

# Labnet 211DS Digital Shaking Incubator

## Instruction Manual

**Catalog Numbers:**

I-5211-DS

I-5211-DS-220V



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## 1.0 Introduction

The Labnet 211DS Digital Shaking Incubator has been designed for general purpose incubation (<65°C), as well as those applications requiring higher temperatures (up to 80°C).

The SmartCheck™ Temperature Control System provides temperature control within the incubator. The microprocessor maintains excellent temperature accuracy and stability. Desired temperature is set and displayed digitally on the large display. An independent, user settable safety thermostat protects samples and the incubator from overheating in the unlikely event of a primary controller failure.

A uniform temperature environment within the chamber is maintained by mechanical convection or fan-assisted heating. This type of heating also speeds temperature recovery after the door of the incubator is opened.

The interior of the Labnet 211DS Shaking Incubator is constructed of mirror finished stainless steel. The exterior is made of cold rolled steel to resist corrosion and provide strength. The insulated door incorporates a glass viewing area for observing samples without disrupting the temperature environment within the chamber.

## 2.0 Safety Information

This unit is a general purpose air incubator for professional, industrial, and 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. This unit is not intended for hazardous or household locations or use.

Your safety and satisfaction require a complete understanding of this unit. Read the instruction manual thoroughly before operating the incubator. All operators should be given adequate training before using the 211DS Shaking 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 80°C (shaker off) Ambient, +10°C to 80°C (shaker on, the shaker adds heat to the system)
Shaker speed	20 to 400 rpm (±2 rpm)
Shaker maximum load	39.7 lbs. (1.8 kg)*
Temperature uniformity	+0.5°C
Temperature accuracy	+0.1°C
Temperature set/display	Digital
Temperature control	Microprocessor
Overtemperature safety	Independent, user settable
Door	Magnetic gasketed, insulated, glass
Viewing area in door (D x H)	9.25 x 13.5 in. (23.5 x 34.3 cm)
Working area	1.7 cu ft (49L)
Exterior construction	Cold rolled stainless steel
Interior construction	Mirror finished stainless steel
Exterior dimensions (D x W x H)	21.75 x 16.75 x 23.125 in. (55.25 x 42.55 x 58.74 cm)
Interior dimensions (D x W x H)	16.25 x 11.5 x 14.94 in. (41.28 x 29.21 x 37.95 cm)
Overvoltage category	Category II
Voltage requirements	
I-5211-DS	120V ±10%, 50/60 Hz, 5x20 T8A 250V (1 fuse)
I-5211-DS-230V	230V ±10%, 50/60 Hz, 5x20 T6.3A 250V (3 fuses)
Power	780W
Environmental conditions	15°C to 30°C, ≤80% RH (at 25°C)

\*The shaker's maximum load (4 x 1L flask with 200 mL of liquid in each) can only be used at maximum 250 rpm.

The Labnet 211DS Shaking Incubator is designed to be safe at least when operated under the following conditions:

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

## 4.0 Unpacking

Upon receipt of your Labnet 211DS Digital Shaking 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:

- ▶ 211DS Digital Shaking Incubator
- ▶ 2 large shelves
- ▶ 1 small shelf
- ▶ 12 shelf clips
- ▶ 4 leveling feet
- ▶ Instruction manual
- ▶ Power cord (both EU and UK cords in 230V models)

Complete and return the warranty card to register your new Labnet 211DS Digital Shaking Incubator.

## 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 may 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. This unit is intended for 50/60 Hz application. A separate circuit is recommended to preclude loss of product due to overloading or circuit failure.



### 5.2 Location

In selecting a location, consider all conditions which 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 which might obstruct free air flow.



### 5.3 Lifting/Handling

This unit is 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 to be installed in the holes at the base of the unit. Turn them clockwise to raise the level. If the unit must be moved, turn the leveling feet in all the way to prevent damage.

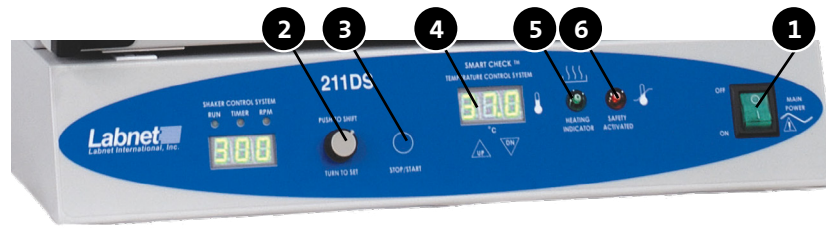
## 5.5 Cleaning



Be sure to disconnect the power cord before cleaning or decontaminating the unit.

