

# OPERATOR'S MANUAL



Charm 2-Place Incubator



# Contents

Introduction	4
Training	4
Precautions	4
Section I: Operations & General Use	4
Specifications	6
Section II: Software	7
Charm Sciences' Contact Information	12
Limited Equipment Warranty	15

## Introduction

The Charm® 2-Place Incubator allows for easy compact incubation for all ROSA tests. The portable incubator has software selection capabilities for temperature and incubation time. This self-contained incubator can be operated in the lab, on a truck, on farm, or in the field. The unit comes pre-calibrated for all Charm temperature requirements.

This manual is divided into two sections, encompassing operational guidelines and general usage, as well as dedicated software instructions

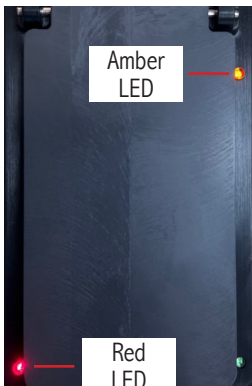
## Training

- Equipment setup and use can be self-taught from the manual.
- For questions, contact your local representative or Charm Sciences, Inc. at +1.978.687.9200 or support@charm.com.

## Precautions

- The incubator will take approximately 20 minutes once turned on to reach desired temperature.
- **Warning:** The metal heated area can be hot to the touch when set to 56°C.
- The incubator must be placed on a level surface while incubating a ROSA test strip to allow for proper flow.

## Section I: Operation & General Use



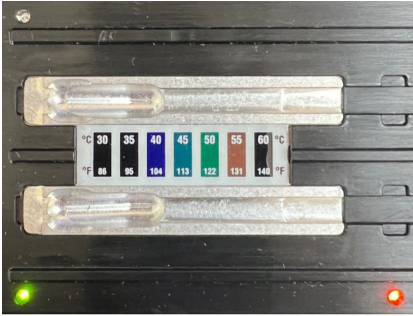
- Connect the 5VDC Power Supply to the back of the unit. The Amber LED will illuminate and the Red LED will begin blinking, indicating the unit is heating up to its preset temperature.
- It may take up to 20 minutes for the incubator to reach the desired temperature. When this state is achieved, the Red LED will stop blinking and turn off while the Green LED will illuminate, indicating the Incubator is holding the temperature steady.



- Lifting the lid to add or remove a ROSA test strip will reset the LED status. Once the lid is closed, the Green LED will turn off and the Red LED will turn on Solid. This will start the preset Incubation period.
- At the conclusion of the incubation period, the unit will make a beeping sound and the Red and Green LEDs will flash until the lid is open and ROSA test removed.
- Post incubation period – this is a specific time interval after the original incubation period has been reached and the maximum amount of time allowed for a user to remove the ROSA test from the incubator. Example: 3 minute ROSA test has a 30 second post incubation period. This means that by 3 minutes 30 seconds user needs to remove ROSA test from incubator. If incubator displays blinking Red and Green LEDs but NO beeping sound – this indicates a time beyond the acceptable post incubation period and ROSA test will need to be repeated.

The Charm 2-Place Incubator will continue beeping with Red and Green LED's flashing for the designated post incubation time set in the device.

- The Red and Green LEDs will continue to flash while the unit maintains the preset temperature.
  - Tests may be performed at ambient temperatures of 10 to 30°C in naturally circulating air.
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The Charm 2-Place Incubator has a color-coded temperature strip for quick visual assessment of temperature.

- The brown temperature indicator should be present when incubator set to 56°C. T
- The blue/green indicator should be present when incubator set to 45°C.
- The navy blue indicator should be present when incubator set to 40°C.

A periodic temperature check with a certified/calibrated thermometer is recommend. A thermometer port is available in the front of the incubator.

Charm sells THERM-DIGITAL-COMARK thermometers for temperature verification.

## Specifications

Unit Dimensions: 7 X 4.3 X 11.5cm (W X H X D)

Weight: 181.4g

User Interface: USB

Power Source: 5V

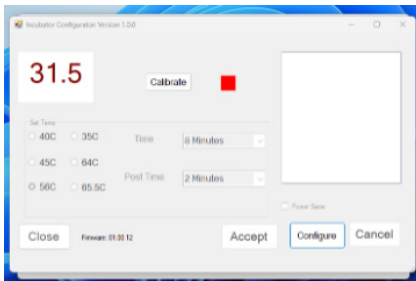
Calibration: Factory Set (adjustments can be made through USB/Software interface)

## Section II: Software

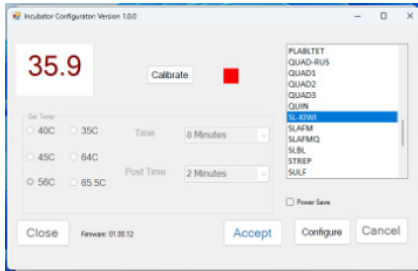


- At the start, the user will encounter the Main form, which allows selection of two main types of Charm incubators:
  1. Two Place, Four Place, or Other
  2. Vial
- First connect the port with Incubator then choose the right incubator type from the following two options and proceed by clicking the “Connect Incubator Now” button.

