

Hybex[®]

Microarray Incubation System

USER MANUAL

Cat. #1057-36-1 (115V) and 1057-36-2 (230V)



FOR RESEARCH USE ONLY

Serial Number

The following serial number identifies the specific instrument you have purchased and must be referenced when requesting service. A copy is affixed to the instrument.

Technical Service: (408) 733-7337, techserv@scigene.com

Warranty

SciGene warrants that the heating base described in this manual shall be free of defects in materials and workmanship for a period of 12 months from date of delivery. This warranty does not cover removable blocks or accessories. In the event of a defect during the warranty period, SciGene's limit of liability will be to provide replacement parts at no charge or, at its sole discretion, replace the product. The foregoing warranty is void in the event the unit was abused or modified or used in a manner inconsistent with its intended purpose. SciGene makes no other warranty, expressed or implied including warranties of merchantability and fitness for a particular purpose. In no event shall SciGene be liable for any direct, indirect, special, incidental or consequential damages or for any damages resulting from loss arising out of or in connection with the sale, use or performance of the product.

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I. SAFETY NOTICES

A. Intended Use

The Hybex Microarray Incubation System is intended for the heating and incubation of laboratory samples. The instrument should only be used according to the instructions provided in this manual. If the equipment is used in a manner not specified by the manufacturer (SciGene), the protection provided by the equipment may be impaired.

La Hybex système est destiné pour le chauffage d'échantillons biologiques. L'instrument ne devrait servir que selon les instructions fournies dans ce manuel de l'utilisateur et d'autres documents techniques de SciGene. Si l'équipement est utilisé de manière non spécifiée par le fabricant, la protection assurée par l'équipement peut être compromise.

B. Instrument Safety

Before operating the instrument, read the information in this section concerning hazards and potential hazards. Ensure that anyone involved with the instrument's operation is instructed in both general safety practices for laboratories and specific safety practices for the instrument.

Avant le fonctionnement de l'instrument, lisez les renseignements dans cette section concernant les risques et les dangers potentiels. S'assurer que toute personne impliquée avec le fonctionnement de l'instrument est instruit dans les pratiques générales de sécurité pour les laboratoires et les pratiques de sécurité spécifiques pour l'instrument.

C. Symbols and Conventions

The following chart is an illustrated glossary of the electrical symbols that are used on the Hybex System. Whenever such symbols appear on instruments, please observe appropriate safety measures.

Le tableau suivant est un glossaire illustré des symboles électriques qui sont utilisées sur le système. Chaque fois que ces symboles apparaissent sur les instruments, veuillez observer les mesures de sécurité appropriées.

1. Electrical Symbols



This symbol indicates that this is a protected ground terminal that must be connected to earth ground before any other electrical connections are made to the instrument.

Ce symbole indique qu'il s'agit d'un terminal de terrain protégé qui doit être connecté à la terre avant que toutes les autres connexions électriques sont apportées à l'instrument.



CAUTION: This symbol alerts you to consult this Operator's Manual for further information and to proceed with caution.

ATTENTION: Ce symbole vous avertit à consulter ce guide de l'utilisateur pour plus d'informations et de procéder avec prudence.



CAUTION: This symbol alerts you to an electrical hazard. Consult this Operator's Manual for further information and proceed with caution.
ATTENTION: Ce symbole vous avertit d'un risque électrique. Consultez ce guide de l'utilisateur pour plus d'informations et de procéder avec prudence.



This symbol indicates the OFF position of the main POWER switch.
Ce symbole indique la position OFF de l'interrupteur principal.



This symbol indicates the ON position of the main POWER switch.
Ce symbole indique la position ON de l'interrupteur principal.

2. Non-Electrical Symbols



CAUTION: This symbol illustrates a heat hazard. Proceed with caution when working around these areas to avoid being burned by hot components.

ATTENTION : Ce symbole illustre un danger pour la chaleur. Faire preuve de prudence lorsque vous travaillez autour de ces zones pour éviter d'être brûlé par les composants du chauds.



CAUTION: This symbol alerts you to consult this Operator's Manual for further information and to proceed with caution.

ATTENTION : Ce symbole vous avertit à consulter ce guide de l'utilisateur pour plus d'informations et de procéder avec prudence.

D. Warnings

Failure to comply with the following warnings that are affixed to the product can lead to possible personal injury or death.

