iChill

User manual and info

iChill light on cycle running, light off cycle off

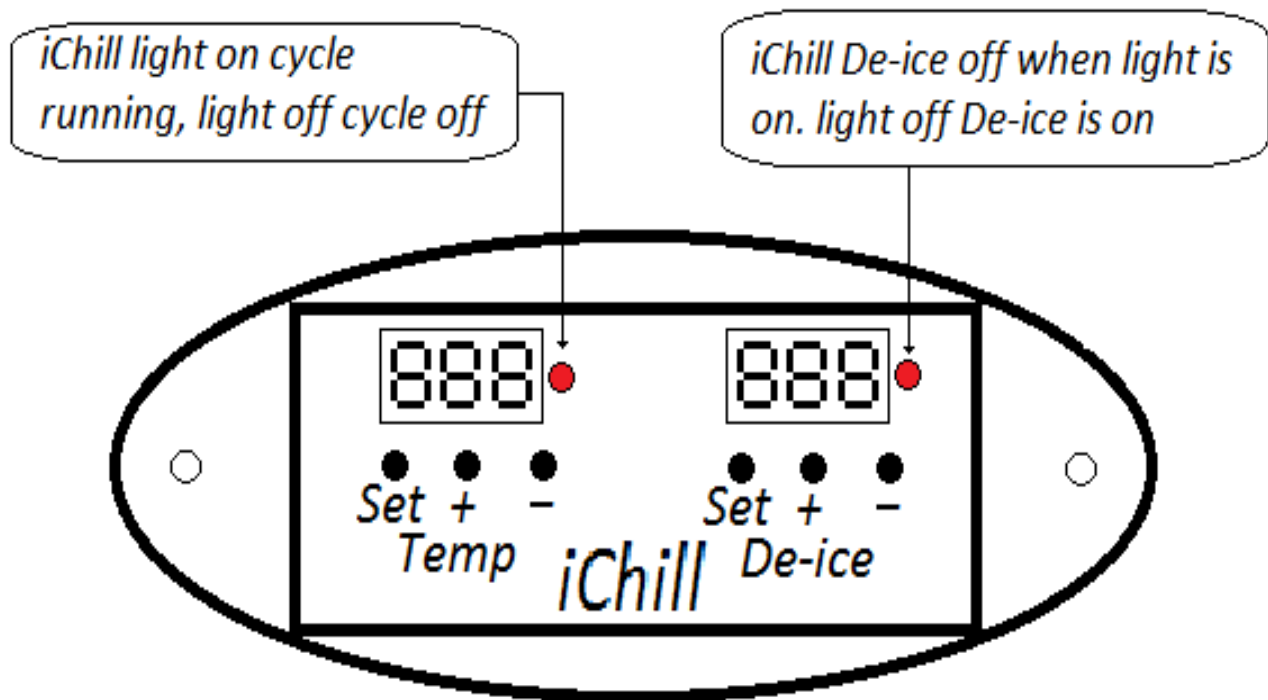iChill De-ice off when light is on. light off De-ice is on

Set + −
Temp iChill De-ice
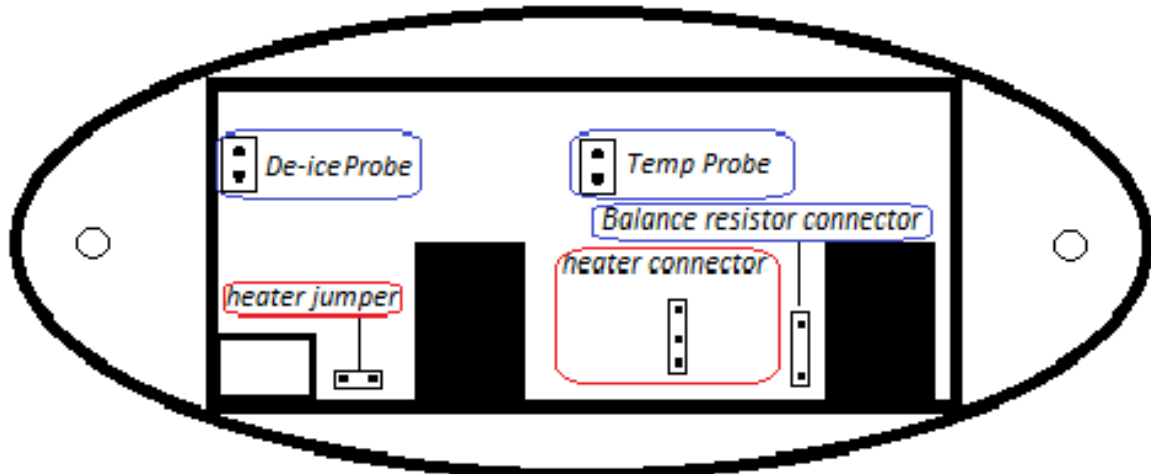
What comes with the iChill kit:

1 – iChill module

1 – Resistor Balancing module (unless installed in the module)

1 – Heater jumper (Not needed if Balance resistor used)

1 – Heater assembly (Not needed if Balancing resistor is used)

2 – Temp Sensors

2 – Temp sensor clips

1 – Power Supply

1 – Tin foil strip and foam insulate

2 – Mounting Screws

Sensor PROBES and connector locations

iChill Has 2 displays: TEMP and DE-ICE and both Displays have Mode Indicator Light beside each display

TEMP shows current room temperature , Pressing the temp Set button will show the current setting for room temperature limit and it will be flashing, pressing the "+" button will increase the temp setting and pressing the "-" will decrease the room temp settings. After about 5 seconds the temp will revert back Temp mode or (Room Temp) will display showing the current room temperature.

