

## Environmental Shaker Incubators

**New Brunswick C Series (PSC 637)**

**INNOVA 4330 (NSC 460)**

**New Brunswick C24 , E24, MaxQ 4000 (PSC 555, 637, NSC 460, Kell 405)**

**New Brunswick G25 , E25, C25, MaxQ 5000 (PSC 543, 555, 637, NSC 460, Kell 405)**

**Stacking Shaker, refrigerated (PSC 555, 637, NSC 368, 460) and Non-Refrigerated (PSC 637, 866, NSC 368)**

**Minidigital Shaker, MaxQ 4450 (PSC 555, 637, NSC 340, 368, 488)**

**Dual Action Shaker, MaxQ 2508 (PSC 555, NSC 338, 340, 448)**

**Every time you use an Incubator Shaker, you MUST sign the logbook.**

**Use only short screws.**

**Secure all tubes and flasks – they shouldn't move when shaking.**

**If you set the temperature for anything besides 37°C, please leave a note and change it back when you are done.**

**If you hear any kind of grinding sound, STOP.**

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### **New Brunswick C Series Incubator Shaker (PSC 637)**

1. ON/OFF switch located on the right hand side of the shaker, but should be left on. Stopping or starting the shaker is controlled by the START/STOP key.
2. Continuous Run./Set Speed. Press SELECT until the bar next to RPM indicator is illuminated. If the display says OFF, press the START/STOP key. Press either UP or DOWN arrow keys to enter SET mode (the SET bar on the left will illuminate). Set the speed by using the UP or DOWN keys until the desired set point is displayed. Holding the UP or DOWN keys will cause the setting to change more rapidly.
3. Checking any Set point. Press SELECT until the desired indicator bar is illuminated. Press either UP or DOWN keys to enter the SET mode and display the current set point.
4. Timed Functions. Press the SELECT key until the HRS indicator is illuminated. Press either the UP or DOWN keys to enter the SET mode and set between 0.1 – 99.9 hrs. While the SET indicator bar is illuminated, press the START/STOP key to program the time (and start the run). The TIME indicator bar will light and remain on for the duration of the run. At the end of the timed run the display will read OFF, the TIME indicator will flash and the audible alarm will “beep”.
5. Temperature Set point. Press the SELECT key until the function °C indicator bar illuminates. Use the UP and DOWN keys to increase or decrease the temperature. If the temperature is more than 1 °C higher or lower than the set temperature, an alarm is triggered. The alarm will stop once the correct temperature is reached.
6. Total Running Time. The total running time since the ON button was selected. Press SELECT until the HRS indicator is illuminated. Simultaneously press the UP and DOWN keys. The SET and MAINT indicator bars will flash and the accumulated running time will be displayed in hundreds of hours (ex. 02 equals 200 hours). To stop flashing, press SELECT.

If you need to deactivate an alarm, the temperature control system or the MAINT indicator lights up, call Debby.

### **INNOVA 4330 (NSC 460)**

1. Open and close the lid using the foot pedal near the floor on the left. Failure to use the foot pedal will cause the control panel to break. Directions for the Innova 4330 are almost the same as the above C25 except for the foot pedal.
2. Turn the Shaker on using the ON/OFF switch located on the right hand side of the shaker (below the keypad). Stopping or starting the shaker is controlled by the START/STOP key.
3. Continuous Run/Set Speed. Press SELECT until the RPM indicator is illuminated. If the display says OFF, press the START/STOP key. Press either UP or DOWN arrow keys to enter SET mode (the SET indicator will illuminate). Set the speed by using the UP or DOWN keys until the desired setpoint is displayed. Holding the UP or DOWN keys will cause the setting to change more rapidly.
4. Checking any Setpoint. Press SELECT until the desired indicator is illuminated. Press either UP or DOWN keys to enter the SET mode and display the current setpoint.
5. Timed Functions. Press the SELECT key until the HRS indicator is illuminated. Press either the UP or DOWN keys to enter the SET mode and set between 0.1 – 99.9 hrs. While the SET indicator is illuminated, press the START/STOP key to program the time (and start the run). The TIME indicator will light and remain on for the duration of the run. At the end of the timed run the display will read OFF, the TIME indicator will flash and the audible alarm will “beep”.
6. Temperature Setpoint. Press the SELECT key until the function °C indicator illuminates. Use the UP and DOWN keys to increase or decrease the temperature. If the temperature is more than 1 °C higher or lower than the set temperature, an alarm is triggered. The alarm will stop once the correct temperature is reached.
7. Total Running Time. The total running time since the ON button was selected. Press SELECT until the HRS indicator is illuminated. Simultaneously press the UP and DOWN keys. The SET and MAINT indicators will flash and the accumulated running time will be displayed in hundreds of hours (ex. 02 equals 200 hours).
8. If you need to deactivate an alarm, the temperature control system or the MAINT indicator lights up, call Debby.