Défaut de respecter les avertissements suivants qui sont apposées sur le produit peut conduire à possibles lésions corporelles ou la mort.



This symbol on the rear of the instrument indicates the presence of the fuse box. **Warning: For Continued Protection Against Fire, Replace Only with Same Type Rating of Fuse.** Always disconnect the power cord before attempting to replace the fuse.

*Ce symbole sur l'arrière de l'instrument indique la présence de la boîte de fusibles. **Avertissement : Pour le maintien de la Protection contre l'incendie, remplacer uniquement avec la même cote de Type de fusible.***



Toujours débrancher le cordon d'alimentation avant d'essayer de remplacer le fusible.

This symbol indicates the presence of hazardous voltage. Always disconnect the power cord before servicing.

Ce symbole indique la présence d' une tension dangereuse. Toujours débrancher le cordon d'alimentation avant l'entretien.

E. Cautions

Failure to comply with the following cautionary statement affixed to the product may lead to possible personal injury.

Omission de se conformer à la mise en garde suivante apposée sur le produit peut entraîner des blessures possibles.



This symbol located both on and in front of the lid indicates the potential presence of a Hot Surface. Use care when working in this area to avoid being burned.

Ce symbole situé sur et devant le couvercle indique la présence possible d'une Surface chaude. Faire preuve de diligence lorsqu'il travaille dans ce domaine pour éviter d'être brûlé.

F. Compliance



1. European Conformity (CE)

This symbol indicates the instrument is in compliance with all applicable European Union Electromagnetic Compatibility and Low Voltage Directives.



2. Waste Electrical & Electronic Equipment Directive (WEEE)

This symbol indicates the instrument is required to comply with the European Union's Waste Electrical & Electronic Equipment (WEEE) Directive 2002/96/EC, providing environmentally safe disposal of end of life equipment through recycling.

Contact your institution to provide environmentally safe disposal. If this is not available, contact your local SciGene distributor or SciGene Technical Support [techserv@scigene.com] for assistance. Do not treat electrical and electronic equipment as unsorted municipal waste.



3. Restriction of Hazardous Substances (RoHS)

This symbol indicates the instrument is in compliance with the European Union's (RoHS 2) Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (EEE).



4. Laboratory Equipment Standards

This symbol indicates the instrument meets Laboratory Equipment standards UL 61010-1:2004 R7.05 and CAN/CSA-C22.2 61010-1:2004 as certified by TÜV Rheinland of North America, Inc.

5. Electromagnetic Compatibility (EMC)

The Hybex System is a Class A digital device under FCC Title 47 Part 15B and designated as Class A electrical equipment for measurement, control, and laboratory use (EN61326).

Note regarding Canadian EMC compliance: Le présent appareil numérique n'émet pas de bruits radioélectrique dépassant les limites applicables aux appareils numériques de class A prescrites dans le règlement sur le brouillage radioélectrique édicté par le Ministère des Communications du Canada.

II. UNPACKING AND SET UP

A. Unpacking the System

The Hybex Microarray Incubation System is shipped in one carton. Open the carton to remove two interior boxes. The larger box contains a Hybex Incubator heating base, power cord and user manual. The smaller box contains a Microarray Chamber Kit. Take care when removing the incubator to lift it by the base and NEVER by the hinged lid. Carefully inspect all items for damage. *If there is evidence of damage, do not discard the shipping materials since they may be needed to return the unit.*

B. Parts Provided

Large Interior Box:

- Hybex Incubator heating base
- Power cord
- User manual

Small Interior Box:

- 2x Microarray chambers (includes 2x covers and 2x bases with o-rings installed)
- 2x Chamber handles (black knobs)
- 4x Slide racks
- 2x Spring handles (for attaching duplexed racks)
- T-handle hex wrench
- Absorbent pads (25/pk)

C. Installation

1. Place the unit on a level surface within a few feet of the power source. Ensure the lid can be opened completely without interference and leave 3 inches of clearance along the back and sides for air circulation.
2. Plug the provided power cord into the back of the unit and then to a properly grounded outlet. Use only the power cord provided.

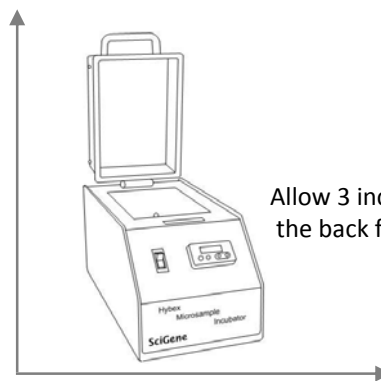


Do NOT operate the system without both chambers or a block installed!

