

ACCUBLOCK™ Digital Dry Bath

User Manual



D1301 D1301-230V
D1302 D1302-230V
D1304 D1304-230V

CE

Labnet 

Intended Use:

Labnet's single and dual Dry Bath Incubators provide comprehensive designs for a wide variety of life science research applications. Excellent temperature control figures can deliver accurate and reliable experimental results from one experiment to another.

If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

1.0 General Specifications

Temperature range	Ambient +5°C to 150°C
Temperature display resolution	0.1°C 4 digit LED
Temperature uniformity	± 0.2°C (at 37°C in block)
Temperature accuracy	± 0.3°C
Temperature controller	Microprocessor – user calibratable
Timer	1 to 99hours59minutes or continuous in 1 minute increments
Operating Altitude	Not to exceed 2,000 meters
Control	PI Microprocessor controller
I/O	USB unidirectional
Dimensions (W x D x H)	8.3 x 11.4 x 4.7 in. (21 x29 x 12cm) (for D1301 and D1302) 8.3 x 15.3 x4.7 in. (21 x 39 x 12 cm) (for D1304)
Weight	7.0 lbs./3.2 kg (for D1301 and D1302) 9.6 lbs./4.4 kg (for D1304)

Electrical requirements:

D1301	115V	50/60Hz, 1 A, Fuse 1.6 AT
D1301-230V	230V	50/60Hz, 0.5 A, Fuse 1AT
D1302	115V	50/60Hz, 1.9A, Fuse 3.15AT
D1302-230V	230V	50/60Hz, 0.95 A, Fuse 1.6AT
D1304	115V	50/60Hz, 3.73 A, Fuse 5 AT
D1304-230V	230V	50/60Hz, 1.86 A, Fuse 3.15 AT

2.0 Safety Precautions:

- **Do not** use this product in an explosive environment
- **Do not** use in the presence of flammable or combustible material
- **Do not** heat substances that react violently when heated
- **Do not** touch block when hot or when unit is heating. Use block lifter.
- **Do not** touch area around block or block well when unit is hot.
- **Do not** spill liquids into the well area or into the unit side vent holes
- **Connect unit** only to a properly grounded outlet

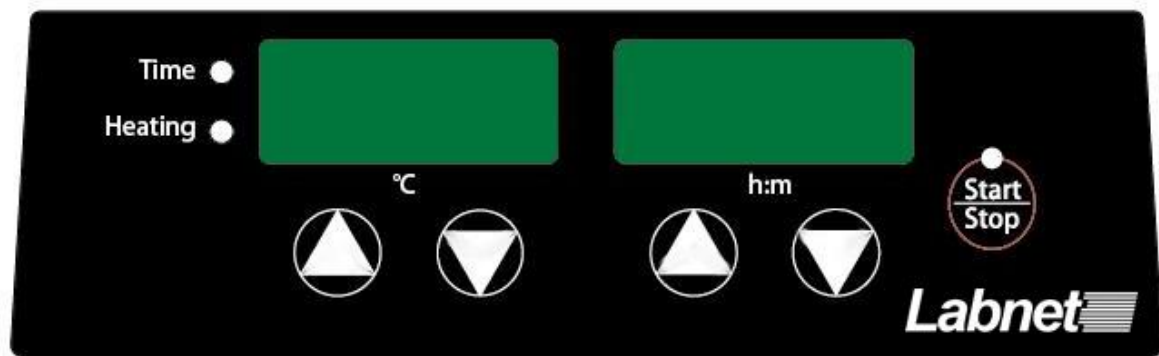
Use of this product in any manner not specified by the manufacturer or modification of the product may cause injury and/or may void the warranty.

3.0 Installation

Upon unpacking the Dry Bath, inspect for damages. Shipping damage is the responsibility of the carrier. Inspect that the following are present: User's manual, Data logger software, Line cord, Block Lifter, Lid, USB cable.

Select a location that is dry and not subject to drafts or moving air from heating or air conditioning vents, or air blown by other equipment. Place the unit on a flat, preferably non-flammable surface. Allow sufficient room around the unit for access and cooling. Six inches minimum on all sides is suggested. Plug the unit into a properly grounded outlet. Using the lifter, insert the block(s) into the well. The unit is now ready for use.








