



REV SCI
REVOLUTIONARY SCIENCE

Instruction Manual
INCUFRIIDGE 300 PROFESSIONAL LINE



Instruction Manual for the Revolutionary Science **INCUFRIIDGE 300 PROFESSIONAL LINE**

TABLE OF CONTENTS

Recommended Safeguards	3
Operating Instructions	4-11
Care and Maintenance	11
Specifications	12
Contact Us	12
Registration	13
Warranty	13
Product Registration	14
Checklist	15
Notes and Service Record	15
Troubleshooting	16

NOTE: This manual contains important information, safeguards and operating instructions for the operation of the REVOLUTIONARY SCIENCE Incufridge by Alternative Pioneering Research & Development, Inc. (APR&D, Inc.)

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INTRODUCTION

Thank you for purchasing the Revolutionary Science IncuFridge. We're confident that our IncuFridge will provide you with years of reliable service. We have made every effort to use high quality, durable parts to deliver the performance expected of instruments costing significantly more.

Please let us know what you think of our products, positive or negative, so we can continue to improve our products in the future.

Sincerely,

REVOLUTIONARY SCIENCE

First Steps

1. Examine carton and packaging for possible damage caused during shipping. If damage is present contact carrier at once. Failure to do so immediately may release the carrier from any liability of damage.
2. Fill out the checklist (pg. 15 of instruction manual). If something is missing, please contact Revolutionary Science.
3. Carefully read the instruction manual.
4. Visit the product registration webpage provided on pg. 14 by scanning the QR code or entering the URL manually and complete the product registration.

Storage Conditions

Do not store your Revolutionary Science IncuFridge in direct sunlight, or in dusty or poorly ventilated areas.

Do not store in a cold (< 10°C) or moist room (> 60% relative humidity) for extended periods of time.

Never immerse your Revolutionary Science IncuFridge in water.

RECOMMENDED SAFEGUARDS

1. Never attempt to disassemble or modify the IncuFridge.
2. Do not clean any parts with solvents.
3. Do not drop.
4. Keep door closed for effective temperature stabilization.
5. Do not operate on wet surfaces.
6. Make sure the power cord is clear of hot surfaces and other hazards. We recommend any slack in the cord to be wrapped up and held together with a twist or zip tie.
7. Avoid spills on or in the unit. They may contaminate or corrode the surfaces.
8. Do not use around flammables, combustible materials, or explosives.
9. Keep back vents clear (at least two inches in every direction) from other equipment and avoid setting unit on unstable surfaces. This will allow for effective air convection.
10. Do not heat any substances that may release fumes considered to be toxic.
11. Avoid placing samples directly on floor of chamber, instead use shelf to insure even distribution of temperature.

12. Like all heating and cooling equipment their efficiency depends upon the external or ambient temperature. This product has a maximum efficiency at an ambient temperature of 21°C, provided that all other safeguards are met. If the ambient temperature increases or decreases, the maximum efficiency will decrease.

CARE AND MAINTENANCE

Your IncuFridge should be cleaned periodically to ensure optimal performance, to promote cleanliness, and to eliminate contamination. Clean your Revolutionary Science IncuFridge only when it is not plugged in. Using a soft cloth soaked in water and a mild detergent wipe the inside and outside of the unit, then let air dry or wipe with a dry cloth. Be careful not to scratch surfaces with abrasive cleaners or dirty cloths.

Initial Setup

Placement

Place unit on a stable, hard surface away from the edge of the counter and other moving equipment.

Loading

Open the IncuFridge by pressing the keyed push-button on the door handle and gently pulling the door open. With the door open and shelves properly inserted, load your samples leaving adequate space between samples for proper air circulation. Avoid placing samples directly on floor of chamber, instead use a shelf to ensure even temperature distribution.

Connecting the Power

Insert the power cord into an outlet designed to provide a nominal voltage of 120 VAC. Make sure the power cord is clear of hot surfaces and other hazards. Any slack in the cord should be wrapped up and held together with a twist or zip tie.

Operating the IncuFridge 300 Pro

Home screen and Temperature Set Point

The Home screen displays the current chamber temperature in large text with the desired (set) temperature shown below it. To increase the chamber temperature, press and hold the Up-arrow button. To decrease the chamber temperature, press and hold the Down-arrow button.



Internal Light:

On the home screen press the Light icon on right side under the arrow buttons to turn on and off the internal chamber light.

Menu Screen:

To display the Menu screen, press the menu icon (three horizontal lines) in the lower right side of the Home screen. The following options will appear. Each option is discussed below.



Program:

Changes chamber temperature based on user-defined time/cycle criteria.

1. Enter the Main menu screen and press the Program button.
2. Program options are adjusted by pressing on them and then changing the value with the Up and Down arrow keys.
3. Up to 99 different programs can be set. Select Pgm to select a different saved program.
4. Each program is made of 1 or more steps where steps contain a specified duration (D:, H:, M:, and S:) and temperature (Set Temp). The Step key is used to cycle between program steps.

D: # of days the step will run

H: # of hours the step will run.

M: # of minutes the step will run.

S: # of seconds the step will run.