### Two Place, Four Place, or Other Incubators:

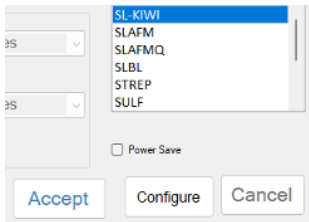


- In the case of the Two Place, Four Place, or Other Incubators, a window will appear showcasing the temperature on the left side along with the designated target temperature and time information.
- In case the user wishes to alter the settings, they need to select the “Configure” button and subsequently input the password for verification. The password structure will comprise the month and day numbers. (For instance, on the 10th of August, the password will be “810.”)



- Following successful verification, the user will be presented with a list of test names. Select the specific test for adjustments. Upon selecting the test name, the system will automatically configure the temperature, incubation time, and post-incubation settings. To finalize these changes, the user clicks the ACCEPT button, thereby applying the designated target temperature and time parameters to the incubator.

### Power Save Feature:

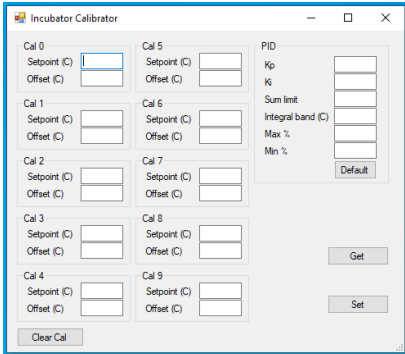


- Power Save mode (if selected) will shut off the power to the heater inside the incubator at the end of the preset incubation period. This is used in transit (or truck) application modes with the Charm ROSA tests.
- To enable this feature – select the Power Save mode then ACCEPT.

### Functionality:

- When enabled, the Red and Green LEDs will blink and a beeper will sound indicating the completion of incubation period. At the end of the post incubation period, the beeper stops and the Red/Green LEDs continue to flash – HOWEVER, with the Power Save mode enabled the heater is turned off and temperature immediately starts to drop.
- To reactivate the incubator to run another test, the lid needs to be opened. Once opened, this triggers the internal heating element to heat up to the target temperature again. This could take up to 5 minutes.



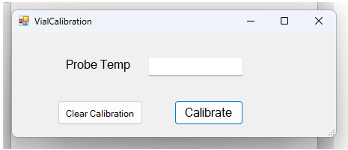


- If the user requires incubator calibration, they should start by clicking the “Calibrate” button, which will trigger a verification prompt. For authentication, the user must input the current date – for instance, if it’s the 10th of August, the input would be “10”.
- A calibrated thermometer should be used for incubator calibration.
- Following successful verification, a calibration window will appear presenting the options in the screenshot.
- Once the offset number for the target temperature is entered, proceed by clicking the “Set” button. Following this, close the window to return to the previous screen.

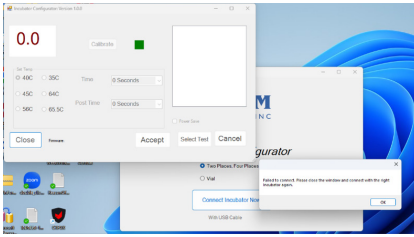
### Vial Incubator:



- In the case of the Vial Incubator, the user will get a different window showcasing the temperature on the left side along with the designated target temperature.



