Preface

Dear User：

Thanks for you to buy GeneTest series of Thermal Cycler! When you use this product, please be sure to carefully read the instruction manual, and you should keep.

You can become our customers is our great honor. To help you quickly grasp GeneTest series of Thermal Cycler instrument to use, we have prepared a statement for you. Our product specification strive to be comprehensive but concise presentation. From which you can obtain the device characteristics, operating instructions and maintenance aspects of knowledge. We strongly recommend that you use this product before, be sure to carefully read, this will help you make better use of the apparatus. If your request fails to manual operation of apparatus for any loss resulting, according to the relevant provisions of Division I will not be liable.

Thank you for your cooperation!

2009-12-1， IEdition

Catalogue

Chapter Ⅰ: Safety Guidelines

1. Safety warnings and note that language tips

High temperature warning: The instrument affixed with a heat warning marked regional and described in this manual do not hand the direct high temperature zone in the region, in order to avoid burn!

Electric shocks Warning: Be sure to shock warning information in strict accordance with the requirements of the implementation of operations, in order to avoid electric shock accidents!

Note: Note that prompted the phrase that contains the information of particular importance, be sure to read them carefully.If the failure to do so may cause equipment prompted not work, and even damage to equipment!

2. Safe to use

In using this instrument, please read the following, be sure to comply with the following basic security measures. If you do not comply with these measures or other places in this manual that warning, it may affect the normal use of the instrument, and even damage to equipment, injured personnel.

1). Prohibited equipment placed in humid, dusty, high temperature, magnetic environment of use.

2). Open the cabinet against unauthorized or the items touch the apparatus with the internal components.

3). Prohibition of anything to plug vents, beware of gloves or rags into the outlet at the bottom of inhalation equipment.

4). To keep equipment clean, and timely maintenance.

Note: The encounter the following situations, the power plug immediately unplug from the power outlet, and contact with suppliers rectified.

1). Instrument through the rain, irrigated or liquid penetration.

2). Equipment not working properly, in particular, there is any unusual sound or smell there.

3). Instrument function changed significantly.

Chapter Ⅱ: Installation

2.1 Package Content Verification

When you receive my company's GT-based PCR instrument, please check out of the box include the following:

① Instrument	1
② Power line (single-phase 3-wire)	1
③ Spare fuse（8A ， 250V）	2
④ Operation manual	1
⑤ Simple operation manual	1

If not match, keep the original box, and timely contact with us.

2.2 Use of the environment

1). Indoor use。

2). Temperature 5℃-35℃。

3). Relative Humidity 10%—90%

4). Should stay away from heat sources to avoid liquid penetration inside the instrument。

5). Equipment shall not block the sides and bottom vents, instrument 30CM distance on both sides shall not place any other items to ensure the smooth ventilation equipment.

2.3 Power supply

The instrument uses switching power supply suitable for a wide voltage range, 85-264V AC voltage can be between the normal working frequency is 50 ~ 60HZ, power cord for the single-phase three-wire, grounding must be reliable.

Warning: Instrument must be reliable and grounded to avoid electric shock accidents!

Chapter Ⅲ: Instrument Features

3.1 Overview

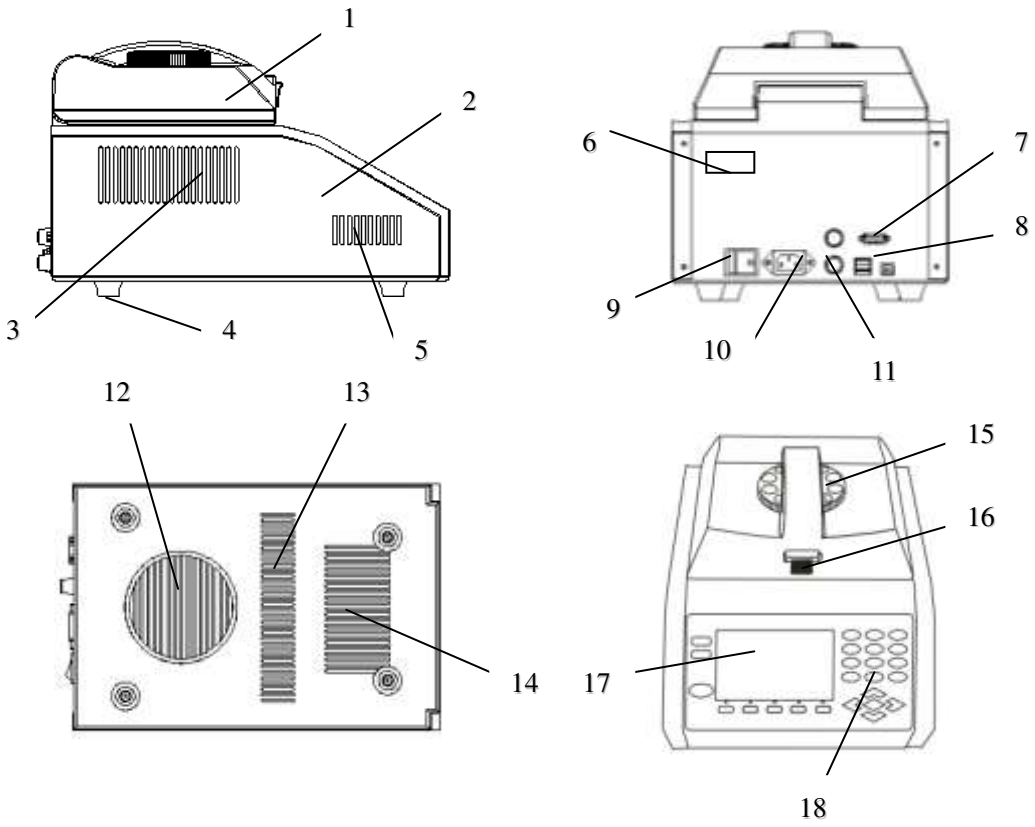
PCR thermal cycler instrument (also known as gene amplification, or PCR amplification instrument instrument) is a polymerase chain reaction (Polymerase chain Reaction) referred to as PCR technology, a new instrument designed. PCR was guided by a pair of primers able to specific genes in plants and animals in vitro (DNA) fragments for rapid enzymatic amplification technology. PCR thermal cycler for the qualitative or quantitative PCR test provides a high-temperature template denaturation, primer annealing temperature, proper temperature primer extension are three important temperature conditions, while elevating the temperature with a fast and accurate temperature control, temperature field uniformity, and high level of automation , this instrument can not be directly applied to clinical.

