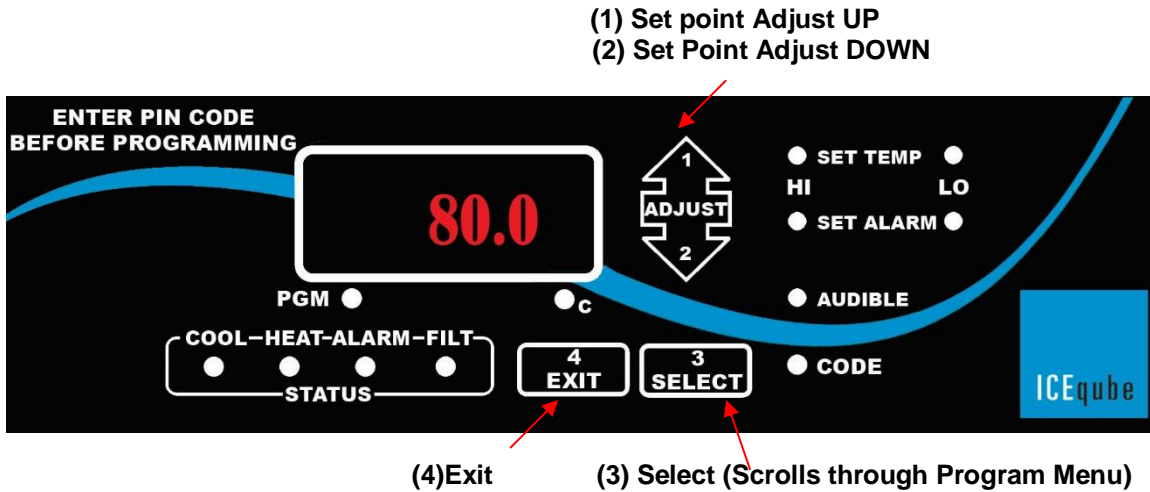


# Controller Programming Guide



Before installing the Ice Qube system on the enclosure, it is recommended to operate the unit for 20 to 30 minutes to ensure it is functioning properly.

## PROGRAMMING THE CONTROLLER:

The digital controller has been pre-programmed with the following factory default settings:

1. Cooling system on temp. 80°F
2. Heating system on temp. 50°F (optional)
3. High enclosure temp. alarm 100°F
4. Low enclosure temp. alarm 40°F
5. Audible and Visual alarm ON"
6. Digital display in degrees Fahrenheit
7. Filter maintenance alarm 0 days - disabled
8. High condenser temp. alarm 170°F
9. Heat Installed On/Off (R11)

To change the factory default settings, enter the programming code sequence:

- (1) Adjust-up arrow
- (2) Adjust-down arrow
- (3) Select
- (4) Exit

Three alternating flashing boxes should illuminate indicating the code was accepted. If no selection is made within one minute, the system returns to the normal operating mode.

**Note:** Pressing the “ (4 ) Exit” button at any time while in the programming mode returns the controller to the normal operating mode.

Press “(3) Select” to continue programming.

1. Cooling system “on” temp  
Press the “(1)” or “(2)” arrow until the desired set point is displayed. The range for this adjustment is 70° to 126°F, (21° to 52°C). When complete, press “(3)” to continue.
2. Heating system “on” temp  
Press the “(1) Adjust-up” or “(2) Adjust-down” arrow until the desired set point is displayed within a range of 0°F to 63°F (-17.5°C to 17°C). When complete, press “(3) Select” to continue. *(Optional for controller Versions 3.22 and later)*
3. High Enclosure Temperature Alarm:  
Press the “(1) Adjust-up” or “(2) Adjust-down” arrow to change the alarm set point within a range of 8°F (or 4° C) above the set temperature “HI” set point, to 135°F (or 57°C). Press the “(3) Select” button to continue.
4. Low Enclosure Temperature Alarm:  
Press the “(1) Adjust-up” or “(2) Adjust-down” arrow to change the alarm set point within a range of 8°F (or 4° C) below the set temperature “LO” set point to -20°F (or -29° C). Press the “(3) Select” button to continue. *(Optional for controller Versions 3.22 and later)*
5. Audible and Visual Alarm:  
The alarm LED will flash and the display will show “ALL”, indicating the “ALL” alarm on/off status. Press “(3) Select” and the display will show either “ON” or “OFF”, indicating current alarm status. Press “(1) Adjust-up” or “(2) Adjust-down” to toggle the mode as desired. If the “OFF” mode is selected, no alarms will activate and the audible on/off select function is skipped. Press the “(3) Select” button to continue.