The unit was cleaned at the factory, but not sterilized. Remove all interior parts, if assembled and 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.

## 6.0 Controls



- 1. Power switch:** The main power (OFF/ON) switch controls all power to the unit. It must be in the ON position before any systems are operational.
- 2. Shaker speed knob:** Allows for speed adjustments of the shaker. Speed range is 20 to 400 rpm.
- 3. Shaker power button:** Controls the power to the shaker motor. It must be in the I/ON position before the shaker can operate.
- 4. SmartCheck™ Temperature Control System:** Consists of the digital display and Up/Down arrow pads for inputting set point temperatures and calibration.
- 5. Heating Indicator:** This pilot light is On when the Temperature Control System has activated the heating element to reach and maintain the set point.
- 6. Safety Light:** This pilot light comes on when the Safety controller is activated. Under normal operating conditions this pilot light should never be On.
- 7. Safety:** This control, on the rear of the unit, is equipped with an adjustment knob and a graduated dial marked “0 to 10”. Completely independent of the Temperature Control System, the Safety guards against any failure which would allow temperature to rise past the 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.

## 7.0 Operation



Check the power supply voltage against the unit marking plate. They must match.

Plug the power cord into the grounded electrical outlet. Push the power switch to the ON position, and turn the Safety to its maximum position (10), clockwise.

### 7.1 SmartCheck Temperature Control System



Enter desired set point temperature. To enter set point mode on the controller, press either the Up or Down arrow pad 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 arrow pads. If the arrow pads are not pressed for five (5) seconds, the display will stop blinking and will read the temperature of the unit. Allow the incubator at least 24 hours to stabilize.

### 7.2 Calibration

The unit was calibrated at the factory at 37°C, however it is recommended that the unit be recalibrated once it is in its working environment and has been stable at set point for several hours. Place a calibrated reference thermometer inside the chamber where it can be easily viewed. Make certain it is not touching any shelving or chamber walls. Allow the temperature to stabilize again until the temperature remains constant for 60 minutes. Compare the reading on the reference thermometer with the digital display. If there is a difference, put the display into calibration mode by pressing on both the Up and Down arrow pads at the same time and holding them in for about five (5) seconds or until the two outside decimal points start to flash. When the decimal points are flashing, the display can be calibrated to match the reference thermometer by pressing on the Up or Down arrow pads until the display reads the correct value. Allow the incubator temperature to stabilize, and repeat if needed.

### 7.3 Set Safety Controller

As mentioned above, the Safety 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 counterclockwise until the Safety Light turns on. Then, turn the Safety clockwise just until the Safety Light turns off. This will set the Safety Controller at approximately 1°C above the SmartCheck Temperature Control System.

## 8.0 Cleaning and Maintenance



Be sure to disconnect the power cord before cleaning or decontaminating the unit.

No routine maintenance is required for the electrical or mechanical components of the unit. The incubator exterior, interior, and shaking platform should be wiped down periodically with a soft damp cloth with mild soap. **NOTE:** Do not use chlorine-based bleach or abrasives. Any spills in the incubator and/or on the shaking platforms should be cleaned up immediately.

## 9.0 Troubleshooting and Service

Always make a visual inspection of the incubator and control panel when troubleshooting. Look for loose or disconnected wires that may be the source of trouble.

In the event the incubator does not operate properly, check the following before calling for service:

- ▶ Is electrical power reaching the unit?
  - Check if the unit is plugged into the power supply.
  - Check if the circuit breaker has tripped.
  - Check if the Main Circuit Breaker has tripped.
- ▶ Unit will not heat?
  - Verify the Main Control is set at the desired set point.
  - Verify the High Limit is set higher than the Main Control.
- ▶ Unit will not maintain temperature?
  - Verify the Main Control is set at the desired set point.
  - Verify the High Limit is set higher than the Main Control.
  - Check if the circulating fan is running.
  - Check the ambient room temperature. Fluctuation in ambient room temperature will have an effect on stability of the incubators temperature.

Should you have a question about the Labnet 211DS Shaking Incubator 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 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](http://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 \_\_\_\_\_

## 11.0 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](http://www.corning.com/weee).

To request certificates, please contact us at [www.labnetlink.com](http://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](http://www.corning.com/resources).

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