diagenode

Innovating Epigenetic Solutions

IP-Star® Compact

Fully Automated System for Epigenetic Applications

USER MANUAL
Cat. No. B03000002

Guarantee

Limited one year global warranty

Diagenode guarantees all products from any manufacturing defects as we rigorously test all products to meet strict quality standards. Diagenode warrants that all standard components of its instruments will be free of defects in materials and workmanship for a period of one (1) year from the date that the warranty period begins, unless the original quotation or accompanying documentation states a different warranty period. All warranty periods begin on the date of delivery and apply only to the first purchaser of the product. If a manufacturing defect arises and a valid claim is received within the warranty period, Diagenode, at its discretion, will repair or replace the product in accordance with the warranty terms and conditions stated herein. In case of repair or replacement of a product under warranty, Diagenode will cover the expenses to return the repaired or replacement product.

This warranty covers only manufacturing defects and does not cover any damage caused by misuse, lack of compliance to recommendations stated in the manual, neglect, accidents, abrasion, or exposure to extreme temperatures, chemical solvents, or acids. We strongly recommend that maintenance or repairs of Diagenode's products are performed by our approved Diagenode service center. Improper or incorrectly performed maintenance or repairs will void the warranty.

Technical Assistance & Ordering Information

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For a complete listing of Diagenode's international distributors, visit:
http://www.diagenode.com/en/support/distributors.php
For the rest of the world, please contact Diagenode s.a.

Contents

User Information

Thank you for your purchase of the Diagenode System SX-8G IP-Star® Compact which has been developed for the automation of different epigenetic applications.

This book is a guide for the user to operate the instrument safety and effectively the instrument.

Please read this book thoroughly to understand the instrument before starting operation. Also keep this book nearby the instrument a quick reference for all the operators as needed.

- Do not operate the instrument without sufficiently understanding instructions described in this book.

- Always keep this book nearby for easy reference at any time.

Below is a list of the different devices included in the Instrument Package.

No	Description	Quantity	Remarks
1	SX-8G Compact Main Body	1	
2	Grip of Front Door	1	w/ two fixing screws
3	96 Tip Rack	4	
4	Reagent Reservoir Rack	1	
5	Reagent Tip Rack 1	1	for 1.5/2.0ml tubes
6	Reagent Tip Rack 2	1	
7	Waste Tip Box	1	
8	Waste Chute	1	
9	Stylus Pen	1	
10	Stylus Pen Holder	1	
11	AC240V Power Cable	1	
12	AC110V Power Cable	1	
13	O-ring	8	
14	Silicon Grease	1	For O-rings
15	Fuse	1	
16	Users Manual (J, E)	1 ea.	This book
17	Package Check List	1	

Safety Information

Before using the SX-8G IP-Star® Compact, please read the safety instructions carefully.

Please read this manual thoroughly to understand and to get familiar with preventive maintenance procedures to avoid any problems in instrument operation.

> ⚠ • Be sure that no water or liquid would get into the instrument or that the instrument does not get wet. It would cause fire or electric shock.
>
> • Do not attempt disassembling, modifying or repairing by yourself. It may cause malfunction of instrument or electric shock to you. Ask us for repair or maintenance of the instrument.

Installation

- Choose an adequate place for installing the SX-8G IP-Star® Compact by avoiding :

    - Places exposed to direct sunshine

    - Places with vibration, high humidity or dust

    - Places where strong electric or magnetic fields exist

    - Places where liquid or oil could be splashed to the machine

    - Places where flammable gas, corrosive gas or high heat source exist.

> ⚠ Damage to or malfunctions of the instrument may be caused by inadequate placement of the system.

Storage

- Unplug power cable from wall outlet when the instrument may not be used for extended period of time.

Precautions for Instrument Operation

- Possibility of biohazard from samples or extracted/purified products could not completely be eliminated in operating the instrument. Use gloves in operating the instrument for your safety, according to the description in this book.

- Pay close attention in handling samples with high risk of biohazard.

- When operating the instrument under low environmental temperature, keep the instrument powered on.

- Be sure no foreign materials get into the instrument from outside.

- Do not scratch or press the operation panel using knives or materials with sharp edges.

- Replacement of the fuse shall be made by field service personnel authorized by Diagenode. Contact us for fuse replacement.

About Warranty Period

- 12 months after installation, regardless of its usage.

- This warranty excludes problems derived from inadequate storage, inadequate usage or operation, repair/modification/maintenance of the instrument by people who are not authorized by Diagenode, though within warranty period.

About Disposals

- Contact us when you want to disposal the instrument.

Warning

In case of an emergency

- If an emergency situation of the instrument occurs, such as extraordinary heat, smoking, abnormal smell, etc., immediately unplug the power cable from wall outlet to avoid fire or electric shock to you. Please contact us for technical support.

- If foreign material or water is splashed inside the instrument, immediately unplug the power cable from wall outlet to avoid fire or electric shock. Please contact us for technical support.

- If power cable becomes damaged (core wire exposed or broken), immediately unplug the power cable from wall outlet to avoid fire or electric. Please contact us for technical support.

Specifications

SX-8G IP-Star® Compact instrument employs MAGTRATION® technology to perform multiple protocols for different epigenetic applications (i.e. ChIP, MeDIP and MethylCap).

Features

- Full automation of epigenetic applications using Magtration® technology
- Simple operation by dedicated Graphical User Interface
- Compact with minimal installation footprint
- Multiple procedures available for various type of magnetic particle reactions by using special protocol development software
- Simultaneous processing of up to 8 samples by 8 nozzles

Performance

Instrument type...................................... Desktop

Throughput... Samples --- 1-8 samples/batch
                                                    Processing time --- About 30 min./ 1-8 samples

Temperature Control .... Two Heat/Cool Blocks --- 4-95°C

Handling Volume.................................. 5-200 µl

Dispensing Accuracy .... 5-10 µl --- less than CV 20%
                                                    11-20 µl --- less than CV 10%
                                                    21-200 µl --- less than CV 2%

* Accuracy with distilled water at room temperature 20-25°C

Note: *Processing Time depends on protocols.*

Size, Weight and Power Requirement

Size .... W800xD700xH675mm (disregarding prongs)

Weight.. 97kg (excluding accessories and disposables)

Power Required .... Power Required: AC100 ~ 240V, 50/60Hz, 440VA

⚠
- Do not share power source with other instruments.
- Do not place close to instruments that emit noise or can cause a power fluctuation.
- Connect power cable to wall outlet with ground line.

