Touch-screen, external keyboard and mouse (USB) (Optional), barcode scanner (USB)(Optional)
Temperature display	Real-time graphical display of actual block temperatures
Communication	1x USB (for memory stick)

User and File Management

User levels	3: administrator, user (with administrator selectable restricted rights) and guest
File protection	via restricted access
File organisation	Windows Explorer, user-defined folders and subfolders
Program storage	Circa 500 (internal memory or USB stick).

Reports and validation

Reports	Encrypted GLP report, LabBook report
Validation	Automatic internal validation prior to each program start

Power and dimensions

Electronic power supply	100V to 240V (frequency 48 to 62Hz)
Dimensions (LxWxH)	465mm x 337mm x 265mm
Weight	8kg approx.
Operating conditions	10°C - 30°C, 0 - 95% relative humidity
Regulatory	CE compliant
Warranty	2 years

Optional accessories

Barcode scanner	Barcode documentation via handheld barcode scanner
Data input	External keyboard and mouse (USB)
Memory	USB Memory Stick

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