The audible LED will flash and the display will show "AUD", indicating the audible alarm on/off status. Press "(3) Select" and the display shows "ON" or "OFF" indicating the current audible alarm status. Press "(1) Adjust-up" or "(2) Adjust-down" arrow to toggle the mode desired. Press the "(3) Select" button to continue.

#### 6 Digital display:

The "C" LED flashes - the display shows either "F" for degrees Fahrenheit or "C" for degrees Celsius. Press the "(1) Adjust-up" arrow or "(2) Adjust-down" arrow to toggle the mode as desired.

Press the "(3) Select" button to continue. The code LED is on and the display shows "PIN". To set a new user PIN code, press the "(1) Adjust-up" button. The display will flash "4", prompting an entry of a four button sequence using the "(1) Adjust-up", "(2) Adjust-down", "(3) Select" and/or "(4) Exit" buttons. (Any sequence of the four buttons may be programmed as the code.) As the buttons are pressed, the display will show the number of buttons that were pressed.

**Note:** After pressing a button, there will only be 5 seconds to press the next button. If the buttons are not pressed within the allotted time of 5 seconds, the system will default to no PIN code, indicated by "0" on the display. Once the sequence is entered the display will no longer flash, and will show "4".

To program the no PIN code mode, press "(2) Adjust-down", the display will show "0" indicating no PIN code. Pressing any button will permit access to the program.

#### \*\*\*CAUTION\*\*\*

Always record the selection sequence (PIN code) and store in a secure place.

#### 7. Filter Maintenance Alarm:

Press "(3) Select" to continue. The filter LED flashes and the display will show "FIL", indicating the filter alarm days selection. Press the "(3) Select" button and the display will show the number of days that the alarm is set in one-half day increments. (Ex: 10.5 indicates the alarm will activate every ten and one-half days.)

Press the "(1) Adjust-up" or the "(2) Adjust-down" arrow to vary the desired number of days. Programming 0 days will disable the alarm.

**Note:** The required number of days to set this alarm will be determined by the ambient air conditions. If rain or wash down hoods are installed, no filter is supplied and the filter alarm should be set to "0". This will disable the filter alarm.

Programming of the microprocessor is now complete. Press the "(3) Select" button to review all of the settings. Press the "(4) Exit" button to enter the selected settings and to return to the normal operating mode.

**Note:** If the "(4) Exit" button is not pressed, any changes to the program settings will not be saved.

#### ALARM OPERATION:

##### 1. High or Low Enclosure temperature Alarm:

LED will light, the display flashes either "HI" or "LO" and audible alarm sounds (if activated). Alarm will reset if enclosure temperature rises (or falls) two degrees Fahrenheit (one degree Celsius).

##### 2. High Condenser temperature alarm::

LED will light, the display flashes the condenser temperature, and audible alarm sounds (if activated). Condenser temperature must fall four degrees Fahrenheit (two degrees Celsius) before the alarm will reset. **The above alarms can be manually reset by entering the PIN code into the system.**

##### 3. Filter day timer has expired:

LED will light, the display flashes showing "FIL", the filter LED flashes with display and the audible alarm sounds (if activated). The filter alarm may be cleared by pressing "(4) Exit".

##### 4. Optional Alarm Output:

An optional alarm output is provided through an alarm relay. This option is a dry contact (no voltage) set of contacts that may be configured as:

Normally Open (X01—close on alarm) B&W wires  
Normally Closed (X02—open on alarm) B&R wires  
Normally Open and Normally Closed  
(X03—close on alarm) B,W&R wires

##### 5. Sensor Malfunctions:

E-O – Evaporator sensor open  
E-C – Evaporator sensor shorted  
C-O – Condenser sensor open  
C-C – Condenser sensor shorted

Alternating E-O...C-O display may indicate the sensor connector has become disconnected from the rear of the controller.

##### 6. Incorrect Voltage Supply

A continual flashing value of "3.15" or "3.16" on the display screen indicates supply voltage is either too high or too low.

#### TROUBLE SHOOTING:

Contact Ice Qube if the air conditioner system should fail to operate satisfactorily during the first year of operation. DO NOT remove the cover without first notifying the factory. Removal of the cover will immediately void the warranty.

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