Storage Conditions

Temperature .... +5 - +40°C

Relative Humidity .... 15-75% Non-Condensing

Barometric Pressure .... More than 70kPa(min)

Transport Conditions

Temperature .... -25 - +60°C

Relative Humidity .... 15-75% Non-Condensing

Barometric Pressure .... More than 70kPa(min)

Environmental Requirements

Temperature .... +15 - +30°C

Relative Humidity .... 15-75% Non-Condensing

Altitude .... Up to 2,000 m

Space .... Keep distances from walls as shown below for ventilation, maintenance work, etc. Also keep more than 200mm space over the instrument.

⚠
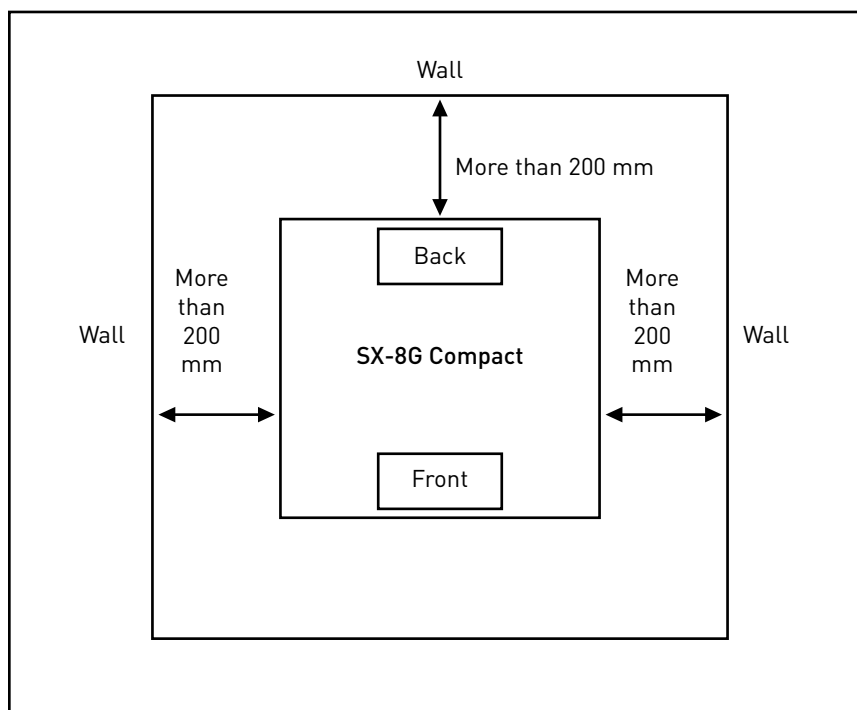
- Place the instrument on horizontal surface.
- Do not place the instrument where it will get direct sunlight or vibration.
- When operating instrument in a cold chamber or cold room, keep the instrument power on to avoid condensation.

About Caution Labels Inside Instrument

Caution Label for High Temperature
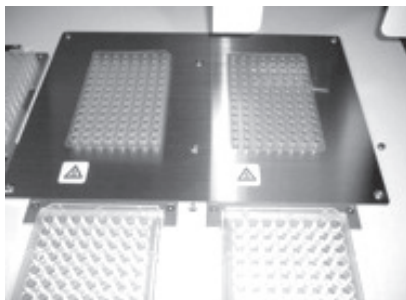
⚠   The part where this label is attached becomes hot. Be sure not to touch while working.
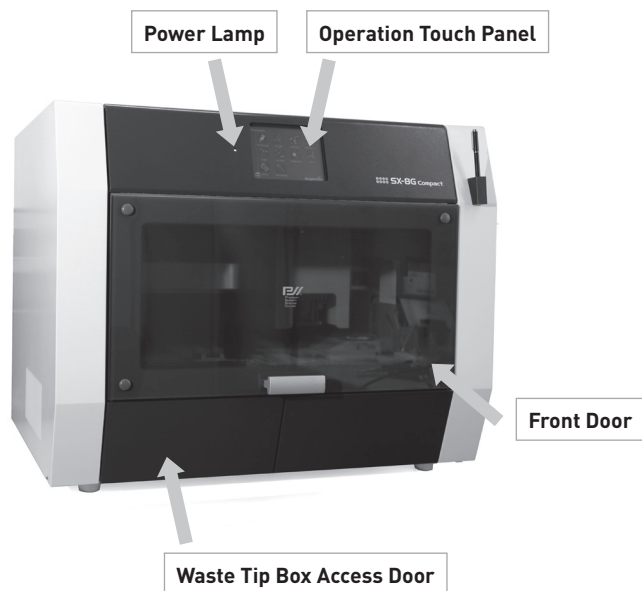
Caution Label for Biohazard

Place attached: Waste Chute
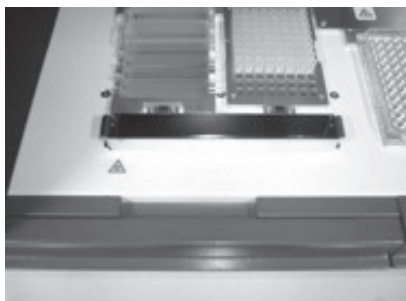
⚠   The part where this label is attached (inside cover) has the possibility of biohazard contamination with samples or extracted/purified products. Take care to avoid contamination.

System Components

Front View

Power Lamp

Operation Touch Panel

Front Door

Waste Tip Box Access Door

Right Side View

On the right side of the instrument. The Power Switch and Communication Port Connector are located at the front and Power Inlet Connector and Fuse Unit are located at the back.

Front → ← Back
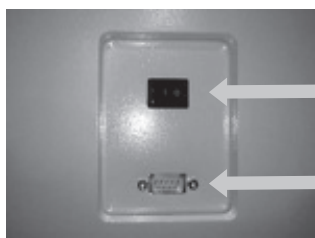
Power Switch

Communication Port Connector (RS-232C, for maintenance)
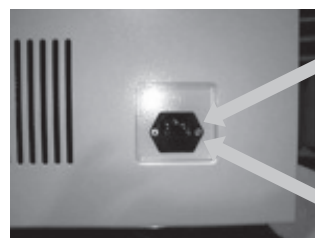
Power Inlet Connector

Fuse Unit

Note: *Replacement of the fuse shall be made by field service personnel authorized by Diagenode. Contact us for fuse replacement.*