Scope: Suitable for molecular biology, medicine, food industry, forensic science, biotechnology, environmental science, microbiology, clinical diagnosis, epidemiology, genetics, gene chip, genetic testing, gene cloning, gene expression in areas such as polymerase chain reaction (Ploymerase Chain Reaction, PCR) for the feature to detect the DNA / RNA for the purpose of a variety of pathogen detection and genetic analysis.

Gradient PCR instrument addition to the standard PCR instrument with the above-mentioned functions, the gradient module is also available at the same time as many as 12 different annealing temperature of PCR reaction, in the gradient module can be realized on the gradient of temperature and gradient parameters such as adjustment of the width of the free programming 12 temperature gradient annealing temperature to achieve different samples and at the same time thermal cycling. Only a single experiment will be able to identify a particular system of the corresponding optimal annealing temperature. This will result in a short time on the optimization of PCR experiments, greatly enhanced the efficiency of PCR research.

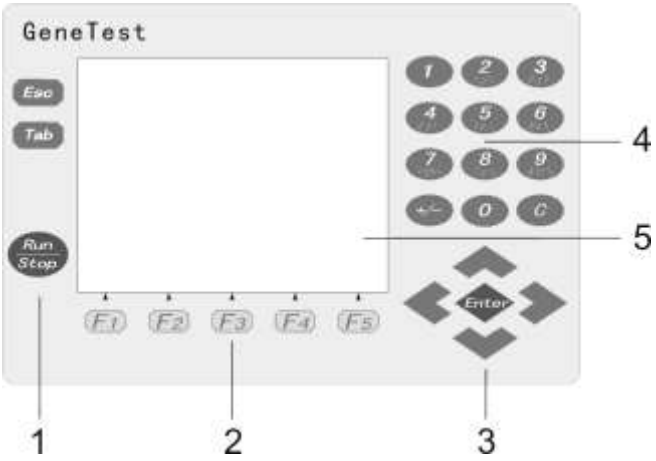
The following describes the structure of this instrument, keyboard and various function keys, the initial use of this instrument, please read carefully.

3.1.1 Instrument Construction



1. Cover	2. Host	3. Vent
4. Instrument feet	5. Vent	6. Nameplate
7. RS232 port	8. USB port	9. The power switch
10. Power outlet	11. Fuse holder	12. Air inlet
13. Vent	14. Vent	15. Knob
16. Button	17. Display screen	18. Keyboard

3.1.2 Keyboard



1. Control keys
2. Multi-function keys
3. Direction keys
4. Number keys
5. Display

3.1.3 Key Note

Numeric input, character input

Temperature, time increment / decrement editing the sign switch

Clear key, backspace

Exit file editing or return on a menu

To cancel the operation or clear the alarm dialog

The file name input switching the case of letters

Hybrid module or switching module 384 displays the gradient

Run File

Stop File

Multi-function key

Select menu, the file

Moving the cursor

To enter the menu

To confirm the operation

3.2 Feature of this instrument

1). The most advanced peltier-based semiconductor technology.

2). High-performance universal power supply.

3). Large 5.7-inch high-definition LCD display.

4). Bilingual curve graphical interface.

5). Power-down data protection.

6). Metal shell, solid, practical, beautiful and generous.

7). Stepless adjustable Lid can adapt to different heights in vitro.

8). Lid can be positioned at any angle.

9). High sealing reaction zone to ensure stable and reliable experiment.

3.3 Performance

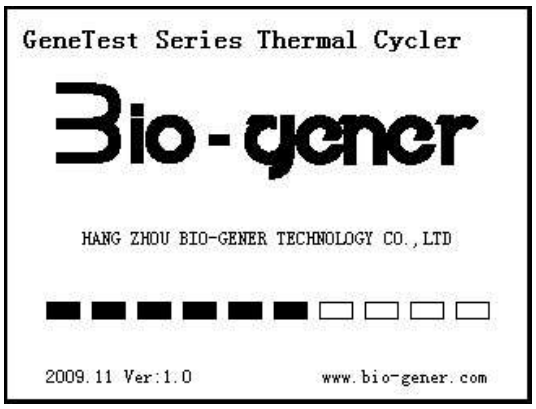
Model	**GT9611/9631/5421/3841 General**	**GT9612/9632/5422/3842 Gradient**
Capacity	96×0.2ml , 96×0.2ml+77×0.5ml , 54×0.5ml , 384well	
Temperature Range	0～99.9℃	
Heating Rate	4℃/s	
Cooling Rate	3℃/s	
Uniformity	≤±0.3℃	
Accuracy	≤±0.2℃	
Display Resolution	0.1℃	
Temperature Control	Block\Tube	
Ramping Rate Adjustale	0.1～2.5℃	
Gradient Uniformity	/	≤±0.3℃
Gradient Accuracy	/	≤±0.2℃
Gradient Temp. Range	/	30～99.9℃
Gradient Spread	/	1～30℃
Hot Lid Temperature	30～110℃	
Hot Lid Height Adjustale	Stepless Adjustable	
Number of Programs	200	
Max.No.of Segment	9	
Max.No.of Step	9	
Max.No.of Cycle	99	
Time Increment/Decrement	1 Sec ～ 9 Min 59 Sec	
Temp. Increment/Decrement	0.1～9.9℃	
Pause Funcation	Yes	
Auto Data Protection	Yes	
Graphical Display	Yes	
Hold at 4℃	Forever	
Language	Chinese/English	
LCD	5.7inch，320×240 pels	
Communication	USB2.0 , RS232	
Dimensions	392mm×262mm×252mm (L×W×H)	
Weight	10kg	
Power Supply	85～264VAC , 50～60Hz , 600 W	