Ne pas faire fonctionner le système sans les deux chambres ou un bloc installé!

See **Section III. B. Handling Microarray Chambers** for how to insert and remove chambers.

Allow 15 inches of vertical clearance to open the lid.



Allow 3 inches of clearance at the back for the power cord.

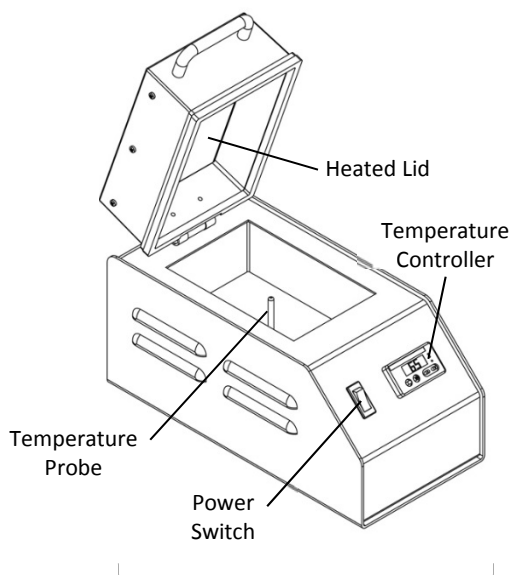
Allow 3 inches of clearance on both sides

III. USING THE HYBEX MICROARRAY INCUBATION SYSTEM

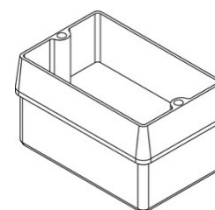
A. Instrument Components, Controls and Accessories

Name	Function
Heating Base	Heats microarray chambers, tube/plate block or insert
Heated Lid	Heats the sealed air around the chambers or block
Temperature Controller	Used to set and observe chamber or block temperature
Temperature Probe	Senses the temperature of chambers or block
Power Switch	Turns on main power to unit
Microarray Chambers	Holds microarray slides for incubation
Waterbath Insert*	For heating buffers or water
Digital Thermometer*	For calibrating system temperature
Heat Block*	Holds tubes or plates for heating

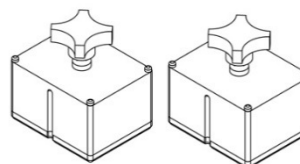
**Optional accessories*



Hybex Incubator (heating base)
Cat. #1057-30-X



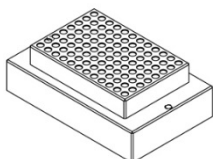
*Waterbath Insert
Cat. #1057-35-0



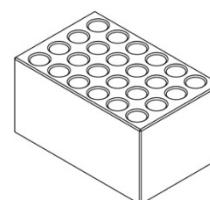
Microarray Chambers
Cat. #1057-38-0 (2/Kit)



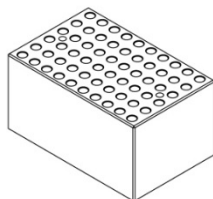
*Digital Thermometer
Cat. #1051-52-0



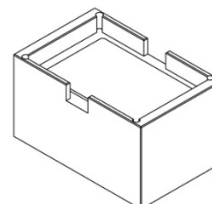
*Heat Block for 0.2 ml Tubes or Plate
Cat. #1057-31-0