Internal Components

The Magtration® Unit and Stage Unit are located inside the instrument.
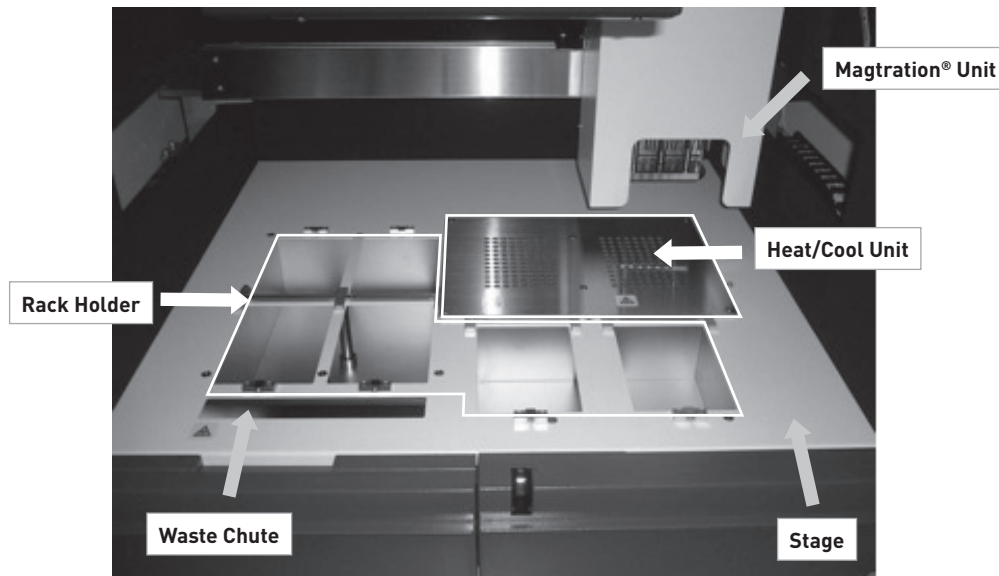
1. Magtration® Unit

- **Nozzle Unit:** This unit has 8 nozzles to process up to 8 samples simultaneously with accurate and rapid aspiration/dispensing.

- **Magnet:** Eight magnets are aligned with 8 tips to simultaneously separate magnetic particles for up to 8 samples.

2. Stage

- **Heat/Cool Unit**
  Two Heat/Cool Units are equipped and can hold 8 and 12 tubes-stripes. Temperature can be set for 4 to 95°C. depending on protocols.

- **Rack Holder**
  Racks and Disposables to be used vary by protocols. Refer to Application Manual for details.

- **Waste Chute**
  It leads waste tips and liquid to Waste Tip Box.

### Example of loading racks and disposables
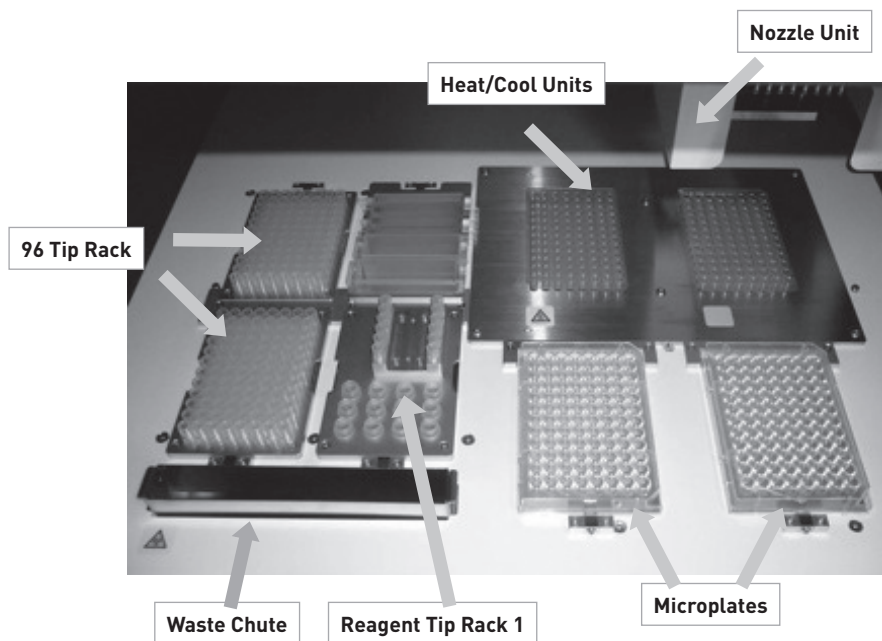
- **96 Tip Rack:** Holds 8x12 pieces of DN70 Tips.

- **Reagent Reservoir rack:** Holds Reagent Container M or L.

- **Reagent Tip Rack 1:** Holds 12 Tips (for single pipetting) and 12 Screw Capped Tubes of 1.5ml or 2.0ml.

- **Reagent Tip Rack 2:** Holds 8 Tips (for single pipetting), 4 Screw Capped Tubes of 1.5 ml or 2.0 ml and 4 Screw Capped Tubes of 5.0 ml.

- **Microtiter Plates:** Holds 96 Wells Microplates.

- **Waste Chute:** Place where waste tips, etc. are discarded.

Note: *The above layout is an example and it could vary depending the protocols.,*

Installation
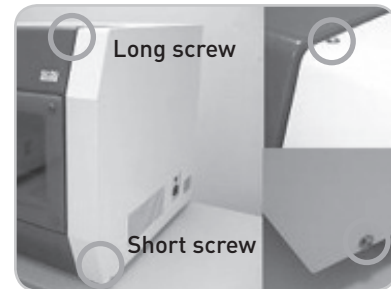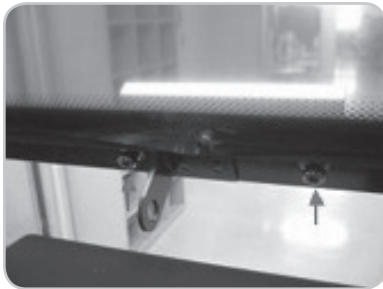
1. Remove protection films attached on the instrument.

2. Open Front Door and fix Grip of Front Door by two screws supplied.

3. Remove the fixing jig for X-Axis Magtration Unit fixed by 3 screws inside instrument.

4. Remove cushioning and desiccant agents.

5. Open Right Side Cover by removing 2 fixing screws.
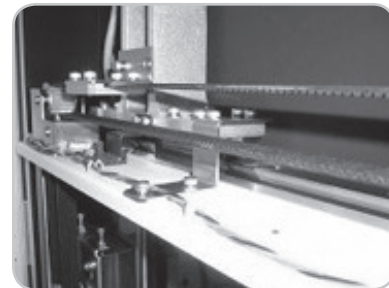
6. Remove Y-Axis fixing jig to right side base by removing 3 fixing screws. Then replace Right Side Cover and fix it by two screws.

7. Open Left Side Cover by removing 2 fixing screws.

8. Remove Y-Axis fixing jig to left side base by removing 4 fixing screws. Then replace Left Side Cover and fix it by two screws.

9. Connect Power Cable to Power Inlet Connector on the right side of the instrument. Then turn Power Switch on assuring that Front Door and Waste Tip Box Door are closed securely.

⚠️ Do not use power cable other than provided to avoid issues such as temporary power failure or risk of fire.

