

Labnet 311D and 611D Digital Incubators

Instruction Manual

Catalog Numbers:

I-5311-D

I-5611-D



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1.0 Introduction

The Labnet Digital Incubators have been designed for general purpose incubations (<65°C), as well as those applications requiring higher temperatures (up to 65°C).

Temperature within the incubator is controlled and regulated by a microprocessor. Temperature is set and displayed digitally. An independent, user settable safety thermostat protects samples and the incubator from overheating in the unlikely event of a primary controller failure.

A fan, located in the chamber, assists in providing an exceptionally uniform environment. The fan also speeds temperature recovery after the door of the incubator has been opened. For applications where the flow of air in the chamber is undesirable, the fan may be switched off.

The interiors of the 311D and 611D incubators are constructed of stainless steel. The exteriors are made of cold rolled steel to resist corrosion and provide strength. The door of the incubator consists of two parts. The inner door is glass to allow for viewing the chamber contents without disrupting the temperature environment. The outer door is solid and insulated. It is also heated to help in maintaining the chamber temperature. The heated door prevents condensation from forming on the inner glass viewing door.

2.0 Safety Information

These units are high performance incubators for professional, industrial, or educational use where the preparation or testing of materials is done at approximately atmospheric pressure and no flammable, volatile, or combustible materials are being heated. These units are not intended for hazardous or household locations or use.

Your satisfaction and safety require a complete understanding of this unit. Read this instruction manual thoroughly before attempting to operate the incubator. All operators should be given adequate training before using this incubator.

NOTE: This equipment must be used only for its intended application. Any alterations or modifications of the incubator may void the warranty and may result in injury.



The electrical warning symbol indicates the presence of a potential hazard which could result in electrical shock.



This symbol indicates a potential risk and alerts you to proceed with caution.



CAUTION: To avoid accidental bodily harming or burning be very careful touching the metal parts of the unit. It can be very hot after it is used at high temperatures. Allow the metal parts to cool down before handling.

3.0 Specifications

Temperature range	Ambient, +5°C to 95°C
Temperature uniformity	
I-5311-D	±0.2°C at 37°C
I-5611-D	±0.25°C at 37°C
Temperature accuracy	±0.2°C
Temperature set/display	Digital
Temperature control	Microprocessor
Overtemperature safety	Independent, settable
Interior outlet	1 AMP
Door	Inner: glass Outer: solid, heated
Temperature uniformity	
I-5311-D	2.75 cu ft (77.9L)
I-5611-D	6.0 cu ft (169.9L)
Exterior construction	Cold rolled steel
Interior construction	Stainless steel
Exterior dimensions (D x W x H)	
I-5311-D	27 x 20 x 29 in. (68.6 x 51 x 73.7 cm)
I-5611-D	31 x 26 x 34 in. (78.5 x 66 x 86.4 cm)

Interior dimensions (D x W x H)	
I-5311-D	17 x 14 x 20 in. (43.2 x 35.6 x 51 cm)
I-5611-D	21 x 20 x 25 in. (53.3 x 51 x 63.5 cm)
Standard accessories	Adjustable leveling feet, 2 steel shelves, shelving points
Overvoltage category	Category II
Voltage requirements	120V ±10%, 60 Hz, 5x20 T8A 250V (1 fuse)
Power/Current	
I-5311-D	800W
I-5611-D	850W
Environmental conditions	5°C to 40°C, ≤80% RH (at 25°C)

The Labnet 311D and 611D Digital Incubators are designed to be safe at least when operated under the following conditions:

- ▶ Indoor use
- ▶ Altitude up to 2,000 meters
- ▶ Pollution Degree 2

4.0 Unpacking

4.1 Inspection

Upon receipt of your Labnet 311D or 611D Digital Incubator, examine the carton and unit for damages. If shipping damage has occurred, a claim must be filed with the carrier. The carrier is responsible for correcting shipping damages. Save all packaging until the unit has been shown to operate properly to your satisfaction. Carefully remove the unit from the carton and shipping pallet.