*Heat Block for 1.5 ml Tubes
Cat. #1057-34-0



*Heat Block for 0.6 ml Tubes
Cat. #1057-33-0

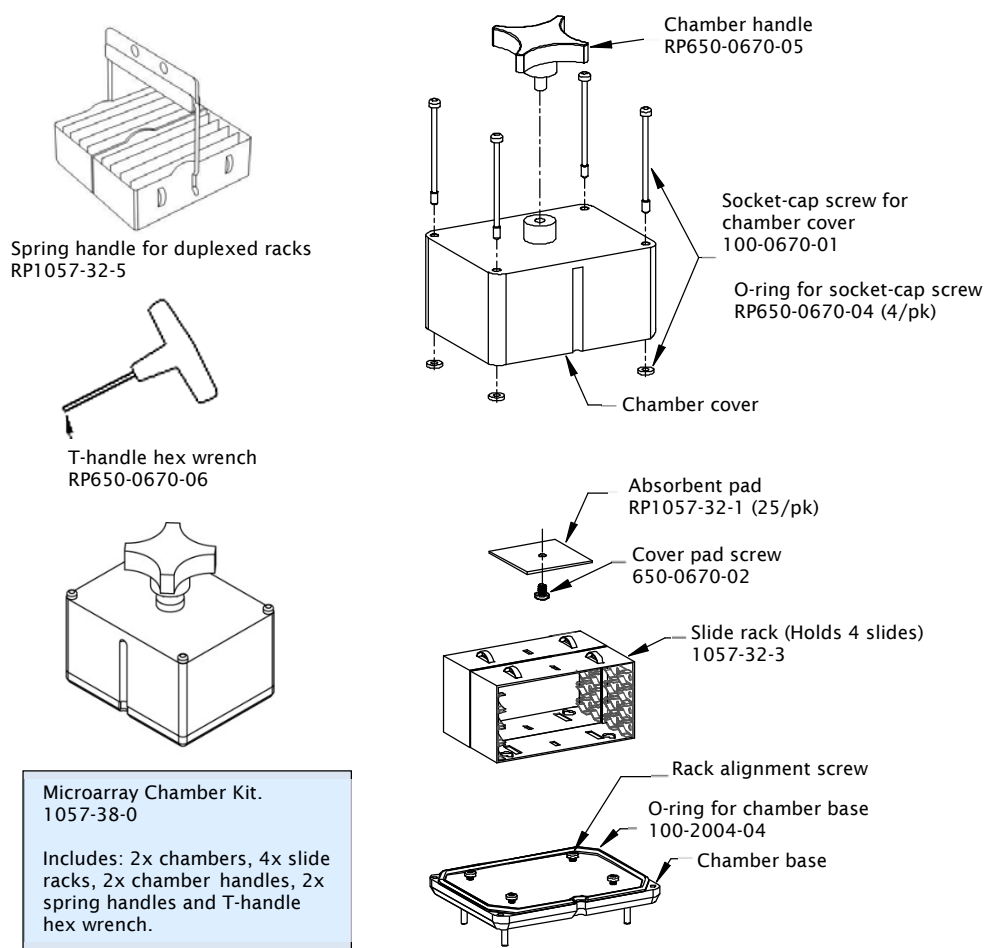


*Heat Block for Flat Bottom Microplate
Cat. #1057-39-0

**Optional accessories*

B. Microarray Chamber Components

Name	Function
Absorbent Pad	Wet pad maintains humidity inside sealed chamber
Chamber base	Holds slide racks in place
Chamber cover	Seals to base during incubation
Chamber handle	Used for lifting chamber in and out of the heating base
Socket cap screw	Secures absorbent pad to inside of top cover
Cover screws	Secure chamber cover to base
Chamber base o-ring	Seals chamber cover to base when properly tightened
Rack alignment screws	Fixed screws that hold slide racks on chamber base
Slide Rack	Holds 4 microarray slides for processing



See **Section VII. ORDERING INFORMATION** for additional details.

C. Using Microarray Chambers and Slide Racks



Do NOT operate the system without chambers or a tube block in the base unit!

Ne pas faire fonctionner le système sans un bloc insérée dans l'unité de base!

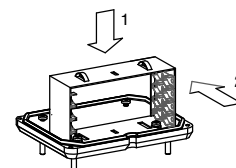


DO NOT preheat the heating unit or chambers before use.

Ne pas préchauffer l'unité de chauffage ou de chambres avant utilisation.

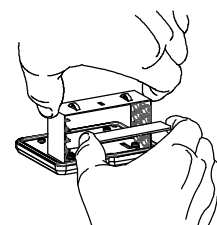
1. Insert Slide Racks into Chamber Base

Place a slide rack on the chamber base so the two screw heads emerge through the key holes. Move the rack toward the center of the base to secure. Rotate the base to add the second rack.



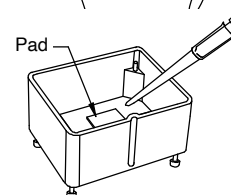
2. Add Coverslipped Arrays

After preparing coverslipped arrays with target/probe solution and hybridization buffer according to your laboratory protocol, place one slide at a time into the slide rack. Keep each slide flat and holding it at its ends, slowly push it into one set of level side clips all the way into the rack. Slides should insert smoothly and be gently held by the clips.