Chapter Ⅵ: Instructions

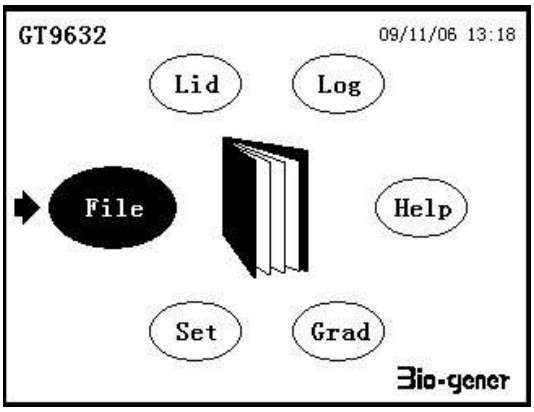
4.1 Power on

1). Power

The back of the instrument connected to power cord into an electrical outlet, and the power supply switch set "-." Power equipment, the buzzer will issue a "beep" sound, LCD screen lit, LCD screen displays the product name, company LOGO, name, URL, and software version number, instrument into the self-test status, self-test standby interface after the end of as shown below.



Power Interface



Standby Interface

2). Preheat

Devices in standby mode, warm plate and lid. If you need to change the lid preheat mode, please see "4.5 Hot Lid". The default lid preheat mode is the “Hot lid on when power on”, lid preheating temperature of 105 ℃.

3). Open cover

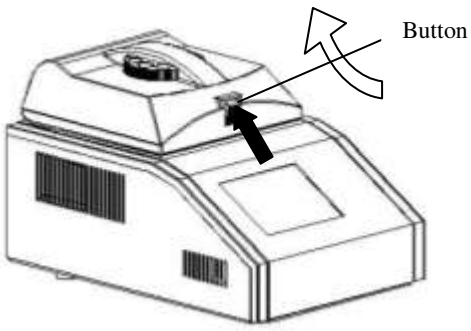


Figure 1

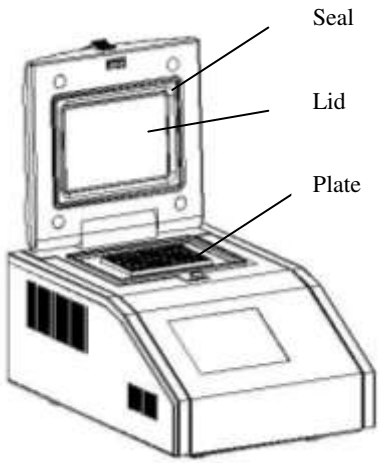


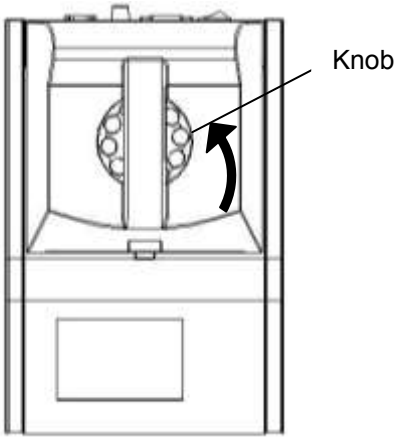
Figure 2

Hold down the button opening the cover and then turn up (as shown in Figure 1), and open to a suitable height (as shown in Figure 2). Lid can be positioned at any angle of orientation（0°--95°）。

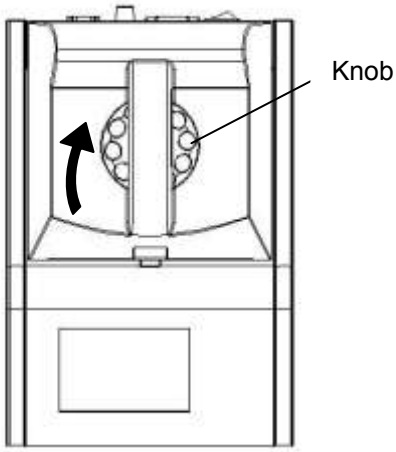
Warning: After power on, do not hand direct contact with plate and Lid heating region, careful burn!

4). Adjust to hot lid height

This series of instruments hot lid parts of the human design, by regulating the compatible 0.2ul, 0.5ul, 384well different specifications of test tubes, to meet the requirement of experiment.