10. Installation completed

⚠️ When transferring the instrument, make sure that all the fixing jigs for all axes are attached securely and that cushioning is set between Magtration Unit and Stage Unit to protect nozzles from free movement.
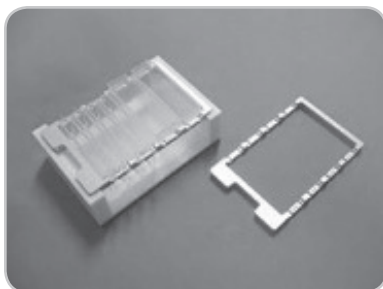
Accessories and Disposables

Accessories

Description	Quantity
96 Tip Rack	4
Reagent Reservoir Rack	1
Reagent Tip Rack 1	1
Reagent Tip Rack 2	1
Waste Tip Box	1
Waste Chute	1
Stylus Pen	1
Stylus Pen Holder	1
Power Cable, for AC240V	1
Power Cable, for AC110V	1
O-ring	8
Silicon Grease	1
Fuse	1
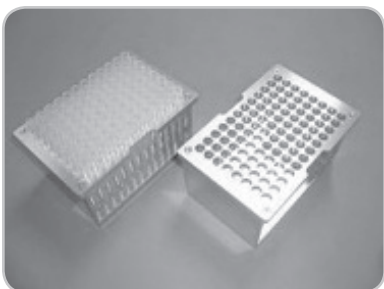
96 Tip Rack

It holds Tips up to 8x12 pieces.

Reagent Reservoir Rack

It holds up to 8 Medium Reagent Container, or up to 4 Large Reagent Container. (Container L is double sized of Container M.)

**Reagent Tip Rack 1
(for 1.5/2.0ml tube)**

It holds 12 Tips (for single pipetting) and 12 Screw Capped Tubes of 1.5ml or 2.0ml.

**Reagent Tip Rack 2
(for 1.5/2.0/5.0ml tube)**

It holds 8 Tips (for single pipetting), 4 Screw Capped Tubes of 1.5ml or 2.0ml and 4 Screw Capped Tubes of 5.0ml.
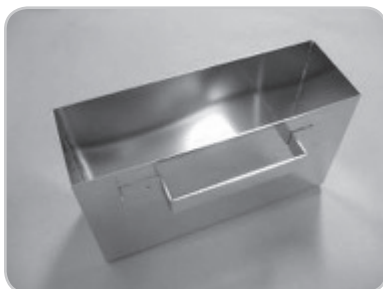
Waste Tip Box

It receives discarded Tips coming down through Waste Chute.
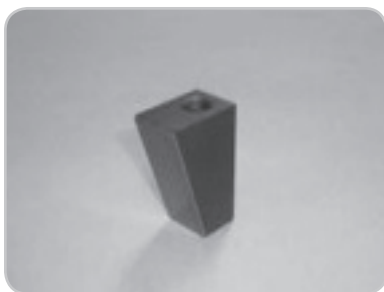

Waste Chute

It leads discarded Tops to Waste Tip Box.

Stylus Pen

It is used to operate instrument through Touch Panel. It could also be used as a ballpoint pen.

Stylus Pen Holder

It is a holder for Stylus Pen and can be magnetically attached onto the instrument surface.

Disposables

Disposables delivered by Diagenode

Cat. No.	Product Description	Place to be Used
WA-006-0010	Medium Reagent Container for SX-8G Compact	Reagent Reservoir Rack
WA-007-0020	Large Reagent Container for SX-8G Compact	Reagent Reservoir Rack
WC-001-1000	Tips (bulk)	96 Tip Rack, Reagent Tip Rack 1,2
WC-002-0960	Tips (box)	96 Tip Rack, Reagent Tip Rack 1,2
WA-003-0010	96 well microplates	Microplates Module
WA-001-0080	200 µl tube strips (12 tubes/strip) + cap strips	Heat/Cool Units
WA-002-0120	200 µl tube strips (8 tubes/strip) + cap strips for SX-8G IP-Star® Compact	Heat/Cool Units
WA-008-0100	2.0 ml screew capped tube	Reagent Tip Rack 1.2

Medium Reagent Container

Large Reagent Container

Tips

Note: *Disposables needed vary by application and also disposables other than listed above may be recommended in some applications.*

Reagents

Refer to each Application Manual for reagents to be used and directions for use.

- Do not reuse any disposables/reagents to avoid contamination or instrument malfunction.
- Do not use disposables/reagents other than specified to avoid instrument malfunction.
- When discarding disposables, follow the instructions defined by your facility or regional laws.

Basic hardware operation

Front Door Operation

Front Door moves up and down, and it is held at the uppermost position when fully moved up. Hold only the Grip of the Front Door to open or close the door to avoid fingers getting pinched. Front Door is locked during operation. Open Front Door after it completely finished its operation.
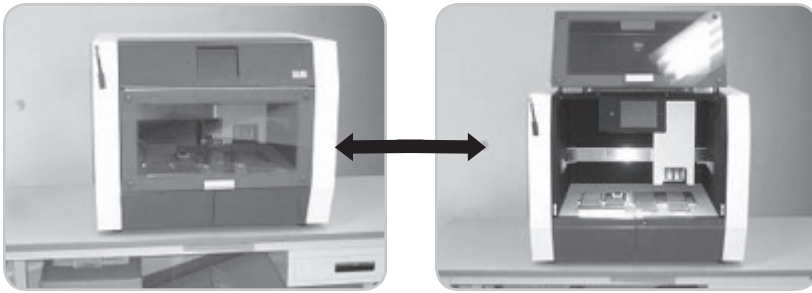
⚠️ Gently open and close the access door to avoid damage.

Putting On and Taking Out Waste Tip Box
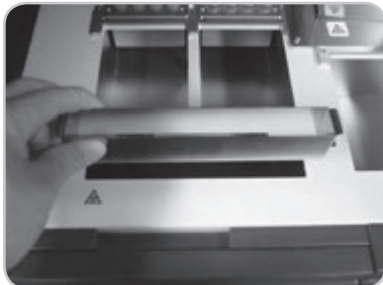
Waste Chute
Waste Chute can be removed by taking it out from Waste Tip Discard Hole for cleaning.

Waste Tip Box
Waste Tip Box can be removed for discarding Tips or for cleaning.
Open Front Door first and then open access door for Waste Tip box. Take out Waste Tip Box by holding its grip.

