PINELOCH POOL
CONSTRUCTION

FREEZE PROTECTION

Overview:
The basic strategy for protecting your pool against a hard freeze centers on simply circulating the water through the plumbing lines.
It is very difficult to freeze moving water. In most cases our temperatures don't get cold enough (for long enough) to use your heater in this effort. Just simply keep the pumps circulating. For those clients with mechanical time clocks, simply remove the "off" pin from your timer and allow the motors to run 24/7.
For those with automated control systems, see below. Of course this approach assumes you maintain power throughout the freeze. If you lose power for an extended duration, please see winterizing instructions below.

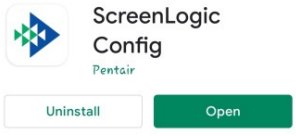
Automated Systems:
When we installed your automated system, we enabled the freeze protection mode for each circuit that requires it. When the temperature reaches 35° or below, these circuits will automatically come on. If you want to verify these settings please continue reading below.

The following recommendations and procedures are for Pentair Easytouch and Intellitouch systems. Many other brands operate in a similar manner, but the menu trees may be slightly different.

ScreenLogic users:
Unfortunately, the option to view or change your "freeze protection" settings are not available on the main ScreenLogic app. However, there are two fairly easy ways you can check your system for freeze settings:

1) Download and install the Screenlogic Configuration App from Google Play or Apple Store to your tablet or smartphone, login with the same credentials as you do with Screenlogic, look under the "setup circuits" option to review the "on with freeze" selector switch for each circuit. (see below which items should be selected)

   It should look like one of these:



2) For Easytouch owners, you can access the needed information from the display screen on your exterior control panel by the equipment pad. Open the main panel door to access the LCD screen and follow this menu tree: *Menu>Settings>Circuit Functions*. Then use the up/down buttons to scroll through all your circuits to determine which ones have freeze protection enabled.

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Pool or Spa Mode?
For those with automated control systems and Pineloch built pools, we would like you to keep your pool operating in "pool mode" during a freeze. We have plumbed your pool so that it provides circulation to both your spa and pool plumbing lines when in pool mode.
If "spa mode" is enabled for freeze protection, the automatic valves will rotate between the pool and spa plumbing every 15 minutes. This is not necessary due to how we originally setup your plumbing.
Please verify that the "spa" circuit is ***disabled*** for freeze protection and that the "pool" circuit is ***enabled***.

Which Circuits?
Now that you can find and access the "freeze protection" selectors through various means listed above, which circuits should be enabled for freeze protection?

- **Pool**- **Enable**
- **Spa**- Disable
- **Master Cleaner**- Disable (this is in reference to Pentair, Kreepy Krauley, and Polaris type roving cleaners) These cleaners have water flow through their booster pumps provided by the main pool pump which is enabled above (through the pool circuit) Therefore it is not necessary to also run your cleaner during a freeze. It is still getting some water flow, even when not moving.
- **Cleaner/Paramount**- **Enable** Paramount in-floor cleaning systems utilize a pump independent from the main filtration pump, therefore, they should be enabled for freeze protection.
- **Air Blower**- Disable If the air blower is engaged and active during a freeze, the most likely result will be that the air will bubble up the side walls of the spa and create a mess, soaking your coping and surrounding decking. We would expect more damage from this water freezing around your coping/decks than we would the potential damage to this one plumbing line. For these reasons we feel the risk to this one pipe is less than the expected damage you might see from allowing it to run.
- **ALL other waterfeatures**- **Enable** Most waterfeatures are plumbed with an independent pump and should be active during a freeze.
- **Water bowls**- If you have a water bowl(s) it will depend on their installation whether or not you should run them during a freeze.
    - If your water bowl(s) normally drains down when its pump is off and refills itself during normal operation, you don't need to run this as part of your freeze protection and can disable its control circuit.
    - If however, your bowl was plumbed with a check valve system that *holds* the water in the bowl even when it's not operating, then you should **enable** the freeze protection for the circuit that runs the bowl(s)

If you have any specialty features that fall outside of the items discussed above, let us know and we can determine if they should be enabled for a freeze condition.

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Loss of power – Winterizing

If we experience a power grid issue and loss of power for an extended period of time, physical winterizing procedures will be necessary. For winterizing your pool, you will need to drain the water from your pumps, filters, heaters, valves, and any above ground pipes.

1- Turn off pool system completely. In most cases, this simply means killing power to your system. Easytouch and Intellitouch computer systems have circuit breakers installed in the main pool panel, simply turn them all off. If your system is winterized and power is restored unexpectedly you do not want your pumps coming back on!

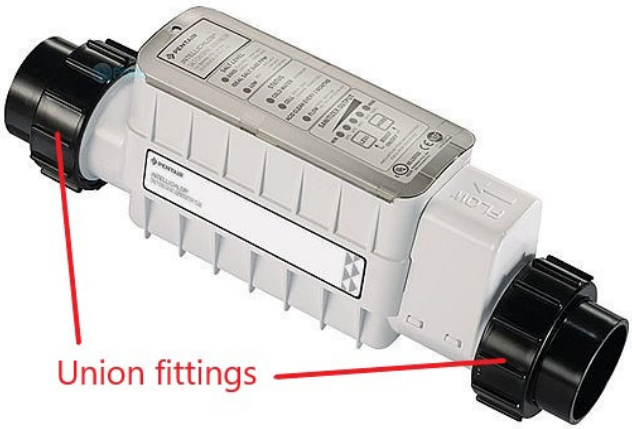
2- Filter winterization. Remove the drain plug on the bottom of the filter. Then release the air bleed valve on top of the filter (typically a counterclockwise twist, about a ¼ turn).

3- Pump winterization- Main pumps. Your pumps have a drain plug for both the basket section and the impeller section of the pump. Remove them both. Remove the pump lid to break any vacuum on the system and release the water.

4- Pump winterization- booster pumps. You can either locate and remove the plug on the front of the pump volute, or simply remove the frontside flexible hose and tilt the pump forward to drain the water.

5- Heater winterization. Below the intake/outlet manifold on your heater, there is a drain plug. Remove this plug allow water to drain.

6- Salt cell winterization. Your Pentair salt cell has two black unions holding it in place. Remove them both and lift the cell out of place and turn up 90°, allowing water to drain out. If all of your other piping has been drained, you can put the unit back in place. If not, its ok to temporarily leave this disconnected.



7- Draining pool lines. In most cases your pool equipment is set at a slightly higher elevation than your pool. While winterizing the system (by draining pumps and filters), you have broken the vacuum on the system and allowed water to drain out through the pipes and back down to your pool, effectively completing this step. There are instances however where check valves, 3-way valves, or ball valves will prevent this, so in preparation for an extended freeze, please contact us for more information.

8- Autofill systems. In most cases your lines feeding your autofill system have been wrapped as these lines extend above the frost line. However, these are smaller ¾" lines and are typically the first ones to freeze and crack. Autofill units use standard sprinkler system solenoid type valves. Some are equipped with drain valves, some are not. Drain them if you can, if not, they are relatively inexpensive and easy to replace. The best course of action is to simply turn off the valve *feeding* the autofill system. Your autofill is typically fed from a nearby exterior spigot. Locate this valve and shut off any water feeding the autofill. After the freeze has passed, we can determine if any damage has occurred.

These simple steps should help avoid costly repairs in case of a hard freeze as you've protected the most valuable portions of your equipment, your pumps, heaters, and filters.