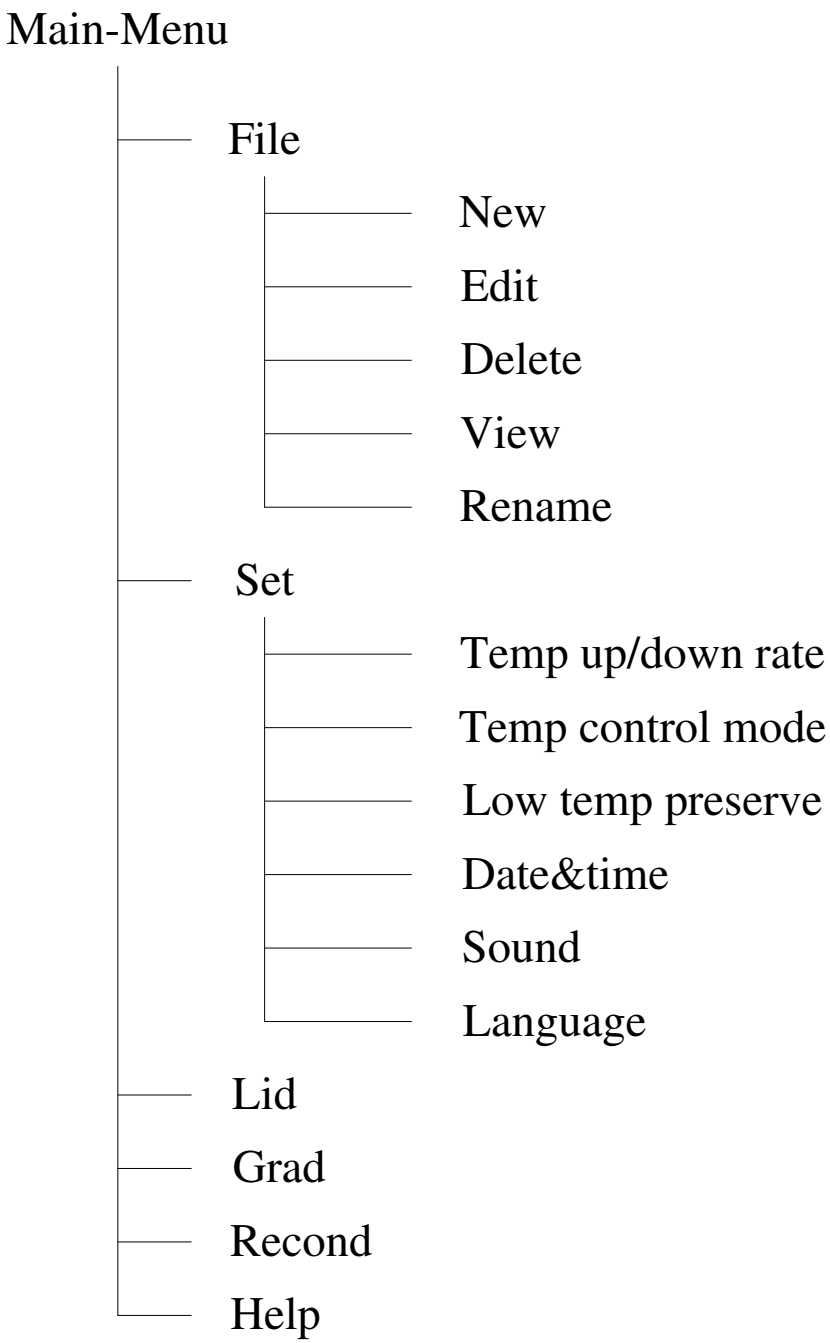
Hot lid up



Hot lid down

This series of instruments knob adjustment are as follows: counterclockwise rotation, hot lid moving upward; clockwise rotation, hot lid downward drop.

4.2 Menu structure



4.3 File System

File is PCR program, File composed by Temperature Segment and Cycle Step, each File can contain up to nine Temperature Segment, each Temperature Segment can contain up to nine Cycle Step, the maximum number of Cycles is 99 times. Cycle Step contained Set Temperature, Cycle Time, Gradient Width (GT-XXX1 type without this), Temperature Increment and Time Increment.

Example1: File structure

94℃ 4m20s

94℃ 35s

55℃ 45s 35 Times

72℃ 50s

72℃ 3m30s

From the above PCR program, we know that this File is structured as follows:

File contains 3 Temperature Segment;

The first Temperature Segment contains 1 Cycle Step, the Cycles Number is 1;

94℃ 4m20s

The second Temperature Segment contains 3 Cycle Step, the Cycles Number is 35;

94℃ 35s

55℃ 45s 35 Times

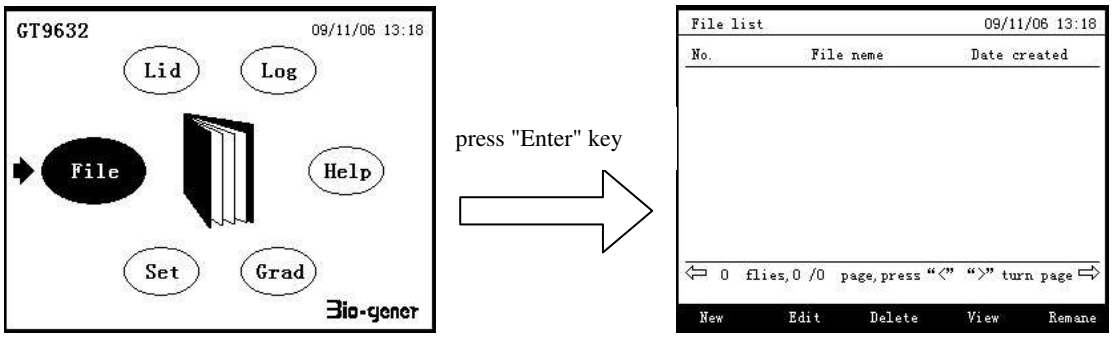
72℃ 50s

The third Temperature Segment contains 1 Cycle Step, the Cycles Number is 1;

72℃ 3m30s

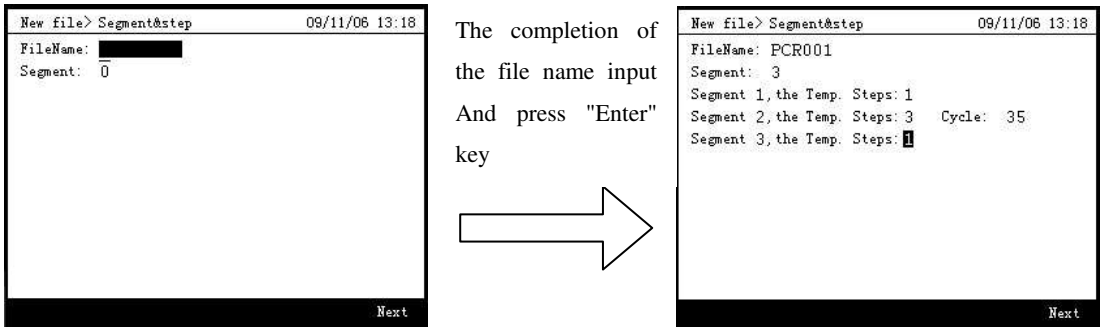
4.3.1 New File

In the standby interface, select the File menu, press "Enter" key to enter the “File list” interface, the following picture:



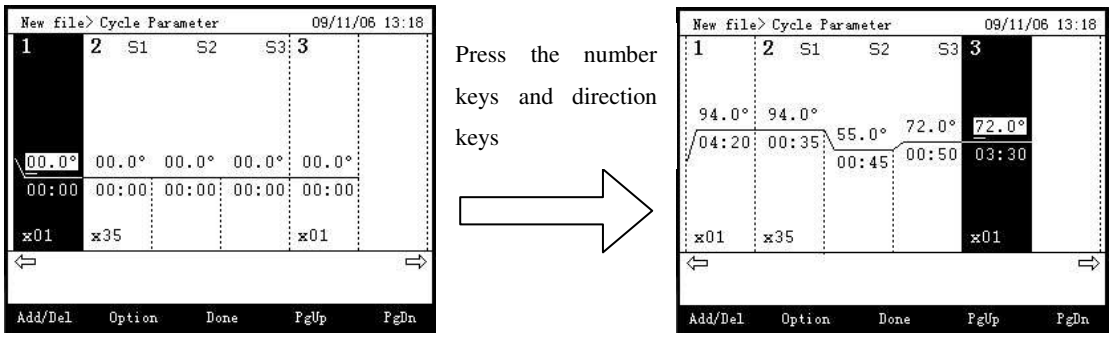
1). The file name input and set the temperature segment

In the “File list” interface, press “F1 (New)” key to enter the “New file>Segment&step” interface. First, press number keys, direction keys and “Enter” key input file name. After the completion of the file name, press "Enter" key to set the temperature segment, see "Example 1: File structure ", set the following picture:



2). Cycle parameter

If the file name input and temperature segment set up are completed, then press "F5 (Next)" to enter the “New file> Cycle Parameter” interface, press number keys and direction keys enter the appropriate content, the following picture:

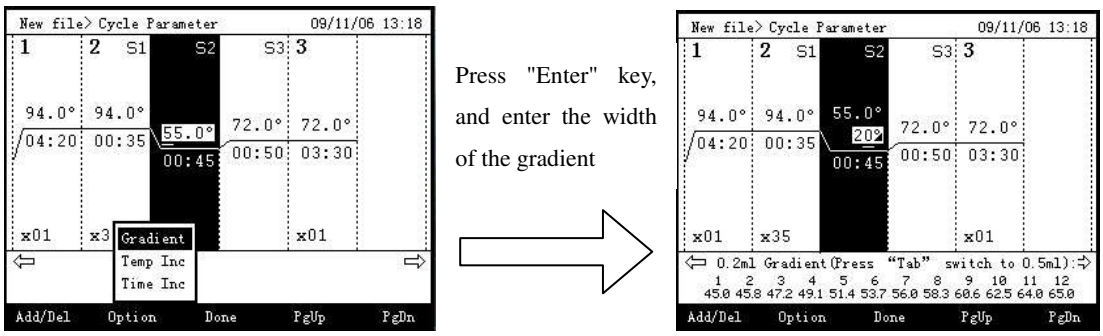


3). Option menu

In the “New file> Cycle Parameter” interface, press "F2 (Option)" key, instead of confining the Options menu, Options menu contains the “Gradient” (GTXXX1 type does not include this), “Temp Inc”, “Time Inc” of three projects.

A. Gradient

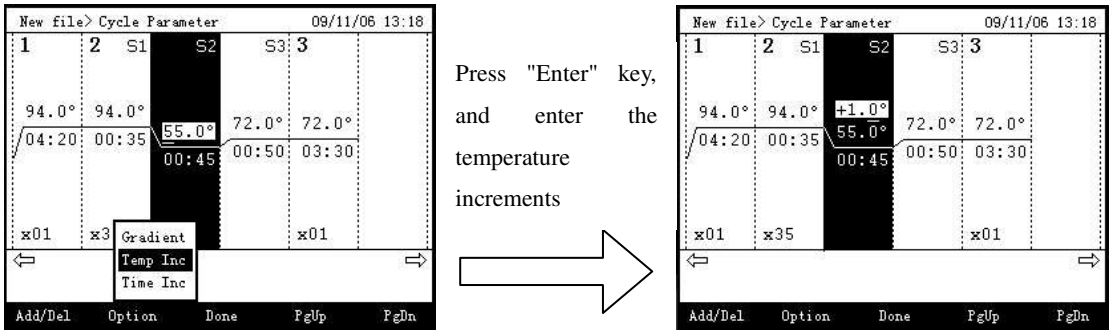
Gradient in the options menu, select items, press "Enter" key after the cycle of steps in the corresponding gradient of the width is set to display items, press the number keys enter the desired value, and the curve of the bottom hole temperature of each column shows the value of the following picture.