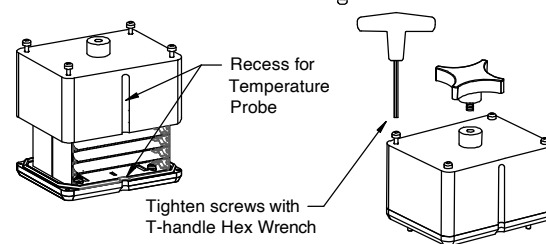
3. Add Water to Cover Pad

Invert the chamber cover with an absorbent pad in place and add 1 ml of dH₂O. Allow liquid to soak completely into the pad.



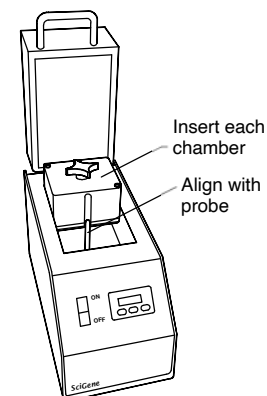
4. Assemble the Microarray Chamber

Place the chamber cover onto the base by aligning the recess for the temperature probe. Use the T-handle wrench provided to tighten four screws on the cover corners. Tighten one screw a half turn, then move diagonally across and tighten the next screw a half turn. Continue with the opposite corners. Repeat until wrench stops, or just hand tight. **NEVER over tighten.** Repeat for second chamber.



5. Insert Chamber into Heating Base

Thread the four-pronged black handles provided several turns into the chamber covers. Carefully lift a chamber, keeping it level, and insert it into the heating unit by aligning the recess for the temperature probe. Repeat for second chamber. Unscrew chamber handles and lower the heated lid. **Always use two chambers to ensure accurate temperatures.**



6. Turn on Power and Set Temperature

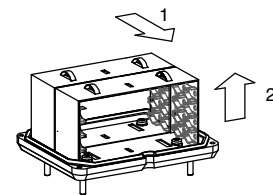
Turn ON the main power switch on the front of the heating unit. Select the desired temperature by pressing the up or down buttons. Allow instrument to stabilize at SET temperature.

7. Remove and Disassemble the Chamber

After the desired incubation time, reattach the chamber handles and carefully lift each chamber from the heating base. Loosen the corner screws on the cover to lift it from the base. If needed, gently apply pressure with the flat edge of a screwdriver to separate the cover from the base, taking care not to damage the sealing edge.

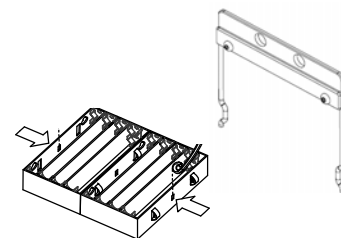
8. Transfer Slide Racks to Waterbath

Gently push each slide rack toward the edge of the base and lift to release. Immediately transfer to a waterbath insert (SciGene cat. #1057-35-0) in a second Hybex instrument or other container of preheated wash solution. Lay each slide rack on its back to allow the coverslips to fall away.



9. Attach Spring Handle to Slide Racks

With racks submerged, align the semicircular tabs on one rack with the corresponding slots on another. Insert a spring handle (SciGene cat. #RP1057-32-5) to hold racks together for processing.



D. Handling Optional Tube Blocks and Waterbath Insert

Tube heating blocks and the waterbath insert are placed and removed from the heating base with the aid of two bolts (provided) that act as handles.

To properly install a block or insert:

1. Thread the two bolts several turns into the block.
2. Grasp the ends of the bolts, lift the block, and then carefully lower it into the unit; guiding it over the temperature probe. The opening in the bottom of the block should fit over the probe.
3. Remove the threaded bolts before using the system.



Do not operate the system without chambers or a tube block in the base unit!

Ne pas faire fonctionner le système sans un bloc insérée dans l'unité de base!

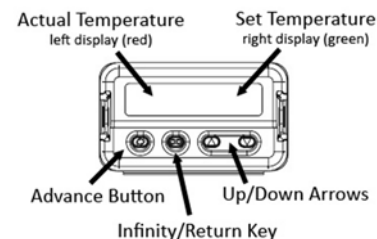


When using a waterbath insert NEVER close the heated lid for more than 90 minutes as excess condensation may damage the heating base.