4.0 Controls



- On / Off rocker switch. Located on back of unit. Turns primary power on and off
- “Start/Stop” LED, red. Used to activate or stop the unit. Illuminates when unit is in heating mode, off in temperature set mode.
- “Heating” LED, red. Illuminates when unit is in heating mode and unit is actually applying heat to the block. This LED is on continuously during heat-up and cycles on and off when the unit is at the set temperature.
- “Time” LED, green – Used to set or select time mode. This LED light indicates running Time Mode.
- “TEMP-UP” arrow key. Raises set temperature when unit is in set mode.
- “TEMP-Down” arrow key. Lowers set temperature when unit is in set mode
- “Timer - UP” arrow key. Raises set time when unit is in set mode.
- “Timer - Down” arrow key. Lowers set time when unit is in set mode.

5.0 Operation

1. Place Labnet Dry Bath Incubator on a sturdy and level surface in a safe, dry place, away from laboratory traffic.
2. Ensure that the AC power switch is OFF, then plug the three-pronged power cord into a grounded three-prong AC outlet of the appropriate voltage (115V or 220V as indicated on the rating sticker near the AC cord on the back of the unit).
3. Select suitable module block(s) or appropriate water volume and put it / them into the Labnet Dry Bath Incubator
4. Turn the AC power ON.

5. Run temperature calibration procedure when using the instrument for the first time.
6. Press  or  Key to adjust to the desired temperature.
7. Press  or  Key to adjust to the desired timer.
8. Press the  Key to start heating.
9. If to reset timer is required during heating, press  Key to deactivate heating.
10. Press  Key again to stop the unit.
11. If lid is to be used, aim the shaded area on the dry bath surface with the magnet of the lid and it will be attached to the housing. In order to remove the lid, press one hand firmly on the housing with another hand pulling the lid off. To use the lid, the tube should not be exceeding 25mm than the heating block.

6.0 Calibration

Calibration allows the unit temperature display to be adjusted or matched to the temperature of a single sample or to a calibrated thermometer making an independent temperature measure of the block.

The Digital Dry Baths are calibrated at the factory at 40°C using a standard small hole-pattern block. If you are using a block with a high heat loss rate such as a block with large holes or a platform style block, you may choose to recalibrate the unit to your specific application. Also, if you are using very loose or odd shaped vessels, the calibration function can help you match the display temperature to your actual sample temperature.

To calibrate the unit for a given block or sample, first turn the unit off using the On / OFF switch. Then place a thermometer of known accuracy* into the block thermometer hole or a thermocouple or other sensor into your sample. Make sure there is a good fit between the thermometer and the block or good contact between any sensor and sample or sensor and block.

To calibrate the block or sample to the display, use the following procedure:

1. Press and hold the START – STOP key then simultaneously power up the unit with the On / OFF switch.
2. You should hear a “DU-DU-DU.” sound from the dry bath and the display will have one segment flashing on the left and will show a set temperature, and the right will show adjt.
3. Use the UP and DOWN arrow keys to set the desired temperature at which you want to calibrate the unit. Then press the START key.
4. Allow time (up to 10 or 20 minutes) for the unit to heat up to your set temperature and to equilibrate at this temperature. The entire LED display will start flashing when equilibration is reached.

5. After the entire display has started flashing, read the thermometer (or sensor meter) and use the UP and DOWN arrow keys to adjust the display to the thermometer or sensor reading. Then press the START-STOP key.

6. The unit will then begin to automatically adjust its operating temperature to your original set point with the re-calibration factor included. Allow sufficient time for the unit to re-equilibrate and then again compare the thermometer or sensor reading to the calibrated display. They should closely match. If not, repeat the calibration procedure.

* Thermometers used for calibration purposes should have a written calibration certificate and be traceable back to NIST or some other certified body. General lab thermometers are often not accurate enough for calibration work.

7.0 USB Interface

The Digital Dry Baths have a USB unidirectional data port. A software and cable are available which allow a user to use a desk top or lap top computer to record and/or print a record of the temperature profile produced by the dry bath.

8.0 Troubleshooting Guide / Service Problem Explanation / Solution

Display / LEDs do not light up

1. Check power cord & outlet
2. Check ON / OFF switch
3. Check fuse
4. Call service

Unit not heating

1. Is set point below room temp
2. Is "START" LED illuminated
3. Press "START" key
4. Call service

Unit display overshoots

1. Normal operation. Display set point in heat-up overshoots on initial heat-up but block and sample do not overshoot. See Operation section of this manual.