B. Temperature increment

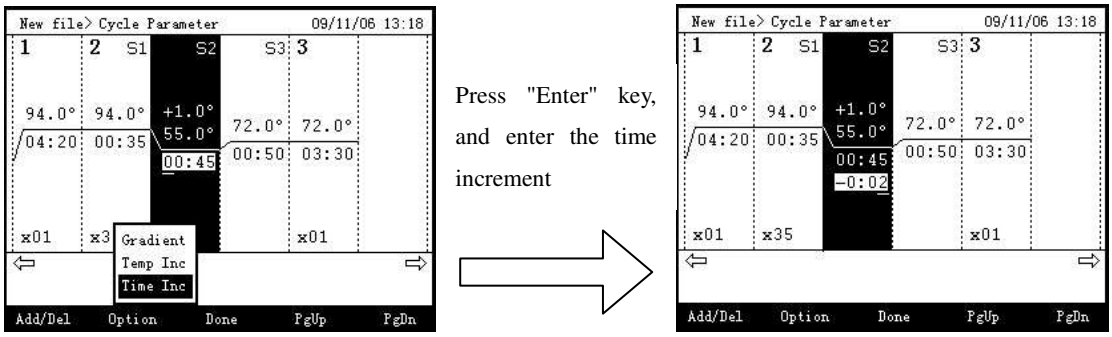
In the Options menu, press "↑" "↓" keys to select the temperature increment item, press "Enter" key after the cycle

of steps in the corresponding temperature increments within the display items, press the number keys enter the desired value, the following picture.



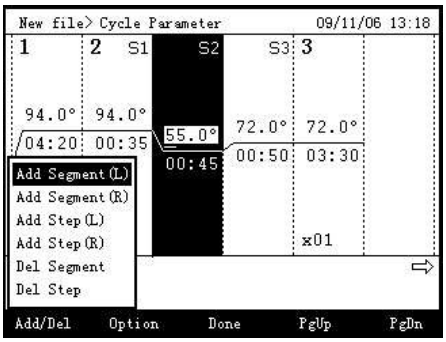
C. Time increment

In the Options menu, press "↑" "↓" key to choose the time increment item, press "Enter" key after the cycle of steps in the corresponding time increment is set to display items, press the number keys enter the desired value, the following picture.



4). Add / Del menu

In the “New file> Cycle Parameter” interface, press "F1 (Add / Del)" key, jump out of the Add / Del menu, Add / Del menu contains “Add Segment(L)”, “Add Segment(R)”, “Add Setp(L)”, “Add Setp(R)”, “Del Segment”, “Del Setp” these six items can be arbitrarily change the temperature segment and Cycle Step, the following picture.



5). Save the file

All input has been completed, press "F3 (Done)" key to save the new file, and return to the “List file” interface.

4.3.2 Edit File

In the “File list” interface, press "F2 (Edit)" key to enter “Edit file” interface, you can arbitrarily modify the file contents, methods of operation with the new file, this manual will not detail in this. edit complete , press "F3 (Done)" key, will be saved out of Edit menu, which contains “Save As” and “Save” items, if you choose to “Save” item, then cover the original file, if you choose “Save As” item, you need to enter a new file name.

4.3.3 Delete File

In the “File list” interface, press "↑" "↓" key to select to delete the file, and press "F3 (Delete)" key, the interface will be out of question in the dialog box, press "Enter" key to confirm you can delete the file. In order to prevent files mistakenly deleted, the system only supports a single operation can only remove a single file.

4.3.4 Preview File

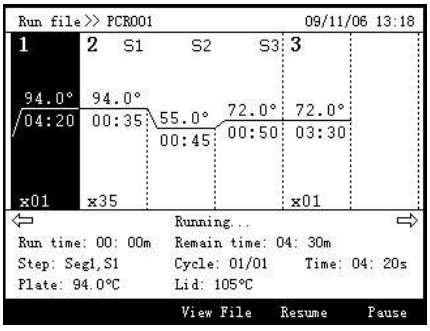
In the “File list” interface, press "↑" "↓" key to select preview of the file, and press "F4 (View)" key or press "Enter" key, you can preview of the file contents.

4.3.5 Rename

In the “File list” interface, press "↑" "↓" key to select to rename the file, and press "F5 (Rename)" key, the interface will pop rename input box, enter the desired file name.

4.3.6 Run File

In the “File list” interface, press "↑" "↓" key to select to run the file, and press "Run / Stop" key, the interface will be out of question in the dialog box, press "Enter" key to confirm to run the file, enter the run file interface, the following picture.



1). Operating system interface to display information

The current file name, the current plate temperature, the current hot-lid temperature, run time, the remaining time, current temperature steps, cycles, cycle time, and the file part of the curve.

2). View Files

To view the entire file, you can press "F3 (View File)" key to see.

3). Pause

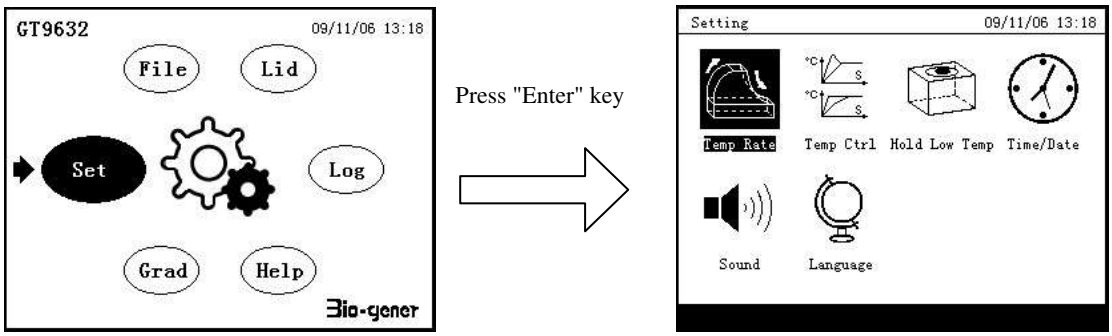
To pause the file, you can press "F5 (Pause)" key to pause the file and restore run by "F4 (Resume)" key.

4). Stop Files

To stop the file, you can click "Run / Stop" key, the interface will be out of question in the dialog box, press "Enter" key to confirm you can stop the file, and return to the list of files interface.

4.4 Settings Menu

In the standby interface by "→" key to select setting item, then press "Enter" key to enter the “Setting” menu.



Set the menu containing the “Temp Rate”, “Temp Ctrl”, “Hold Low Temp”, “Time/Date”, “Sound” and “language” which is set six items, press the direction keys to move the cursor, press "Enter" key to enter the settings required for entry.