### **New Brunswick C24, E24, MaxQ 4000 Incubator Shaker (PSC 555, 637, NSC 460, Kell 405)**

1. ON/OFF switch located on the right hand side of the shaker,. Stopping or starting the shaker is controlled by the START/STOP key.
2. Continuous Run./Set Speed. Press SELECT until the bar next to RPM indicator is illuminated. If the display says OFF, press the START/STOP key. Press either UP or DOWN arrow keys to enter SET mode (the SET bar on the left will illuminate). Set the speed by using the UP or DOWN keys until the desired set point is displayed. Holding the UP or DOWN keys will cause the setting to change more rapidly.
3. Checking any Set point. Press SELECT until the desired indicator bar is illuminated. Press either UP or DOWN keys to enter the SET mode and display the current set point.
4. Timed Functions. Press the SELECT key until the HRS indicator is illuminated. Press either the UP or DOWN keys to enter the SET mode and set between 0.1 – 99.9 hrs. While the SET indicator bar is illuminated, press the START/STOP key to program the time (and start the run). The TIME indicator bar will light and remain on for the duration of the run. At the end of the timed run the display will read OFF, the TIME indicator will flash and the audible alarm will “beep”.

5. Temperature Set point. Press the SELECT key until the function °C indicator bar illuminates. Use the UP and DOWN keys to increase or decrease the temperature. If the temperature is more than 1 °C higher or lower than the set temperature, an alarm is triggered. The alarm will stop once the correct temperature is reached.
6. Total Running Time. The total running time since the ON button was selected. Press SELECT until the HRS indicator is illuminated. Simultaneously press the UP and DOWN keys. The SET and MAINT indicator bars will flash and the accumulated running time will be displayed in hundreds of hours (ex. 02 equals 200 hours). To stop flashing, press SELECT.

If you need to deactivate an alarm, the temperature control system or the MAINT indicator lights up, call Debby.

#### **New Brunswick G25, E25, MaxQ 5000 Shaker Incubators (PSC 543, 555, 637, NSC 460, Kell 405)**

1. Turn Power button on. (light is burned out)
2. Turn Shaker button on (light OK) and heater button on (light burned out).
3. Set Control Temp. This is the temperature you want.
4. Set the Safety Temp. This is the temperature you don't want the incubator to go over. 10°C over your Control Temp. is fine.
5. Set Speed Control.
6. Since this isn't an LED type of setup, you need to come back in about 30 minutes to make sure the incubator is at the correct temp.
7. Place your flasks in the correct size holder. You don't want the flask to move in the holder when it's shaking. Tubes need to go into a rack and attached firmly to a holder. Make sure the rack doesn't move when it's shaking. Failure to secure your tubes/flasks will cause breakage and loss of sample.