Make sure that the access door for Waste Tip Box is closed after setting Waste Tip Box, otherwise you cannot start a protocol run.
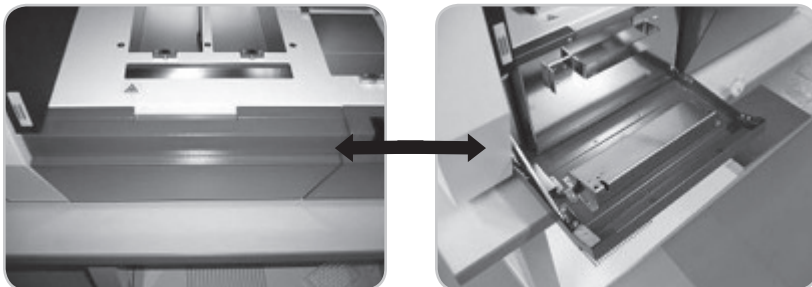
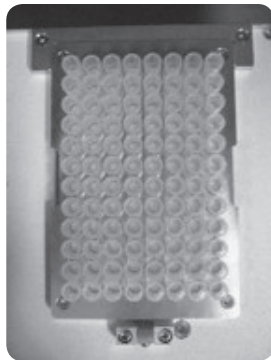⚠️ Gently open and close the access door to avoid damage, when removing the waste Tip Box.

Setting Racks and Disposables in Place
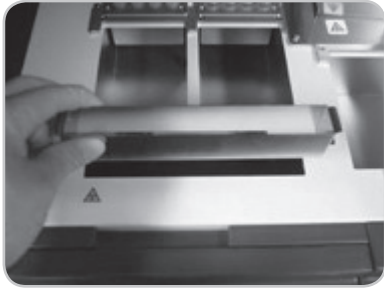
Setting Racks
Set Racks required by the selected application at each designated position, taking note of positioning direction.
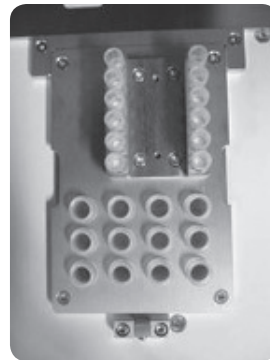Be sure to place Racks inside frames completely without uplift.
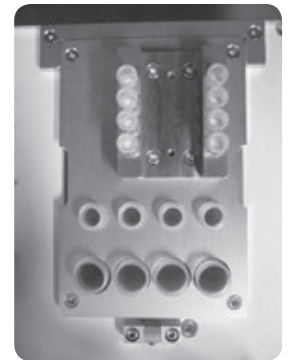

96 Tip Rack
No positioning

Reagent Reservoir Rack
Position the cut to Spring

Reagent Tip Rack 1
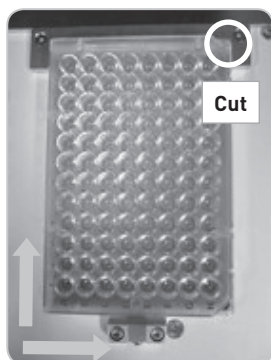Tubes on front side

Reagent Tip Rack 2
Tubes on front side

> ⚠ • When Racks are not correctly positioned, Tip pickup failure, inaccurate aspiration/dispensing or instrument malfunction may occur.
>
> • When Reagent Tip Racks 1or 2 are not correctly positioned, Tips will not be picked up resulting instrument malfunction.


Setting 96 well microplates
Set Microtiter Plates in positions designated by the selected application, taking care of positioning direction.

> ⚠ • When 96 well microplates are not positioned correctly, adequate aspiration/dispensing or liquid mixing may not be performed resulting inadequate extraction/purification.
>
> • If non-recommended microtiter plates are used, adequate aspiration/dispensing or liquid mixing may not be performed resulting inadequate extraction/purification.

Setting PCR Plate onto Heat/Cool Unit
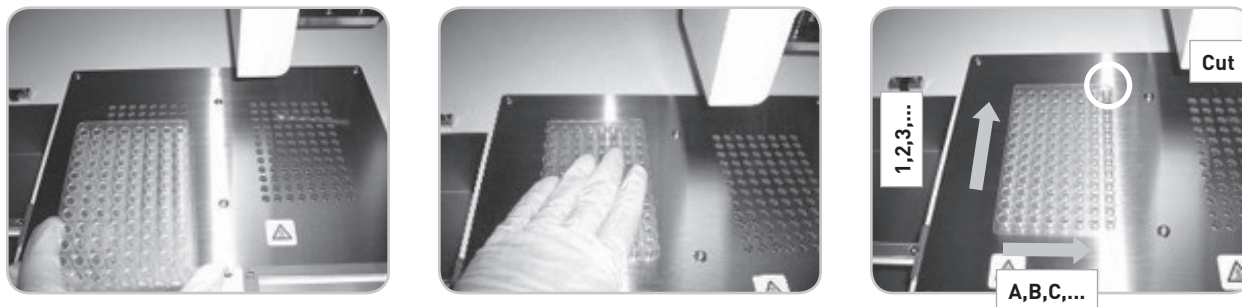
Place PCR Plate on Heat/Cool Unit taking care of the positioning direction and push it down to fit completely.

⚠️
- When PCR Plate is not positioned correctly, adequate aspiration/dispensing or liquid mixing may not be performed resulting inadequate extraction/purification.
- If non-recommended PCR plate is used, adequate aspiration/dispensing or liquid mixing may not be performed resulting inadequate extraction/purification.

Basic Software Operation for running applications

## Start Up and Shut Down Procedure

Start Up

- Close access door for Waste Tip Box and Front Door.
  (Refer to sections "7.2 Putting On and Taking Out Waste Tip Box" and "7.1 Front Door Operation.")

- Turn on Power Switch located on the right side of the instrument.

- When the instrument is turned on, the Touch Panel screen is activated.

Shut Down

- Turn instrument power off, making sure that the instrument is not operating.
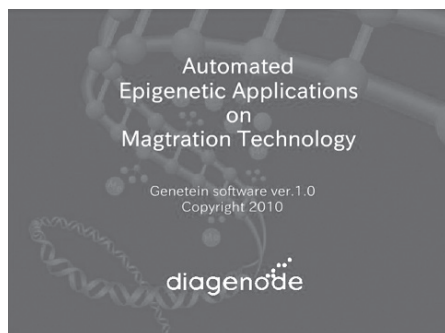 * If it is operating, stop operation by pressing "Protocol Stop" button.

Touch Panel Operation

Using Stylus Pen, select desired function.
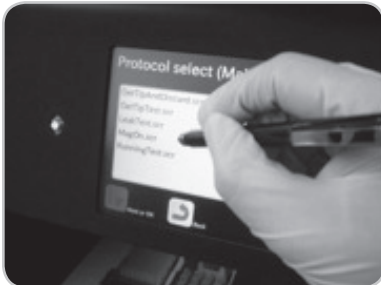
⚠️
- Operate Touch Panel with Stylus Pen gently without excessive force to avoid damage.

- Use only the Stylus Pen provided. Do not to damage the Touch Panel screen by using tools with sharp edges.