The package should include:

- ▶ Labnet 311D or 611D Digital Incubator
- ▶ 2 large shelves
- ▶ 8 shelf clips
- ▶ 4 leveling feet
- ▶ Power cord (both EU and UK cords in 230V models)
- ▶ Instruction manual

5.0 Installation

Local city, county, or other ordinances may govern the use of this equipment. If you have any questions about local requirements, please contact the appropriate local agency. Installation can be performed by the end user.



5.1 Power Source

Check the data plate for voltage, cycle, phase, and ampere requirements. If matched to your power source, plug the power cord into a grounded outlet. **NOTE:** Voltage should not vary more than 10% from the data plate rating. These units are intended for 50/60 Hz applications. A separate circuit is recommended to preclude loss of product due to overloading or circuit failure. **NOTE:** Electrical supply to the unit must conform to all national and local electrical codes.



5.2 Location

In selecting a location, consider all conditions that might affect performance, such as heat from radiators, ovens, autoclaves, etc. Avoid direct sun, fast-moving air currents, heating/cooling ducts, and high-traffic areas. Allow a minimum of 5 cm between the unit and walls or partitions that might obstruct free airflow.



5.3 Lifting/Handling

These units are heavy and care should be taken to use appropriate lifting devices that are sufficiently rated for these loads. Units should only be lifted from their bottom surfaces. Doors, handles, and knobs are not adequate for lifting or stabilization. The unit should be completely restrained from tipping during lifting or transport. All moving parts, such as shelves and trays should be removed, and doors need to be positively locked in the closed position during transfer to prevent shifting and damage.

5.4 Leveling

The unit must sit level and solidly. Leveling feet are supplied and must be installed in the four holes in the bottom corners of the unit. With the feet installed and the unit standing upright, each foot can be raised by turning it in a counterclockwise direction. Adjust the foot at each corner until the unit stands level and solid without rocking. If the unit must be moved, turn the leveling feet all the way clockwise to prevent damage while moving.

5.5 Cleaning

The unit chamber should be cleaned and disinfected before use. Remove all of the interior parts, and clean thoroughly with a disinfectant that is appropriate to your application. **NOTE:** Do not use chlorine-based bleaches or abrasives as this will damage the chamber interior. Regular periodic cleaning is required.

6.0 Controls

- 1. Power switch:** The main power ON/OFF switch controls all power to the unit. The power must be On before any systems are operational. The green switch will be lighted when ON.
- 2. Main temperature control:** This control consists of the digital display and Up/Down buttons for inputting set point temperatures and calibration.
- 3. Safety thermostat:** The Safety is completely independent of the Main Controller. The Safety guards against any failure of the Main Controller that would allow temperature to rise past set point. If temperature rises to the safety set point, the Safety takes control of the heating element and allows continued use of the incubator until the problem can be resolved or service can be arranged.
- 4. Fan switch:** This operates the turbo fan inside the chamber for fast heat up times and recovery. The switch is lighted when activated.
- 5. Safety light:** This pilot light comes on when the Safety thermostat is activated. Under normal operating conditions this pilot light should never be on.

7.0 Operation



Check power supply against unit serial plate. They must match. Plug the power cord into the electrical outlet.

Push power switch ON, and turn the Safety thermostat to its maximum position, clockwise.

7.1 Set Main Temperature Control

Enter desired set point temperature. To enter set point mode on the control, press either the Up or Down button one time. The digital display will start to blink, going from bright to dim. While blinking, the digital display is showing the set point. To change the set point, use the Up and Down buttons. If the buttons are not pressed for five (5) seconds, the display will stop blinking and will read the temperature of the unit. **NOTE:** The Safety thermostat should be turned to its maximum position, until the unit has stabilized at desired set point temperature. Allow the incubator at least 24 hours to stabilize.

7.2 Calibration

The Main Temperature Controller was calibrated at the factory at 37°C; however, it is recommended that calibration is done once the unit is installed in its working environment and has been stable at set point for several hours. Place a certified reference thermometer in the chamber. Be certain the thermometer is not touching any shelving. Allow the temperature to stabilize again until the thermometer reads a constant value for one hour. Compare the digital display with the reference thermometer. If there is an unacceptable difference, put the display into calibration mode by pressing both the Up and Down arrow buttons at the same time until the two outside decimal points begin to flash. While the decimal points are flashing the display can be calibrated by pressing the Up or Down arrow buttons until the display reads the correct value. Allow the incubator temperature to stabilize again, and recalibrate if necessary.