Lors de l'utilisation d'un insert de bain-marie jamais fermer le couvercle chauffant pour plus de 90 minutes que l'excès de condensation peut endommager la base chauffante.

E. Using the Temperature Controller

The Hybex System is equipped with an EZ-Zone temperature controller that has been calibrated at the factory to provide accurate block temperatures from 35 to 99°C. The controller has two LED displays and four push buttons. The left display shows ACTUAL block temperature in red. The right display shows SET temperature in green.



To program the temperature controller:

1. Turn on the instrument.
2. Program the desired SET temperature by pressing the up or down arrow buttons:
 - Press the up arrow button to increase the current SET temperature
 - Press the down arrow button to decrease the current SET temperature.
3. Verify the new SET temperature is shown in the green display on the right. The instrument will now adjust the block heater until the SET temperature is attained.

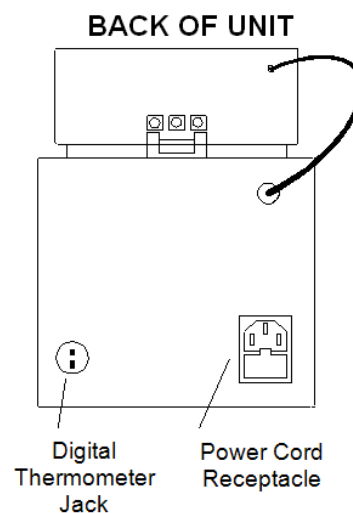
SciGene recommends checking calibration according to your laboratory schedule. See section III. F. **Calibrating the Temperature Controller** for details.

F. Calibrating the Temperature Controller

The temperature controller is calibrated at the factory to provide accurate block temperatures from 35 to 99°C. Calibration is required only if the controller displays a block temperature which differs by more than one degree (1°C) from a NIST calibrated T-type digital thermometer (sold separately, SciGene cat. #1051-52-0). Contact SciGene Customer Service (custserv@scigene.com) or your local distributor to purchase a thermometer.

To calibrate the temperature controller:

1. Insert a block into the Hybex incubator, turn ON the instrument and set the controller to 65°C. Allow 15 minutes for temperature to stabilize.
2. Using the cable provided with the digital thermometer (cat. #1051-52-0), plug one end into the blue receptacle found on the back panel of the Hybex incubator and the other end into the thermometer.
3. Turn on the thermometer. Allow 1 minute for thermometer to stabilize. The actual temperature of the block will be displayed.
4. Calculate the difference between the digital thermometer and the temperature controller to determine the adjustment value. For example, if the thermometer reads 63.9°C while the controller reads 65°C, then the adjustment value is -1.1°C.
5. On the controller, press the up and down arrows simultaneously for 3 seconds. The left display shows “A1” and the right display shows “open”.
6. Press the Advance Button (green circle) 3 times until the right display shows “i.CA”. The left display will show the offset value between the controller and thermometer when the unit was last calibrated.
7. Using the up or down arrows, add the adjustment value from step 4 above to the existing offset value shown on the controller. For example, if the adjustment value is -1.1°C and the current offset is -0.3°C then the new offset is -1.4°C.
8. Press the Infinity Key (∞) twice to exit calibration and return to the operation display. Verify that the temperature on the thermometer matches the display. Your incubator is now calibrated to provide accurate temperatures between 35 and 99°C.



IV. MAINTAINING THE HYBEX MICROARRAY INCUBATION SYSTEM

A. Powering Off

Turn the power switch to the OFF position and unplug the power cord before performing any service procedure.

B. Cleaning the Heating Base

Clean outer metal surfaces and the heated lid using a soft cloth and mild, detergent-based cleaner. Avoid abrasive cleaners that can scratch surfaces. Do **NOT** use caustic or strongly alkaline solutions (e.g., strong soaps, ammonia, or bleach).

If running radioactive or biohazardous reactions, consult your institution's radiation safety officer or biosafety office for assistance.



Turn the power switch to the OFF position and unplug the power cord before performing any service procedure!

Tournez le commutateur d'alimentation sur la position OFF et débranchez le cordon d'alimentation avant d'effectuer toute opération de service!



Remove liquid or condensation (wipe dry) while instrument is OFF and block is cool or at room temperature!