Set Temp: The temperature the step will run at.

Repeat: The number of times the program sequence will repeat.

No Wait: TRUE will begin the step count down immediately, FALSE will begin the count down once Set Temp is reached.

Run: Run Current Selected Program.

Save: Save Current Selected Program.

Stop: Cancels the currently running program.

Back Button: Return to main screen.



The currently running program is displayed on the Main screen.

P:# - Program number

S:#|# - Current Step|Total Steps

R:# - Total Program Repeats

D:H:M:S - Countdown to Step completion



DATA LOGGING:

Select data logging interval.

Not Logging: Press to turn off data logging feature.

1 second: Log every second

5 second: Log every 5 s

10 seconds: Log every 10 s

30 seconds: Log every 30 s

60 seconds: Log every minute.

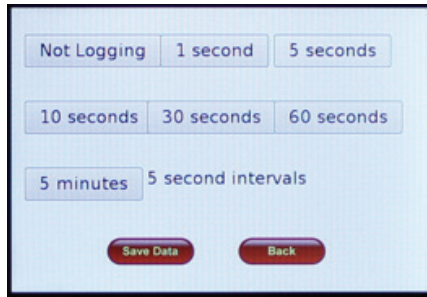
5 minutes: Log every 5 min. (most efficient memory storage)

Save Data button: Will immediately save cached data to internal storage.

Note: Data is stored in a cache in memory until cache is full, then it is written to internal storage.

When turning machine off, press Save Data button to ensure no data is lost.

Back Button: To return to main screen.



To recover your data from the IncuFridge insert a NTFS- or FAT32-formatted USB drive into the USB port on the front of the unit. Once a drive is detected the recorded time and temperature data will transfer from the IncuFridge to the USB drive. This data is then erased from IncuFridge.

Remove USB Drive is displayed when the data has been transferred to the drive and it's safe to remove it.



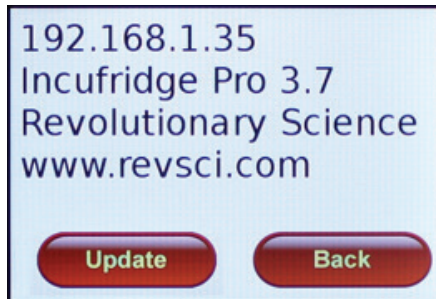
Calibrate: To adjust the temperature probe offset.

1. Place a NIST-traceable thermometer in the center of the IncuFridge chamber.
2. Set the IncuFridge to the desired temperature.
3. Wait until temperature reading equilibrates and note the offset (the difference between the IncuFridge chamber reading and independent thermometer)
4. Enter the calibration mode by going to the main menu and selecting Calibration.
5. Press Up/Down arrows to increase/decrease the offset. Calibration offset and calibrated temp will reflect any change.
6. Press the Back button to save and return to main screen.
7. Celsius and Fahrenheit can be toggled in the Calibration screen by pressing in the lower, left corner of the Calibration screen.

Note: The IncuFridge uses a single point calibration. It is recommended that you calibrate the IncuFridge at your most commonly used temperature setting.

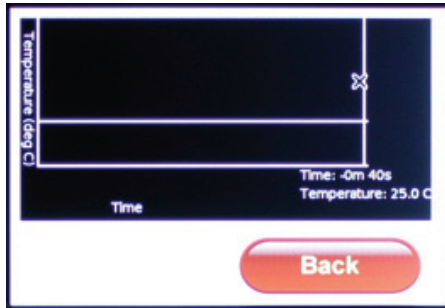


About: When connected to Wi-Fi, the display will show the IP and website address.



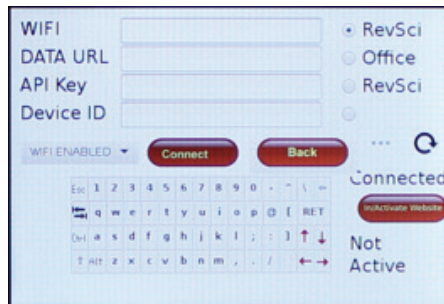
Graph: Plots chamber temperature vs time lapsed.

1. Enter the Menu screen.
2. Press Graph to show (time, temperature) coordinate.
Note that time is counted backwards from current time.
3. Press the Back button to return to the main screen.



Wi-Fi Config: To connect the IncuFridge to your wireless network.

1. Select WIFI Config from the menu.
2. On the right side of the screen, choose the Wi-Fi network the IncuFridge should connect to.
3. WIFI: Enter Wi-Fi password.



*A USB keyboard may be attached to the units to type in the information. If using the on-screen keyboard a stylus should be employed.

Set Time

1. Time is normally synced to an internet source. However, if no internet connection is available one can set the time manually.
2. To change the time zone, use Up/Down arrows and scroll through available options.
3. Select the month, day, year, hour, minute, or second and adjust each value using the Up/Down arrows. Note that the IncuFridge uses a 24-hour clock system. For example, 1 p.m. would show 13 in the Hour setting.
4. Press the Set Time button to save the settings.
5. Press Back to return to main screen.