7.3 Set Safety Thermostat

As mentioned above, the Safety thermostat should be initially set to its maximum position, to allow the unit to stabilize. Once the incubator is stable at the desired set point, turn the Safety thermostat counterclockwise until the Safety light turns on. Next, turn the thermostat clockwise just until the Safety light turns off. Then turn the thermostat clockwise two (2) of its smallest divisions on its scale past the point where the Safety light went out. This will set the Safety thermostat at approximately 1°C above the main temperature set point.

7.4 Fan Switch

Turn the fan switch on during the warm up cycle for faster heat up time. Also, this switch may be used for rapid recovery. Once the unit has reached a stable temperature the fan may be turned off.

8.0 Cleaning and Maintenance

Both the interior and exterior of the incubator should be wiped down with a soft cloth periodically to prevent any build-up of dust and grime.

Any spills in the incubator should be cleaned immediately. Cleaning may be performed with a soft, damp cloth. If required, the chamber may be disinfected. The unit was cleaned at the factory, but not sterilized. Clean the inside of the chamber thoroughly with a disinfectant that is appropriate to your application. Make sure to rinse the cleaned surface with a damp cloth, using water only, and dry the surface with a clean cloth. **NOTE:** Do not use chlorine-based bleaches or abrasives, as this will damage the stainless steel surfaces. A similar periodic cleaning is recommended.

9.0 Troubleshooting and Service

9.1 Temperature

Code	Description	Solution
Temp-1	Temperature too high, display and reference thermometer don't match	<ul style="list-style-type: none">▶ Controller failed – call Customer Service.▶ Wiring error – call Customer Service.
Temp-2	Display reads “HI” or “400+”	Probe is unplugged or broken – call Customer Service.
Temp-3	Chamber temperature spikes over set point and then settles to set point	Recalibrate – see Section 7.2.
Temp-4	Temperature too low-display and reference thermometer don't match	<ul style="list-style-type: none">▶ Safety set too low – see Section 7.3.▶ Controller set too low – see Section 7.1.▶ Unit not recovered from door opening – wait for display to stop changing.▶ Unit not recovered from power failure or being turned off – incubators will need 24 hours to warm up and stabilize.▶ Element failure – call Customer Service.▶ Controller failure – confirm with front panel lights that controller is calling for heat.▶ Safety failure – confirm with front panel lights that Safety is operating correctly.▶ Wiring problem – call Customer Service.▶ Loose connection – call Customer Service.
Temp-5	Display reads “LO”	<ul style="list-style-type: none">▶ Ambient temperature is lower than range of unit – compare set points and ambient temperature to rated specifications.▶ Sensor is plugged in backwards – call Customer Service.
Temp-6	Unit will not heat over a temperature that is below set point	<ul style="list-style-type: none">▶ Confirm that fan is moving.▶ Confirm that set point is set high enough.
Temp-7	Unit will not heat up at all	<ul style="list-style-type: none">▶ Check if all controller functions work.▶ Check if the Safety is set high enough – for diagnostics, should be fully clockwise with the pilot light never on.▶ Check if the fuse/circuit breaker has blown.
Temp-8	Indicated chamber temperature unstable	<ul style="list-style-type: none">▶ Stabilize ambient conditions – either door opening or room airflow from heaters or air conditioning. If not the ambient conditions, call Customer Service.▶ Calibration sensitivity – call Customer Service.▶ Safety set too low – be sure that its setting is more than 5°C over desired set point; check if pilot light is on continuously; turn controller knob completely clockwise to see if problem solved, then follow instructions in Section 7.3 for correct setting.▶ Electrical noise – remove nearby sources of RFI including motors, arcing relays, or radio transmitters.