4.4.1 Variable-temperature Rate

Press "↑" "↓" key to select the heating rate and cooling rate items, press the number keys to change the heating rate and cooling rate values. Press "F5 (default)" restore the default value, the default maximum cooling rate.

4.4.2 Temperature Control Mode

Temperature control mode is divided into the “Block Temp control mode” and the “Tube Temp control mode”, the general PCR experiment, use the “Block Temp control mode”, in the high-demand situations, select the “Tube Temp control mode”. System default is the “Block Temp control mode”.

4.4.3 Hold Low Temperature

If this function is enabled, System will automatically “hold low temperature” after the end of program, protect the sample will not degenerate. System, this function is enabled by default.

4.4.4 Time and Date

Set the system time and date.

4.4.5 Sound

“Keyboard sound”, “Alarm sound”, “File end sound” and “Temperature to reach sound” opening and closing settings. System default “Keyboard sound”, “Alarm sound”, “File end sound” three sounds open, the “Temperature to reach sound” off.

4.4.6 Language

Native support for the bilingual system, this setting items can switch languages.

4.5 Hot Lid

Hot lid temperature setting range is 30 ~ 110 ℃.Hot lid has four work mode, “Hot lid off”, “Hot lid on when power on”, “Hot lid on when file running”, “File start run when hot lid reached set point”. System default hot lid temperature is 105 ℃, hot lid work mode is the “Hot lid on when power on”.

4.6 Gradient Calculator

Simply enter the core temperature and gradient width, you get the hole temperature of each column. Different types of instruments are the corresponding gradient calculator (GTXXX1 type does not include this).

4.7 Record

Record each run file name, run time, the file was created, and record the total number of experiments. Can record up to 200 test information, excess, the most old records are removed.

4.8 Help

Introducing the machine features and simple instructions.

Chapter Ⅴ: Maintenance

5.1 Instrument maintenance

1) . Regular cleaning

A. Neutral soap solution should be used to clean the cavity above the plate. (To avoid the use of alkali, concentrated alcohol and organic solvent solution)

B. Should be maintained below the plane and its left and right vent no other items, the instrument in use for some time after the adhesion of some of the dust vent will be cleared in time, it is very important.

C. Plate should be kept clean, the plate once the deposit accumulation inside the cavities of some reactant residues, will affect the temperature response, it is recommended to use cotton scrub on a regular basis.

2). Replacement fuse

The instrument equipped with two fuses, once damaged, can be found in the following steps to replace.

A. Power switch set "0" bit, remove the power cord.

B. Fuse holder with a screwdriver in groove by rotating the direction of the arrow, pull out the fuse.

C. Remove after two 8 A 250V fuse, if damaged, replaced, and then re-insert the fuse holder, and then the word screwdriver according to fuse seat in the opposite direction of the arrows rotate, the installation back in situ.

Note: If a replacement fuse later it still fails, please notify the company responsible for maintenance.

5.2 Inspection and failure to exclude

1). The results of poor response

In response to this machine, and ultimately did not receive the desired results, the problem may be in biology, the program or hardware device, in order to help to distinguish between hardware failure, the machine is installed for the self-test hardware and software for self-diagnosis , the following will be described in detail, according to our experience, usually most of the problems of biology and procedural matters, common faults are as follows:

A. Response items wrong, or insufficient quantity or purity of poor or trace amounts of single-core strand is not correct.

B. Denaturation temperature is too high or too low, in this machine, it is recommended to use 90-95 ℃, for 40 seconds, according to the number of responses may be a corresponding increase or decrease the amount of time.

C. "Annealing" temperature too high or too low, should be 55-70 ℃, 20 Dao 30 aliphatic suitable.

D. Reactant concentration is too high or too low.

E. Preparation process, without special treatment. Should be at 70 ℃, mineral oil processing.

F. Program time and temperature values inappropriate.

G. Sample temperature is slightly lower, while the module temperature is slightly higher.

H. Check the reaction tube is placed well, can be a little mineral oil coating with holes, in order to increase thermal conductivity.

2). The machine self-test and self-diagnosis Function

Boot operation, the chance to run the self-test procedures, test instrumentation software and hardware and displays the results. In order to notify the user of potential problems as soon as possible, to minimize the experiment fails. And in the event of failure to display an error message.

5.3 Notes

1). Power

A. The power of this machine is no special requirement, the use of wide range, AC 85V-264V, but the power supply voltage fluctuations can not be too large, so as to avoid damage to machines, devices, or installing power supply should be considered.

B. The machine in the process of running the program, the ban on cutting off the end of the power of the method of experiment for two reasons:

First, the implementation of procedures for the negative;

Second, the power cut off, fans stop switch, component cooling impeded, easy to plot heat damage.

2). LCD Display

The machine should avoid the use of ultraviolet disinfection, to prevent the destruction of LCD liquid crystal display, use the process, should avoid rigid objects, knocking, scratching, to avoid damage.

3). Cleaning Precautions

When you clean the machine base, should avoid entering the liquid inside the machine, you are doing the experiment, probably added with radioactive substances, should be extra careful in the washing. The machine should not be in the wet, exposure of the environment.

Note: Please read the contents of this section notes that if the failure to operate the above

requirements, it may cause equipment damage!