Enlever le liquide ou la condensation (essuyer), tandis que l'instrument est éteint et le bloc est frais ou à température ambiante!

C. Cleaning the Microarray Chambers and Slide Racks

Chamber covers (with absorbent pads removed), chamber bases (with o-ring in place) and slide racks should be washed in warm water with mild detergent, rinsed with dH2O and dried using a lint-free cloth. Do not use organic solvents that may damage the o-ring or outer coating. When not in use, insert racks into the chambers, loosely assemble cover and base, place in a Ziploc bag and store in a dust-free location.

D. Checking and Replacing the Absorbent Pads

Each chamber cover has an absorbent pad (SciGene cat. #RP1057-32-10, 25/pk) attached with a nylon screw. An absorbent pad should be replaced if it appears worn or dirty. With the cover turned over, remove the screw with a Phillips screwdriver, discard the old pad and position a new pad so its mounting hole is above the threaded hole in the cover. Secure the pad with the original nylon screw. Do not over tighten. Contact SciGene Customer Service (custserv@scigene.com) or your local distributor to purchase replacement pads.

E. Maintaining Humidified Chambers

Maintaining an effective seal between the chamber cover and base is essential for performance. The chamber base o-ring and the bottom edge of the cover that seals against it must be free of debris or damage to provide an effective seal and maintain humidity. Inspect and wipe clean with a lint-free cloth before each use. Take care not to damage the sealing edge.

F. Checking and Replacing Fuses

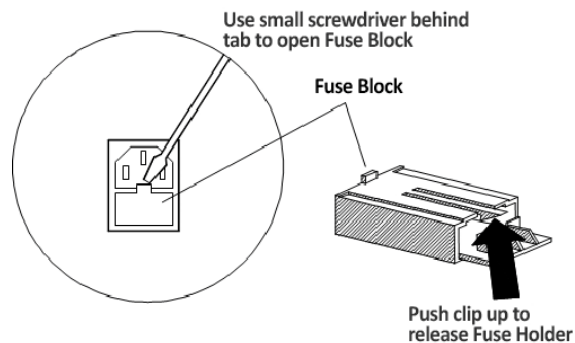
There are two fuses located in a removable fuse block below the power cord receptacle on the back of the unit. A blown fuse appears dark. Always replace fuses with those of the same amperage and voltage as shown on the label below the fuse block.



Turn the power switch to the OFF position and unplug the power cord before performing any service procedure.

To remove fuses:

1. Insert a small, flat blade screwdriver into the tab recess just below the plug receptacle.
2. Push down to release the fuse block.
3. Slide fuse holder out from the fuse block while holding the retaining tab out of the way.
4. Gently pry out the fuses.



V. TROUBLESHOOTING

Symptom	Cause	Solution
Instrument does not turn on.	Blown fuse(s).	Replace fuse(s) on back of unit, beneath power cord receptacle.
Controller is not responding when buttons are pressed.	Controller needs to be reset or is faulty.	Contact SciGene or your distributor to reset or replace the controller.

VI. SPECIFICATIONS

Electrical	
Cat. #1057-36-1	115V AC; 50/60 Hz; 3A
Cat. #1057-36-2	230V AC; 50/60 Hz; 1.6A
Dimensions	
Outside (H x W x D)	10 x 6 x 12 inches (21 x 15 x 30 cm) — cover closed
Weight	
Instrument (without block)	6 lbs (3 kg)
Performance and Controls	
Temperature Range	Ambient +5°C to 99°C
Temperature Regulation	± 0.2°C
Temperature Controller	Digital PID
Temperature Display	Actual or Set single LED
Digital Thermometer Output	Thermocouple