Code	Description	Solution
Temp-9	Will not maintain set point	<ul style="list-style-type: none"> Assure that set point is at least 5°C over ambient. See if ambient is fluctuating – check for adjacent open doors or HVAC duct openings, stabilize ambient conditions.
Temp-10	Display and reference thermometer don't match	<ul style="list-style-type: none"> Calibration error – see Section 7.2. Temperature sensor failure – evaluate if pilot light is operating correctly. Controller failure – evaluate if pilot light is operating correctly. Allow at least 24 hours to stabilize at set point temperature. Verify that reference thermometer is certified.
Temp-11	Can't adjust set points or calibration	<ul style="list-style-type: none"> Turn entire unit off and on to reset. If repeatedly happens, call Customer Service.
Temp-12	Calibrated at one temperature, but not at another	This can be a normal condition when operating temperature varies widely. For maximum accuracy, calibration should be done at or as close to the set point temperature as possible.

9.2 Mechanical

Code	Description	Solution
Mech-1	Door not sealing	<ul style="list-style-type: none"> Check physical condition of gasket. Tighten door latch till it pulls glass in. Adjust hinge blocks or twist the door. Confirm the unit has not been damaged and body is square.
Mech-2	Motor doesn't move	Call Customer Service.
Mech-3	Motor makes noise	Call Customer Service.

9.3 Other

Code	Description	Solution
Other-1	Controller on at all times – “locked-up”	<ul style="list-style-type: none"> Turn unit off and on to reset. If cannot change any condition on the front panel, call Customer Service.
Other-2	Front panel displays are all off	<ul style="list-style-type: none"> Check the power cord for damage. If there is no damage, call Customer Service.
Other-3	Unit or wall fuse/circuit breaker is blown	<ul style="list-style-type: none"> Check wall power source. Compare current draw and compare to specs on data plate. See what other loads are on the wall circuit.
Other-4	Unit will not turn on	<ul style="list-style-type: none"> Check wall power source. Check fuse/circuit breaker on unit or in wall. See if unit is on (e.g., fan or heater) and just controller is off.
Other-5	Unit is smoking – out of box	This is not an uncommon occurrence when first operating new units. Put the unit under the vent and run at full power for one hour. Smoking is normal during first cycle to temperature.
Other-6	Contamination in chamber	<ul style="list-style-type: none"> See cleaning procedure in see Section 8.0. Develop and follow standard operating procedure for specific application; include definition of cleaning technique and maintenance schedule.

Should you have a question about the Labnet 311D and 611D Digital Incubators or require service for the unit, contact Corning Customer service at 800.492.1110 or 978.442.2200. Do not send a unit for service without first calling to obtain a repair authorization (RA) number. The unit should be properly packed to avoid damage. Any damage resulting from improper packaging shall be the responsibility of the user.

10.0 Spare Parts

Cat. No.	Description
4880527	Blower motor
6100544	Convenience outlet
3300546	Fuse 8A
2350544	Door element
7850571	Door switch
2350561	Heating element
7500507	Light socket
1751179	MP control
7850567	On/Off switch
1800510	Power cord
H9200-37	Safety control
4650551	Safety on pilot (green)
I-4880508	Turbo fan motor

11.0 Limited Warranty

Corning Incorporated (Corning) warrants that this product will be free from defects in material and workmanship for a period of one (1) year 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 Customer Service at: USA/Canada 1.800.492.1110, outside the U.S. +1.978.442.2200, visit www.corning.com/lifesciences, or contact your local support office.

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 and model number, date of purchase, and supplier here.

Serial No. _____ Date Purchased _____

Model No. _____ Supplier _____

12.0 Equipment Disposal



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), this product 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 electronic and electrical equipment (WEEE) provided with the products and available at www.corning.com/weee.

To request certificates, please contact us at www.labnetlink.com.

Warranty/Disclaimer: Unless otherwise specified, all products are for research use or general laboratory use only.* Not intended for use in diagnostic or therapeutic procedures. Not for use in humans. These products are not intended to mitigate the presence of microorganisms on surfaces or in the environment, where such organisms can be deleterious to humans or the environment. Corning Life Sciences makes no claims regarding the performance of these products for clinical or diagnostic applications. *For a listing of US medical devices, regulatory classifications or specific information on claims, visit www.corning.com/resources.

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