Running a protocol

Diagenode Splash Screen – A0

After the software start-up screen disappears, the Diagenode splash screen is displayed for several seconds, and then disappears.
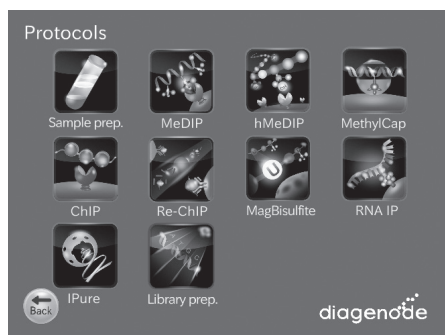

Start Screen – Top menu

After the Digenode splash screen disappears, the start screen is displayed. This is the first active window; it allows the user to enter into three different parts of the software.

USER ACTIONS:

Buttons:

- Protocols
- Maintenance
- Information

Protocols screen

All available protocols are displayed on this screen.
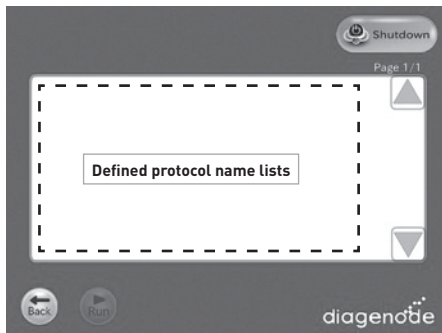
Information screen

After the user presses the "Information" button, the "Information" screen appears.

Buttons:

- The user presses the "Back" button to return to the display of the "Top menu" screen they came from.


Screen – [Categories Name] Protocol List

After the user presses the "[Categories Name]" button, the "[Categories Name]" appears. When selected the protocol on the protocol list, the "Run" button shall turn executable.

Buttons:

- The user presses the "Back" button. Returns the user to the display of the "Protocols" screen they came from.
- The user presses the "Shutdown" button. Then screen shall be changed to "Power Off".
- The user presses the "Run" button. Then screen shall be changed to "Sample number".
- ▲ Page up the list box.
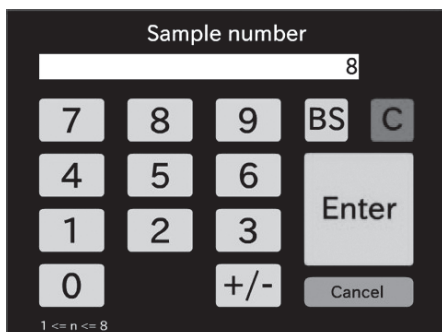- ▼ Page down the list box
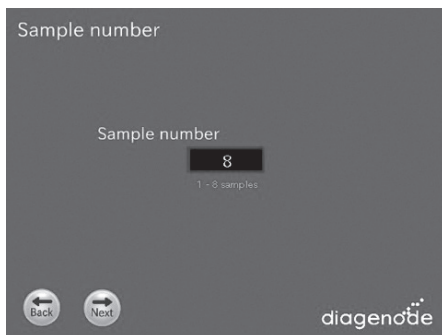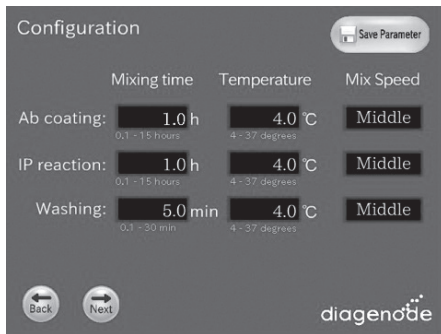

Screen – Sample number

After the user presses the "Run" button, the "Sample number" appears.

Buttons:

- The user presses the "Sample number" Text box. Then screen will be changed to keyboard.
- The user presses the "Back" button. Returns the user to the display of the "Protocol List" screen they came from.
- The user presses the "Next" button. Then screen shall be changed to "Configuration" or "Layout information".
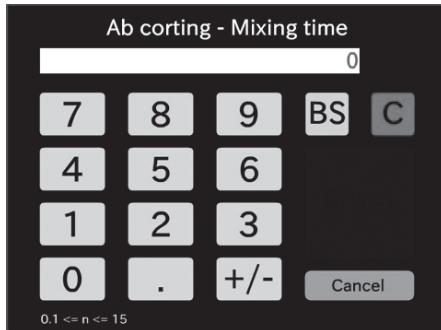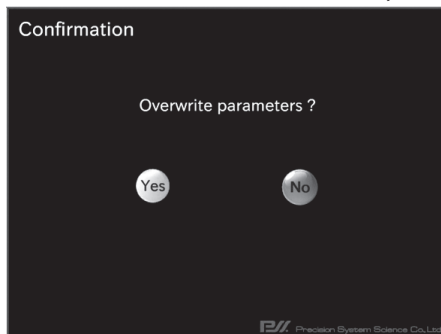

Keyboard

Keyboard

Screen – Configuration

After the user presses the next button from the "Sample number" screen, the "Configuration" screen appears.
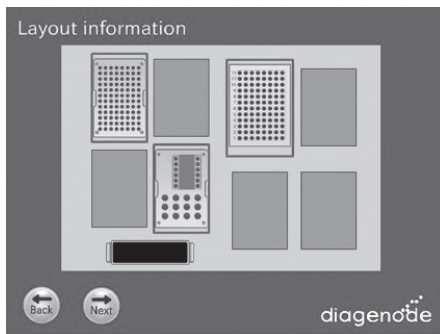
Buttons:

- The user presses the "Back" button. Returns the user to the display of the "Protocol List" screen they came from.

- The user presses the "Next" button. Then screen shall be changed to "Layout information".

- The user presses the "Save Parameter" button. Then screen will be changed to "Save Parameter - Confirmation".

  - OK – Current parameters shown in the Display View will be stored to the [Protocol].ptd. And, returns the user to the display of the "Configuration" screen.

  - No – Returns the user to the display of the "Configuration" screen.

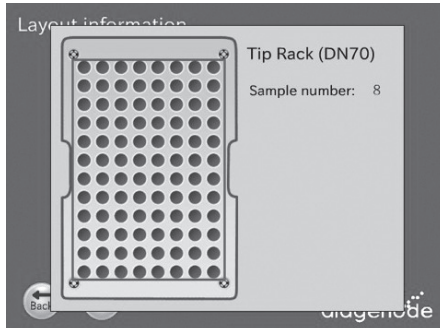- The user presses the Text box. Then screen will be changed to Keyboard or Speed list menu.
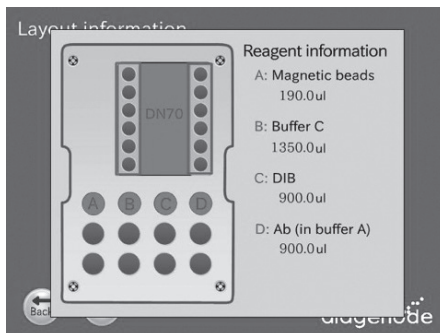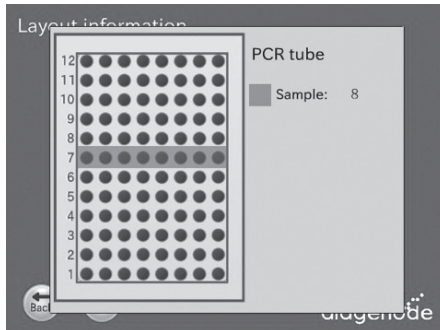

Speed list menu

Layout information

Block-Tip

Block-Regent Tip Rack

Block-PCR Tube

Screen – Layout Information

After the user presses the "next" button from "Sample number" screen or "Configuration" screen, the "Layout Information" screen appears.