#### **MaxQ 6000 Stackable Incubator/Shaker and Refrigerated/Shaker (Refrigerated: PSC 555, 637, 833, NSC 368, 460; Non-refrigerated: PSC 637, 368)**

1. Turn shaker on – front panel.
2. Hold down appropriate arrow key in the speed module of the control panel, up or down until desired speed is set (up to 500 rpm). SET RPM light will illuminate.
3. Press SPEED ON/OFF key to begin shaking.
4. Speed can be changed without pressing the START/STOP key. Simply press the appropriate up or down arrow until desired rpm is reached.
5. Press and hold up or down arrows to either increase or decrease temperature. Release key when desired temperature is reached.
6. Once set, temperature control is initiated by pressing the TEMP ON/OFF key.
7. During operation, the up or down arrows can be used to adjust the temperature.
8. Setting Timed Shaking:
  - a. Press TIMER/CONTINUAL key until TIMER and SET TIME lights are illuminated. The HOURS or MINUTES light will also light up.
  - b. Press HOURS/Minutes key for desired timing mode.
  - c. Hold down appropriate arrow key in the TIME module up or down, until desired timing cycle is set from 0.1 hour up to 999 hours or from 0.1 minute to 999 minutes depending on which timing mode is chosen. SET TIME light will illuminate.
  - d. Press SPEED ON/OFF to begin timed shaking; Timer will count down from time selected. An alarm will sound when time is up and shaking will stop.
9. Setting Continuous shaking:

- a. Press TIMER/CONTINUAL key until TIMER light is illuminated. The Hours or MINUTES light will also light up at this point depending on which option was selected.
  - b. Press HOURS/MINUTES key for desired timing mode.
  - c. TIME display should show 000. Press SPEED ON/OFF to begin shaking. Timer will begin to count up and display accumulated time in display window.
10. Refrigerated shakers. After 2 minutes, the compressor/refrigeration system is activated. This delay is NORMAL and is a safety feature to prevent damage to the compressor.
11. The defrost timer will automatically engage every 4 hours.

#### **MaxQ 4450 Minidigital Shaker (PSC 555, 637, NSC 340, 488)**

1. Turn shaker on – turn power switch once; press a second time to turn off. There is a 3 second delay until control panel is illuminated.
2. Hold down appropriate arrow key in the speed module of the control panel, up or down until desired speed is set (up to 500 rpm). SET RPM light will illuminate.
3. Press START to begin shaking. Press STOP to end shaking.
4. Speed can be changed without pressing the START or STOP key. Simply press the appropriate up or down arrow until desired rpm is reached.
5. Press and hold up or down arrows to either increase or decrease temperature. Release key when desired temperature is reached.
6. Once set, temperature control is initiated by pressing the HEAT ON key.
7. During operation, the up or down arrows can be used to adjust the temperature.
8. Setting Timed Shaking:
  - a. Press TIMER/ELAPSED key until TIMER and SET TIME lights are illuminated. The HOURS or MINUTES light will also light up.
  - b. Press HOURS/MINUTES key for desired timing mode.
  - c. Hold down appropriate arrow key in the TIME module up or down, until desired timing cycle is set from 0.1 hour up to 999 hours or from 0.1 minute to 999 minutes depending on which timing mode is chosen. SET TIME light will illuminate.
  - d. Press START to begin timed shaking; Timer will count down from time selected. An alarm will sound when time is up and shaking will stop.
9. Setting Continuous shaking:
  - a. Press TIMER/ELAPSED key until TIMER light is illuminated. The Hours or MINUTES light will also light up at this point depending on which option was selected.
  - b. Press HOURS/MINUTES key for desired timing mode.
  - c. TIME display should show 000. Press START to begin shaking. Timer will begin to count up and display accumulated time in display window.
10. Setting Continuous Timing:
  - a. Press TIMER/ELAPSED key until TIMER light is illuminated. The Hours or MINUTES light will also light up at this point depending on which option was selected.
  - b. Press HOURS/MINUTES key for desired timing mode.
  - c. Press START to begin timed shaking. TIME display should show 000. Timer will begin to count up and display accumulated time in display window.

#### **MaxQ 2508 Dual Action Shaker (PSC 555, NSC 338, 340, 448)**

1. Turn shaker on – front panel in the center.
2. Turn speed control clockwise to increase speed and counterclockwise to decrease speed.

3. Timed shaking. Rotate timer past the 5-minute setting and then adjust the shaking speed. After shaking motion is started, rotate the timer to any timed interval from 1 minute to 60 minutes.
4. To turn shaker off, rotate the timer knob to 0 and the speed control to the extreme counterclockwise position. Depress the power switch to the off position.