5.4 Error message and corresponding countermeasures

No.	Error message	Possible causes and corresponding countermeasures
1	File is empty, create a new file!	Instrument for the first time the use or the file is cleared, the new files.
2	Step cycle is zero, please enter the number of cycles the steps!	Do not enter the number of cycles the steps to complete the input.
3	Cycle time is zero, please complete the time to edit!	Cycle time can not be zero, enter the date and schedule.
4	File name can not be empty!	File name does not support the null character.
5	File name too long!	File name maximum support 8 characters.
6	File storage is full, please delete the old files!	The maximum file storage capacity of 200, exceeding the alarm after.
7	Have the same file name the file, rename!	Is not supported with the same file names multiple files.
8	Beyond the gradient temperature range, please re-enter!	Set the width of the gradient, the top or bottom of the temperature range of super.
9	File is corrupted, delete!	Non-interference with the normal power failure or severe damage caused by file data.
10	Sensor short-circuit the left side of the module!	Hardware failure, need to overhaul.
11	The left side of the module sensor open!	Hardware failure, need to overhaul.
12	Central Module Sensor short-circuit!	Hardware failure, need to overhaul.
13	Central module sensor open!	Hardware failure, need to overhaul.
14	The right side of the module sensor short-circuit!	Hardware failure, need to overhaul.
15	The right side of the module sensor open!	Hardware failure, need to overhaul.
16	Radiator Sensor short-circuit!	Hardware failure, need to overhaul.
17	Radiator Sensors Open!	Hardware failure, need to overhaul.
18	Lid sensor short circuit!	Hardware failure, need to overhaul.
19	Lid sensor open!	Hardware failure, need to overhaul.
20	Power output short-circuit!	Hardware failure, need to overhaul.
21	The module temperature is too high!	Blocking vents or circuit failure, if the latter needs repair.
22	The module temperature is too low!	The ambient temperature is too low, or circuit failure, if the latter needs repair.
23	Heat sink temperature is too high!	Vent blockage or fan failure, if the latter needs repair.
24	Heat sink temperature is too low!	The ambient temperature is too low, or circuit failure, if the latter needs repair.
25	Hot lid temperature is too high!	Circuit failure, need to overhaul.

5.5 Instrument abnormal causes and corresponding countermeasures

No.	Fault Description	Possible causes and corresponding countermeasures
1	Instrument power no display after boot	Make sure the power cable properly inserted into the socket, check the power output, to confirm whether there is electricity, plug in the off pulling equipment, testing fuse.
2	After the power is turned on, the plane began its work in the program among	Before the end of the last run, power was interrupted。
3	Fan with strengths and weaknesses	Normal. Fan is only used to heat the heat pump work, is not used to achieve the set temperature.
4	Instruments work, making a slight clatter sound or squeak	Normal. Need high-power intense heat or strong cold, the machine beat clatter sound or squeak issue oscillation switching power supply automatically adjusts the sound.
5	Very slow heating and cooling modules	See variable temperature setting and fan speed is normal operation.
6	Dislocation appears on LCD screen	Due to power surges caused by electrostatic pulse or the display of dislocation, please re-boot after power failure does not affect the program runs.

Note: If the above method does not resolve the problem, please contact the vendor!

Chapter Ⅵ: Service

1. Equipment warranty for two years, the warranty period if the user fails under normal use, I Division is responsible for free repair.

2. Lifelong maintenance, we are located in the local dealer, repair stations, the Office can provide you with considerate after-sales service.

3. The following conditions shall not even in the warranty period, free repair, replacement and returned.

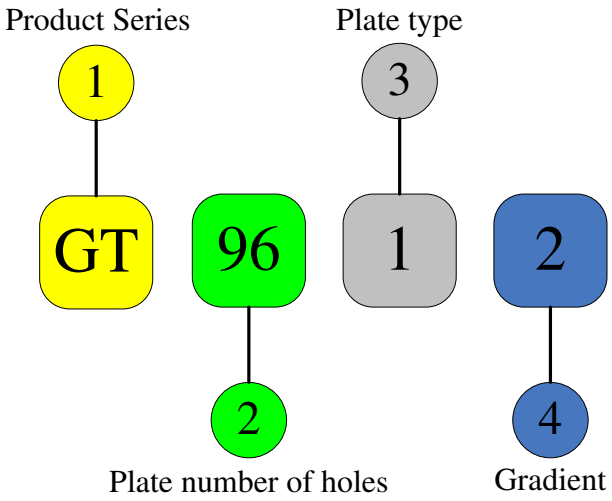
1). Due to fires, earthquakes, floods, storms, lightning and other natural disasters and abnormal voltages, pollution, chemical erosion and damage caused by Russia's failure.

2). Adverse conditions (fumes, dust, moisture, direct sunlight, etc.), the use, or fails the requirements of this manual use, maintenance caused the failure or damage.

3). As the fall, move, transport, entry of foreign matter or products manufactured by the company causes such as failure or damage.

Appendix Ⅰ Model code rule table

No.	Code	Description	Remark
1	GT	Products series abbreviation	GeneTest
2	96 , 54 , 384	Plate number of holes	384 blocks the last one into the number 3
3	1	0.2ml	Tube capacity
	2	0.5ml	
	3	0.2ml&0.5ml	
4	1	General	
	2	Gradient	



Appendix Ⅱ Warranty

<table>
<tr><td>Origin</td><td colspan="3"></td><td colspan="2">Model</td><td colspan="2">Production Number</td></tr>
<tr><td rowspan="2">User</td><td colspan="4">Name</td><td colspan="2">Telephone</td></tr>
<tr><td colspan="5">Address</td><td>Postcode</td></tr>
<tr><td rowspan="3">Vendor</td><td colspan="4">Name</td><td colspan="2">Postcode</td><td rowspan="3">Vendor
Seal</td></tr>
<tr><td colspan="4">Address</td><td colspan="2">Telephone</td></tr>
<tr><td colspan="4">Sale Date</td><td colspan="2">Invoice number</td></tr>
<tr><td rowspan="4">Maintenance records</td><td>Carry-in date</td><td>Repair tickets Number</td><td>Fault conditions</td><td>Cause of the malfunction</td><td>Disposition</td><td>Produce for examination dates</td><td>Repairer Signature</td></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
</table>

Note: The above content altered invalid. Repair ticket numbers should be consistent with the number of repair receipts, maintenance records of the documents in order to repair the norm. Please save repair bills to inspection.