- To calibrate the Vial Incubator, first click on the "Calibrate" button and verify with the password which is the current date mentioned before in the 5<sup>th</sup> number point. After successful verification, the user gets the following window to input the recorded temperature in place of the Probe Temp text box. Once the temperature is entered, proceed to click the "Calibrate" button to store the adjusted point.
  - Following this, close the window to return to the previous screen.
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### Exceptions/Error Messages:

- If the user chooses an incorrect Incubator type and proceeds to click the “Connect Incubator” button, they will encounter an erroneous interface. After 5 seconds, they will receive a prompt to close the window and select the right Incubator. After closing the message, they will get another message to disconnect the port connection and connect again. The correct Incubator type should be selected before clicking the “Connect” button again.
- If the user chooses the appropriate Incubator and, upon opening the interface, finds that no temperature readings are being displayed, a waiting period of 10 seconds will ensue. Subsequently, a notification will appear instructing the user to close the window, disconnect the port connection, and then reconnect. This situation may occur intermittently, often when establishing a connection with the port takes longer than usual. In that case, close the window by clicking on the close button. The user will get the Main page to start the process again. But remember before starting the process disconnect the port and connect again.
- For the Vial Incubator, every time if user closes the vial Incubator window, must disconnect the port, and connect again. Failing to do so might lead to a situation where the user receives no response in the window and becomes unable to close it. If this occurs, the recommended steps are to disconnect the port, close the window, reconnect the port, select the Vial option, and finally, click the “Connect Incubator Now” button.”

## Charm Sciences' Contact Information

Contact the Technical Services staff at Charm Sciences for any questions or concerns about the Charm 2-Place Incubator.

- Twenty-four-hour telephone support: 978-687-9200 or 1-800-343-2170.
- E-mail Address: [support@charm.com](mailto:support@charm.com)





## Limited Equipment Warranty

1. WARRANTY; LIMITATION OF REMEDIES: (a) Charm Sciences, Inc. ("Charm") warrants each equipment product to be free from defects in materials and workmanship and to be free from deviations from the specifications and descriptions of Charm's products appearing in Charm's product literature, based upon normal use. The warranty periods are, from the date of delivery:

<u>Days from Date of Delivery</u>	<u>Warranty Coverage</u>
1-30	New replacement unit, shipping
31-90	Parts and labor, shipping
91-180	Parts and labor
181-365	Parts only

Charm shall undertake to correct any such defects in material or workmanship that exist or appear during the warranty periods, provided, however, that Charm shall have no obligation or liability under this warranty unless Charm has been notified of such defect no later than thirty (30) days after such defect is first discovered and, in any case, no later than one year from the date the equipment is shipped to Buyer. Buyer will provide Charm with an opportunity to inspect and test the goods claimed to be defective. Remedial action under this warranty shall require only that Charm at Charm's option, repair or modify the equipment, or replace the same. (b) The foregoing provisions of this paragraph set forth and constitute Charm's sole obligation and liability and Buyer's exclusive remedy under this warranty. Charm's liability shall immediately cease if the seal is broken or the equipment is (i) subjected to accident, misuse, negligence, alteration, improper repair, servicing or maintenance, (ii) installed or used contrary to local, state or federal laws, codes or regulations, (iii) used contrary to Charm warnings, instructions or recommendations or contrary to the purpose or manner for which it was designed, or (iv) used with reagents other than those provided, sold or approved in writing by Charm. In addition, Charm will have no liability if the alleged breach of warranty is due to incomplete information supplied by Buyer or his representative to Charm or if the alleged breach of warranty is due to dirt, debris or other contamination of the equipment. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXCEPT TITLE, WHETHER STATUTORY, EXPRESS, IMPLIED (INCLUDING WARRANTIES FOR MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE AND ALL WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE). Buyer represents that it alone has determined that the equipment purchased is suitable for and will meet the requirements of its intended use.

2. LIMITATION OF LIABILITY; INDEMNIFICATION: (a) Charm's liability on any claim of any kind, whether based in contract, warranty or tort (including negligence, failure to warn or strict liability) or otherwise, for any expense, injury, loss or damage arising out of, or connected with, or resulting from the design, manufacture, sale, delivery, resale, installation, inspection, repair, reconditioning, operation or use of any equipment, shall in no case exceed the contract price of that equipment. In no event shall Charm be liable for any special, indirect or consequential damages. (b) In the event the equipment is (i) subjected to abuse, misuse, alteration, improper repair, servicing or maintenance, (ii) installed or used contrary to local, state or federal laws, codes or regulations, (iii) used contrary to Charm's warnings, manuals or recommendations, or (iv) used with reagents other than those provided, sold or approved in writing by Charm, Buyer expressly agrees to defend, indemnify and hold Charm harmless from and against all claims, whether based in contract, warranty, or tort (including negligence, failure to warn, or strict liability), losses, expenses, damages, and liabilities which may arise out of the use or alleged use of the equipment to the extent caused by Buyer's negligence.

3. AMENDMENTS: The warranty provided herein may not be altered except by express written agreement signed by an officer of Charm. Representations, oral or written, which are inconsistent with this warranty are not authorized and if given, should not be relied upon.

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