CARE AND MAINTENANCE:

Your Incufridge should be cleaned periodically to ensure optimal performance, to promote cleanliness, and to eliminate contamination. Clean your REVOLUTIONARY SCIENCE Incufridge only when it is not plugged in. Using a soft cloth soaked in water and a mild detergent wipe the inside and outside of the unit, then let air dry or wipe with a dry cloth. Be careful not to scratch surfaces with abrasive cleaners or dirty cloths.

Incufridge Professional Line Specifications

- Precision: $\pm 0.1^{\circ}\text{C}$ (at 37°C)
- Uniformity: Internal temperature uniformity $\pm 0.5^{\circ}\text{C}$ (at 37°C)
- Display: 3 digits, 0.1°C resolution
- Controller: Digital microcomputer
- Temperature Range: $4^{\circ}\text{C} - 75^{\circ}\text{C}$
($19^{\circ}\text{C} - 25^{\circ}\text{C}$ ambient)
- Warranty: 2-year, repair or replacement

Model #	Chamber Capacity	Interior Dimensions Width x Depth x Height	Exterior Dimensions Width x Depth x Height	Power
RS-IF-328P	1 ft ³ (28L)	12" x 14" x 10.125"	15.25" x 23.25" x 16.75"	100-120VAC, 50-60 Hz, 120 W, 12 VDC
RS-IF-365P	2.3 ft ³ (65L)	16.125" x 16.125" x 15.125"	20.375" x 25" x 22.625"	100-120VAC, 50-60 Hz, 420 W

CONTACT US

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Web site: www.revsci.com

REGISTRATION

For your future reference and to expedite answers to your questions, please complete the following information:

Date Purchased: _____

Serial Number: _____

Model Number: _____

Purchased From: _____

FULL TWO YEAR WARRANTY

Your Revolutionary Science IncuFridge is warranted to be free from defects of material or workmanship under normal use for a period of two years from shipping date. If your IncuFridge proves to be defective within this warranty period, Revolutionary Science will repair or replace your unit at our option. This warranty will be void if malfunction is caused by accident, misuse, or negligence, including tampering, abuse, or damage in transit. This warranty excludes any relief for incidental or consequential damages. Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so the above limitation may not apply to you. This warranty gives you specific legal rights, you may also have other rights, which may vary from state to state. Your IncuFridge comes with several built-in safety features. Any attempt to interfere with the operation of these features makes this warranty null and void.

To validate this warranty, be sure to complete the product registration by visiting the website found on pg. 14.

LIMITATION OF LIABILITY

In no event will seller be liable for any consequential, indirect, exemplary, special, or incidental damages, including any lost profits, arising from or relating to the services even if seller has been advised of the possibility of such damages. Seller's total cumulative liability in connection with the services, whether in contract or tort or otherwise, will not exceed the fees paid for the services. One or more claims will not enlarge this limit.

WARRANTY REGISTRATION

Please visit the registration webpage by scanning the QR code or entering it in manually to register your Revolutionary Science Incufridge.



<https://www.revsci.com/pages/product-registration-and-feedback>



CHECKLIST

Before packaging material is discarded please make sure all parts are accounted for:

- __ IncuFridge 300
- __ 2 Shelves
- __ 1 Stylus
- __ 1 Handbook

Notes, Service Record, etc.

TROUBLESHOOTING

Symptom	Cause	Action
Temperature on the display is higher than the actual	Incufridge may be in need of calibration or the Celsius/ Fahrenheit setting is incorrect.	See calibration instructions in the manual
Temperature on the display is lower than the actual	Incufridge may be in need of calibration or the Celsius/ Fahrenheit setting is incorrect.	See calibration instructions in the manual The Incufridge Basic only displays Celsius
Display screen does not turn on	Power cord may be disconnected	Inspect all power supply conditions
	Something may be caught in the fan	Turn off Incufridge and inspect internal and external fans. Carefully remove foreign objects if any are found
Chamber temperature does not get high enough or cool enough.	Fans or heat sinks may be obstructed with dust or too close to the wall The room temperature may be too cold or too warm to attain cold or heat setting.	Check the fans. It is likely that the fan in the back is too close to the wall or it is dirty and proper venting cannot occur. The room temperature should be between 19°C and 25°C to allow for proper heating and cooling.
Touch screen display does not respond to touch	Edge of display may be pinched by the metal control panel or foreign object	Carefully inspect and for obstructions.
Temperature stays at ambient and does not heat or cool	Possible defective components	Contact Revolutionary Science
Either fan is not operational	Possible defective components	Contact Revolutionary Science

If symptoms persist, please contact Revolutionary Science Support Center at support@revsci.com or call (800) 775-7942.

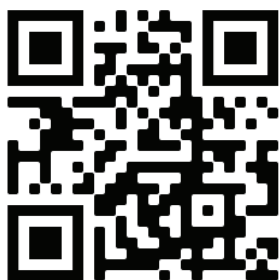


TROUBLESHOOTING

Please visit the Revolutionary Science troubleshooting webpage by scanning the QR code or entering it in manually to view instructional videos covering potential Incufridge issues and their solutions.



<https://www.revsci.com/pages/troubleshooting>



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