Buttons:

- The user presses the "Back" button. Returns the user to the display of the screen they came from.
- The user presses the "Next" button. Then screen shall be changed to "Set confirmation".
- When the user presses a block, that block is magnified on the work surface layout background. The magnified view provides a better display of the correct method setup for that block on the work surface.
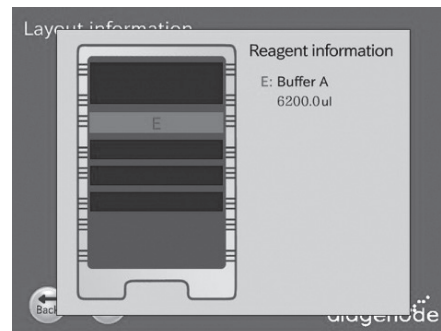
Block-Regent Buffer
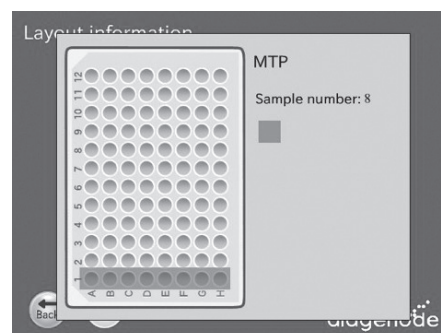
Block-MTP

Save Parameter - Confirmation
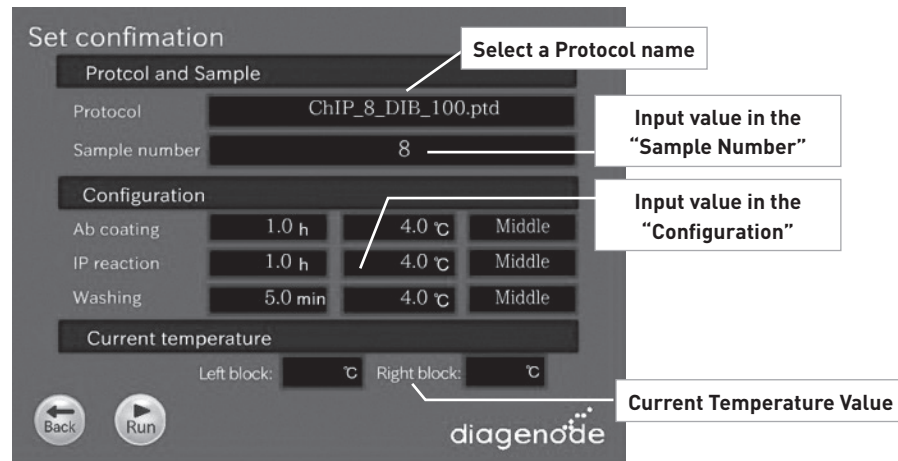
Screen – Set confirmation

After the user presses the "next" button in the "Layout information" screen, the "Set confirmation" screen appears.

At this point, user is expected to be ready to press RUN.

Buttons:

- The user presses the "Back" button. Returns the user to the display of the screen they came from.
- The user presses the "Run" button. This is the expected action when user gets to this display after reviewing blocks. Runs the protocol.
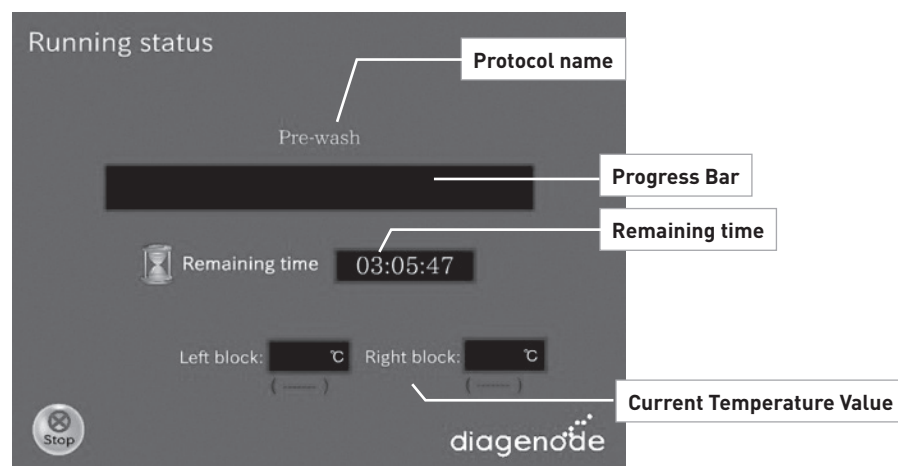
Screen – Running

After the user presses the "Run" button in the "Set confirmation" screen, the "Running" screen appears.

Buttons:

- The user presses the "Stop" button. Then screen shall be changed to "Stop Dialog".

Status screen is preferred as a progress bar that moves across the screen as the step progresses
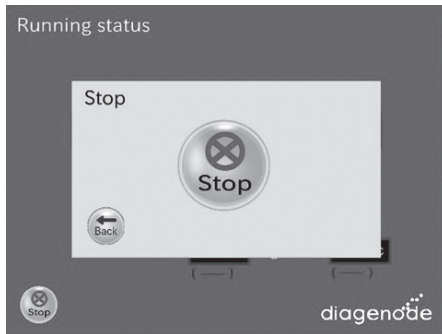
Stop Dialog

Stop Dialog

Buttons:

- The user presses the "Stop" button. Then screen will be changed to "Finish" or "End" and stop the protocol
- The user presses the "Back" button. Returns the user to the display of the screen they came from.
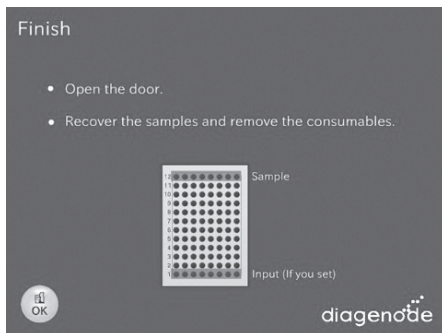
Screen – Finish/End

When the protocol is complete, a window appears telling user the run is over. The screen behind this window should be the Startup screen. When OK is pressed, then the Startup screen appears and the user can immediately begin to remove their sample and prepare for the next run.