Block or Sample temp not same as display temp.

1. Is unit in heating mode
2. Is unit sitting in draft
3. Check accuracy of thermometer
4. Is thermometer making good contact
5. Follow calibration procedure

If following these troubleshooting suggestions does not solve the problem [contact Corning](#) at : 800-492-1110.

9.0 Cleaning and Maintenance

Make sure that the dry bath and block are cool and the power cord is disconnected before performing any cleaning or maintenance. Repair or maintenance should only be performed by an authorized service technician.

The dry bath may be cleaned with a moist cloth containing a mild soap solution. Do not immerse the dry bath in water or any liquid.

The blocks may also be cleaned in a mild soapy solution. Be sure that all items have thoroughly dried before attempting to connect the cord or use the unit.

Spills: In the event liquid is accidentally spilled into the bath or well area, disconnect the plug from the outlet and turn the unit upside down to minimize liquid contact with the internal components. Remove the bottom cover and inspect to assure liquid has not contacted heater elements, electronic controls, or connectors. Have qualified service technician clean the unit and replace any damaged parts.

EQUIPMENT DISPOSAL-EUROPEAN REGULATIONS






According to Directive 2012/19/EU of the European Parliament and of the Council of 4 July 2012 on waste electrical and electronic equipment (WEEE), Dry Bath Incubator is marked with the crossed-out wheeled bin and must not be disposed of with domestic waste.

Consequently, the buyer shall follow the instructions for reuse and recycling of waste electrical and electronic equipment (WEEE) provided with the products and available at the following link: www.corning.com/weee

Appendix

Symbols and Conventions

The following chart is an illustrated glossary of the symbols that may be used in this manual or on the product.

	<p>CAUTION: This symbol refers you to important operating and maintenance (servicing) instructions within the product instruction Manual. Failure to heed this information may present a risk of damage or injury to persons or equipment.</p>
	<p>ATTENTION: Hot Surface!</p>
	<p>Indicates disposal instruction. DO NOT throw this unit into a municipal trash bin when this unit has reached the end of its lifetime. To ensure utmost protection of the global environment and minimize pollution, please recycle this unit.</p>

Warranty Statement

Corning Incorporated (Corning) warrants that this product will be free from defects in material and workmanship for a period of three (3) years from date of purchase. CORNING DISCLAIMS ALL OTHER WARRANTIES WHETHER EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE. Corning's sole obligation shall be to repair or replace, at its option, any product or part thereof that proves defective in material or workmanship within the warranty period, provided the purchaser notifies Corning of any such defect. Corning is not liable for any incidental or consequential damages, commercial loss or any other damages from the use of this product.

This warranty is valid only if the product is used for its intended purpose and within the guidelines specified in the supplied instruction manual. This warranty does not cover damage caused by accident, neglect, misuse, improper service, natural forces or other causes not arising from defects in original material or workmanship. This warranty does not cover motor brushes, fuses, light bulbs, batteries or damage to paint or finish. Claims for transit damage should be filed with the transportation carrier.

In the event this product fails within the specified period of time because of a defect in material or workmanship, contact Corning's Customer Service at the following numbers: USA: 1-800-492-1110; Canada: 1-978-442-2200.

Corning's Customer Service team will help arrange local service where available or coordinate a return authorization number and shipping instructions. Products received without proper authorization will be returned. All items returned for service should be sent postage prepaid in the original packaging or other suitable carton, padded to avoid damage. Corning will not be responsible for damage incurred by improper packaging. Corning may elect for onsite service for larger equipment.

Some states do not allow limitation on the length of implied warranties or the exclusion or limitation of incidental or consequential damages. This warranty gives you specific legal rights. You may have other rights which vary from state to state.

No individual may accept for, or on behalf of Corning, any other obligation of liability, or extend the period of this warranty.

For your reference, make a note of the serial number, date of purchase and supplier here.

Serial No. _____ Date Purchased _____

Supplier _____

Warranty/Disclaimer: Unless otherwise specified, all products are for research use only. Not intended for use in diagnostic or therapeutic procedures. Labnet International makes no claims regarding the performance of these products for clinical or diagnostic applications

Please register your warranty online at
<http://www.labnetinternational.com>

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