Incubator "Quick Start" Protocol

Turning on the system:

1. The power switch is on the side of the incubator. After applying power, the controller will boot up in about 15-20 seconds. The controller will initially display the software it's currently running, and then will display the "main display".

Main Display/Status Menu:

Setting time:

1. Press TIME key
2. Press ENTER key
3. Use ▲ and ▼ keys as needed to set current time and press ENTER
4. Press TIME key to return to main menu

Inputs Menu Navigation:

Inputs menu includes entries for the Manual settings for temperature, humidity, and any expansion/auxiliary channels (we only need to worry about temperature).

1. To enter Inputs menu, press the INPUTS key
2. Use ▲ and ▼ keys as necessary to navigate through the menu
3. To enter a submenu, press the ENTER key
4. To change any setting, press the ENTER key, use the ▲ and ▼ keys as necessary to change the setting and press the ENTER key again to accept the change
5. To exit Inputs menu, press INPUTS until you reach the main display

Diurnal Programming:

This program allows users to set up a 2-step day/night program. The controller will prompt you to enter the day and night temperatures (we don't have the extra options it may prompt you to enter, so you can ignore those) and the day start and end times. (The night period is assumed to be the remainder of the 24 hr period.) All light outputs will be on during the day period, and lights will be off during the night period.

The Diurnal program can be changed in the Enter/Exit Diurnal submenu under the main Programming menu. **To locate the submenu:**

1. Press PROGRAM key
2. Use the ▲ and ▼ keys as necessary to select "Enter/Edit Diurnal" and then press ENTER.
3. Use the ▲ and ▼ keys as necessary to review settings.
4. If any settings need to be changed, press the ENTER key, use the ▲ and ▼ keys as necessary to change the setting and then press ENTER to accept.
5. Once you are finished, keep pressing the ▼ key until you return to the Program menu. To exit the program menu, press the PROGRAM key.

To program or edit a Diurnal program:

1. Press the PROGRAM key.
2. Use the ▲ and ▼ keys as necessary to select "Enter/Edit Diurnal" and then press ENTER.
3. Enter the day set point for temperature. To change day set point for temperature, press the ENTER key, use the ▲ and ▼ keys as necessary to set the day set point and then press the ENTER key again to accept the setting.
4. Press the ▼ key to advance to the next setting. No extra options were ordered, so keep advancing until the "day period start time" setting.
5. Set the day period start time. To change the start time, edit the same as in Step 3.
6. Press the ▼ key to advance to the next relevant setting.
7. Enter the night set point for temperature. To change the night set point for temperature, edit as in Step 3.
8. Press the ▼ key to advance to the next setting.
9. Press the ▼ key to return to the Program Menu. To exit Program menu, press the PROGRAM key

To run a Diurnal program:

1. Press the PROGRAM key
2. Use the ▲ and ▼ keys as necessary to select "Run Diurnal" and then press ENTER. The program will then run.

** When the Diurnal program is running, the program LED will be illuminated, the main status screen will display "Day" or "Night" in place of the system time.

Alarms:

The alarm system can be set with a high and low limit alarm for both a primary limit (limit 1) and a redundant, secondary limit (limit 2). When a limit alarm occurs, the chamber will shut down its control functions to protect your experiment.

Temp Limit 1 High/Low Alarm setting:
These settings determine the process value at which the controller will trigger a limit 1 high/low alarm. It is recommended that you set these values at least 3C above and below your highest/lowest programmed temperatures, respectively.

Temp Limit 2 High/Low Alarm setting:
These settings determine the process value at which the controller will trigger a limit 2 high/low alarm. It is recommended that you set these values at least 3C above and below your Limit 1 High and Low Alarm values, respectively.

To adjust the temperature limit alarms:

1. Press ALARMS key
2. Press ENTER at the 'TEMP' prompt.
3. Use the ▲ and ▼ keys as necessary to select the desired Limit alarm setting.
4. Press the ENTER key to edit the selected alarm setting.
5. Use the ▲ and ▼ keys as necessary to change the alarm setting value.
6. Press ENTER to accept the changes.
7. Repeat steps 3-6 to set the other alarm limit thresholds.
8. Press the ALARMS key to exit this menu and return to the main display.

**Ignore the Deviation Alarm and Deviation Alarm Latching/Buzzer settings

During an active Limit Alarm:

1. An audible alarm tone sounds (buzzer)
2. Alarm type-specific message is displayed on the Intellus display screen
3. The alarm LED on the control overlay flashes
4. An alarm message is displayed on the monitor screen of the Web Server interface (if we get the IntellusUltraConnect present and working, and the Web Interface has been enabled)
5. An alarm notification email is sent to all configured recipients via the Web Server (again, if we get the IntellusUltraConnect present and working, and the Web Interface has been enabled)
6. All processes suspended within the chamber
7. The buzzer will continue to sound until the active alarm is acknowledged. The alarm can be acknowledged in the following ways:
   i. Press any key on IntellusUltra overlay
   ii. Click on acknowledgement button on Monitor page of Web Server interface (if present)