VII. ORDERING INFORMATION

Cat. #	Description	UoM
1057-30-0	Hybex Microsample Incubator, heating base, 115V.	EA
1057-30-2	Hybex Microsample Incubator, heating base, 230V.	EA
1057-38-0	Microarray Chamber Kit. Includes 2x chambers, 4x slide racks, 2x chamber handles, 2x spring handles for duplexed racks and a T-wrench.	EA
1057-32-3	Slide Rack (4-position).	EA
RP1057-32-5	Spring Handle for 4-Position slide racks.	EA
RP650-0670-05	Chamber Handle (black knob).	EA
1057-31-0	0.2 ml tube block. Holds 96x0.2ml PCR tubes or single plate.	EA
1057-33-0	0.6 ml tube block. Holds 60x0.6ml tubes.	EA
1057-34-0	1.5 ml tube block. Holds 32x1.5ml microcentrifuge tubes.	EA
1057-39-0	Flat-bottom heat block. Holds a microplate.	EA
1057-35-0	Waterbath Insert, 670 ml.	EA
RP1057-32-1	Absorbent Pad for chamber cover (25/pk).	PK
650-0670-02	Absorbent Pad Screw for chamber cover, Nylon.	EA
100-0670-01	Socket Cap Screw for chamber cover.	EA
RP650-0670-04	O-ring for socket-cap screw (4/pk).	PK
100-2004-01	O-ring for chamber base.	EA
RP650-0670-06	T-handle hex wrench.	EA
1051-52-0	Digital thermometer, T-type. Includes cable and NIST certificate.	EA

VIII. APPENDIX A – Using and Calibrating a Watlow SD31 Controller

** For selected Hybex incubators manufactured between 2005 and 2010. **

A. Using the Watlow SD31 Temperature Controller

The controller has a single LED panel with four buttons. The set temperature is displayed if the **SET** key is pressed and held otherwise the **ACTUAL** block temperature is displayed.



To set the block temperature:

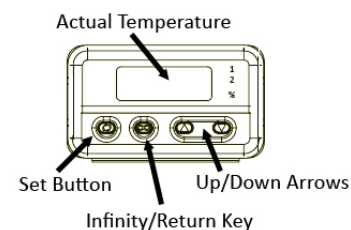
1. Hold in the **SET** button to view the previous set temperature.
2. While holding down the **SET** button, press the up or down arrow button until the desired set temperature is shown.
3. Release the buttons to display the actual temperature. The instrument will adjust block heating until the new temperature is attained.

B. Calibrating the Watlow SD31 Temperature Controller

Re-calibrating the Hybex temperature controller is recommended *only if* the display varies by more than one degree (1°C) to a connected NIST-certified T-type digital thermometer (SciGene cat. #1051-52-0).

To adjust the controller to achieve accurate temperatures:

1. Insert a block into the Hybex incubator, turn ON the instrument and set the controller to 65°C. Allow 15 minutes to stabilize.
2. Using the cable provided with the digital thermometer (cat. #1051-52-0), plug one end into the blue receptacle found on the back panel of the Hybex incubator and the other end into the digital thermometer.
3. Turn on the thermometer. Allow 1 minute for thermometer to stabilize. The actual temperature of the block will be displayed.
4. Calculate the difference in the temperature shown on the controller and the digital thermometer. For example, if the controller displays 52.5°C and the digital thermometer displays 51.0°C, the difference (offset) is 1.5°C.
5. On the temperature controller, press the Infinity Key (∞) for three seconds until "OPEN" appears.
6. Press the down arrow four times until "Cal" appears.
7. Press and hold the SET key. The existing offset value between the controller and digital thermometer is displayed.
8. Press and hold the SET key and use the up/down arrows to adjust the offset value to the temperature difference calculated in Step 4. For example, if the controller shows a temperature 1.5°C lower than the thermometer, adjust the offset by adding 1.5 to the value shown.
9. Press the Infinity Key (∞) to exit calibration and return to the operation display. Verify that the temperature on the thermometer matches the display. Your incubator is now calibrated to provide accurate temperatures between 35 and 99°C.



IX. DECLARATION OF CONFORMITY

Hybex Microarray and Microsample Incubation System



SciGene
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Declares that the above referenced product(s) meets the essential requirements of the following European Union Directives by using the relevant standards shown below to indicate compliance.

EMC Directive 89/336/EEC Standards:

EN 61326-1	1997	Electrical equipment for measurement, control and laboratory use to include:
EN 61000-4-2	2001	+A1: 1998 +A2: 2001 +A3: 2003
EN 61000-4-3	2001	
EN 61000-4-4	2001	
EN 61000-4-6	2003	

LVD Directive 2006/95/EC

EN 61010-1	2010	Safety requirements for measurement, control and laboratory use
	3rd Edition	Part 1: General requirements

RoHS Directive 2011/65/EU

Terry Gill

Name of Authorized Representative

Sunnyvale, California, USA

Place of Issue

Director of Product Manufacturing

Title of Authorized Representative

September 22, 2014

Date of Issue



Signature of Authorized Representative