De-ice Display show current Evaporator temp or the A/C Fin Core temperature. To set De-ice Mode press Set button and the current De-ice Temp set will be displayed and flashing ,press the "+" button to increase temp or the "-" button to decrease temp, After 5 seconds the display will stop flashing and return to the current evaporator/core/fin temp.
The indicator light beside the De-ice display show the functionality of the De-ice mode if the light is on the De-ice mode is not on, once the indicator light turns off the mode is on and De-icing removing all the ice and frost from the Evaporator core. De-ice setting adjusts the sensitivity of the Evap/FINS Sensor to prevent freeze ups
.Adjust this setting ONLY if you are experiencing problems. The factory default setting is "1.0°C" Some users need to bump up to "3" or "4" to keep from icing up. For most people, going below "0" may cause random freeze or icing up, if you are experiencing ice ups and the problem has not been solved by increasing your De-ice setting, then raise your Heater Delay setting in the De-ice display press set once and again and hold P0 will display and flash then press the "+" button till it gets to P1 then press the set and then the "+ or –" to desired temp limit normally stock temp is 1 degree threshold or you can increase to from 0.5 to 7.0 degrees.
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<u>Using the iChill</u>

iChill uses 2 sensors (ROOM and Evaporator/Fin sensors), the HEATER cable (red tip) Or the secondary function Balance Resistor Cable for non-heater mode. You then Program the controller to direct your air conditioner to operate in such a way as to cool the room to a set temperature in between 0.5°C and 18°C without freezing up. And How does it do it? The HEATER cable (red tip) is keeping your A/C's sensor warm to make the A/C "think" it is warmer than the actual room temperature. By doing this, the compressor on your A/C keeps running and cools down the space. Or The Balance resistor skews the sensor reading to the a/c unit making it think its warmer than it is, when using the balance resistor there is no heater and no overheating problems that can happen with heaters as well as heater burning out making the system not have the ability of functioning correctly and there is no parts to wear out making it the way to go for life long use and less services needed and spare parts on hand.

The Temp and the De-ice sensors are in charge of telling the HEATER when to stop running. When the HEATER turns off, the A/C's sensor cools down and shuts off the compressor in response. If the room temperature reaches the set value, the HEATER will stop running. Your A/C's Temperature sensor will cool down and shut the compressor off.
If the fins of your A/C are reaching the freezing set point (1.0°C factory default), the HEATER will stop running. Your A/C's Temperature sensor will cool down and shut the compressor off to allow for a de-ice cycle. This is normal even if the room has not reached its set point.

<u>NOTE:</u>

- The De-ice of your A/C is not heat assisted, it defrosts by turning your compressor off and circulating air over the frosted Evaporator fin/coils.

- After installing iChill, we strongly advise you to run your cooler for a test period to let the cooler get to desired Temperature. This is to assure the system is performing correctly and to your needs.

- The iChill will remember all your last settings even if it is unplugged or a power failure and will resume after power is restored.

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Programming iChill.

If you press the "SET" button and hold for more than 5 seconds, the thermostat switches to the settings.
The available settings are:

P0 - Selection of the heater or cooler.
P1 - Hysteresis (0.1-15° C, the default 2° C)
P2 - The task of the upper working temperature limit (default 110° C)
P3 - The task of the lower working temperature limit (default -50° C)
P4 - Temperature correction (-7 + 7° C, default 0)
P5 - The delay on / off switch (0-10 sec., Default 0)
P6 - Over temperature alarm signal (0 +110° C, the default is off)

Use the "+" or "-" buttons to select between P0 and P6.
Use the "Set" button to enter a desired field.
Once all the settings have been made. You may use the "+" or "-" buttons to change the set point

Hysteresis Temp setting definition.

The temperature difference that is needed between the set point and actual reading, to switch the iChill on again after switching off. Thus meaning if our set point is 5°C and our Hysteresis is 2°C following steps will occur.

1) Temp Relay = ON
2) Temperature drops to 5°C
3) Temp Relay = OFF
4) Process medium warms up to 7°C (2°C higher than Set Point)
5) Temp Relay = ON
6) Return to step 2

 Delay - Time taken for the relay to respond to a change in the process.

DISCLAIMER AND WARRANTY

By using the iChill temperature controller Module

You (the "User") acknowledge there are inherent hazards in getting an air-conditioner to do something it was not originally designed to do, and that these inherent hazards cannot be, mitigated, Obviated or ameliorated while still maintaining the essential functionality of the iChill. User accepts all responsibility in the use of and monitoring of the iChill and A/C Unit. And proper servicing and cleaning of A/C unit. User assumes all risk of loss of property or product due to improper functioning of the iChill (or A/C) Unit.

All Users assume all risk of injury and warrants that he/she will defend, indemnify and hold the seller harmless for any direct or consequential harm or damage that may result from the use of this product. Users that don't accept this responsibility must return the iChill for a FULL REFUND before use.

LIMITED WARRANTY:

iChill are warranted against defects for 1 year, not including damage due to misuse or accidents.