At this point, user is expected to be ready to press RUN.

Buttons:

- The user presses the "OK" button. Then screen shall be changed to "[Categories Name] Protocol List".

Maintenance

Item	Frequency	Done by
Cleaning Stage and Racks	After every run	User
Cleaning Magtration Unit	After every run	User
Greasing O-rings	*Every two weeks*	User
Replacing O-rings	*Every 6 months*	Field Service
Maintenance	*Once a year*	Field Service

> ⚠ • Use a mask, goggles and gloves while maintaining the instrument for your safety, according to the description in this book.
>
> • Maintenance work shall be performed with instrument powered off.
>
> • Pay close attention when cleaning places where caution labels are attached

Note:
- Maintenance work shall be done as indicated, otherwise the results of the protocol runs may not be accurate.
- Certain maintenance will be performed by Diagenode Field Service personnel.
- Stage and Racks should be cleaned after every run.
- Nozzles and Piercing Unit of Magtration Unit should be cleaned after every run.

Cleaning Procedure

- Stage
- Magtration Unit
- All Racks
- Waste Chute
- Waste Tip Box

In addition to the list above, the inside of the instrument and the accessories should be cleaned after each use.

Cleaning Method:

Choose cleaning liquid depending on the contamination status and wipe the contaminated surface using paper, such as Kim Wipe®, moistened with the cleaning liquid. Use a mask, goggles and gloves when cleaning the instrument for your safety.

- Water
- 70% Ethanol

Note: *Do not use alcohol when cleaning Touch Panel or Clear Panel of Front Door. Use water for those parts.*

Greasing O-rings

Grease O-rings every two weeks to maintain proper tip attachùent and avoid liquid leakage.

1. Remove old grease.

2. Wear gloves and put small amount of Silicon Grease on the fingertip. Then spread Silicon Grease on fingertips by rubbing fingertips together.
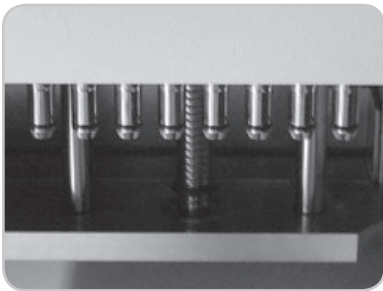
3. Put Silicon Grease on O-rings (black rubber rings) on Nozzles.
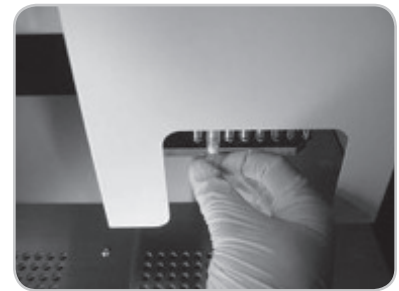
4. Place a tip on the nozzle to spread the grease evenly around the O-ring.

⚠ Be sure not to put an excess of Silicon Grease, as it may result insufficient tip-discard.

Troubleshooting

Error Reported During Protocol Run

Error code reported is shown in place of "xxxxx" in the above screen. And the corresponding error message is displayed under the code.

⚠ The protocol run aborted by an error can not be restarted from the point of abortion.

- (Refer to the "List of Error Codes" for error codes.)

- The screen shown above is displayed and the instrument aborts its operation, when an error occurred during a protocol run.

- Take appropriate countermeasures for the error, referring to List of Error Codes attached.

- Make note of the error code reported, because it is requested when contacting Diagenode for technical support.

Note: *Repeat the same countermeasure when the same error occurred in the next run of the protocol. Contact Diagenode when countermeasure taken does not resolve the problem.*

Suspending or Aborting Protocol Run

- When you want to suspend a protocol run operation, select "Suspend" button in the display to suspend instrument operation. It may take some time before suspending its operation, depending on the process under execution.

- Select "START" button to restart and continue the protocol run.

- When you want to abort the protocol run, select "STOP" button. And "Protocol Select" screen is displayed.

⚠ The aborted protocol can not be restarted anymore.

Troubleshooting guide

Problem	Presumable Cause	Countermeasures To Be Taken
Power is not supplied to instrument	AC Power Cable is not connected properly.	Check connection of AC Power Cable. Be sure to use Power Cable supplied with instrument. * Do not use power cable other than supplied.
	Fuse is burned out.	Contact Diagenode if fuse needs to be replaced.
Displayed characters are not readable.	Light intensity is low.	Adjust light intensity properly by rotating the screw located on the right of Display with flat-blade screwdriver.
Error code is displayed	Causes vary by error code.	Record the error code displayed and take appropriate countermeasure, referring to List of Error Codes. If the countermeasure taken does not eliminate the problem, contact Diagenode for assistance.
Protocol was started with incomplete setting of Tips or other disposable.	-	Be sure to confirm appropriate setting of reagents and disposables, before starting protocol run. If you want to add disposables after protocol started, press "STOP" to abort instrument operation. It is strongly recommended to restart the protocol run from the beginning after completion of adding disposables. If you want to continue the protocol run from halted point after adding disposables, you will be responsible for the result. * When Front Door is opened after halting operation, power to the motors is shut by safeguard, resulting displacement of stopping positions of motors.
Liquid leakage from Tip-end or big difference in liquid level among lanes.	O-rings are not greased enough or O-rings are deteriorated.	Grease O-rings properly or replace O-rings. It is recommended that replacement of O-rings is made by an appropriately trained Field Service Personnel, to avoid damage of the nozzles. * If you replace O-rings by yourself, you will be responsible for the result.
	Disposables are not set properly.	Check for proper setting of Mictotiter Plates, PCR Plates, etc. Note that using disposables other than recommended may cause instrument malfunction. It is strongly recommended to use those disposables designated for the protocol.

List of Error Codes

Code No.	Message	Description	Countermeasure to be taken
200007	Axis:Z bottom sensor	Z Bottom Sensor was activated.	Check the position of the module corresponding to the error reported and remove the obstruction caused the error. Then home all axes. Protocol run shall be restarted from the beginning, after replacing all disposables needed.
200008	Axis:Endlimit error	Axis other than Z was moved beyond its movable range.	
200001	Axis:error	Error other than errors described above.	

Note:

- *The errors listed above are usually caused by inadequate setting of disposables/accessories or if the door is not shut properly. Be sure to check the placement of accessories/disposables and the door before restarting protocol run.*

- If there are *error codes other than the codes listed above or the error could not be eliminated by performing the countermeasure described, contact Diagenode with recording the error codes.*

Ordering information

Description	Cat. No.	Format
IP-Star® Compact	B03000002	1 unit

Visit us at one of Diagenode's demo sites or discover our Automated Systems by performing some assays with the help of our R&D and Technical Department.

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