

# HomeSeer 4

## ScreenLogic Plugin

### User Guide

v2.1.5.x  
Strebor Tech  
July 2023

## Introduction

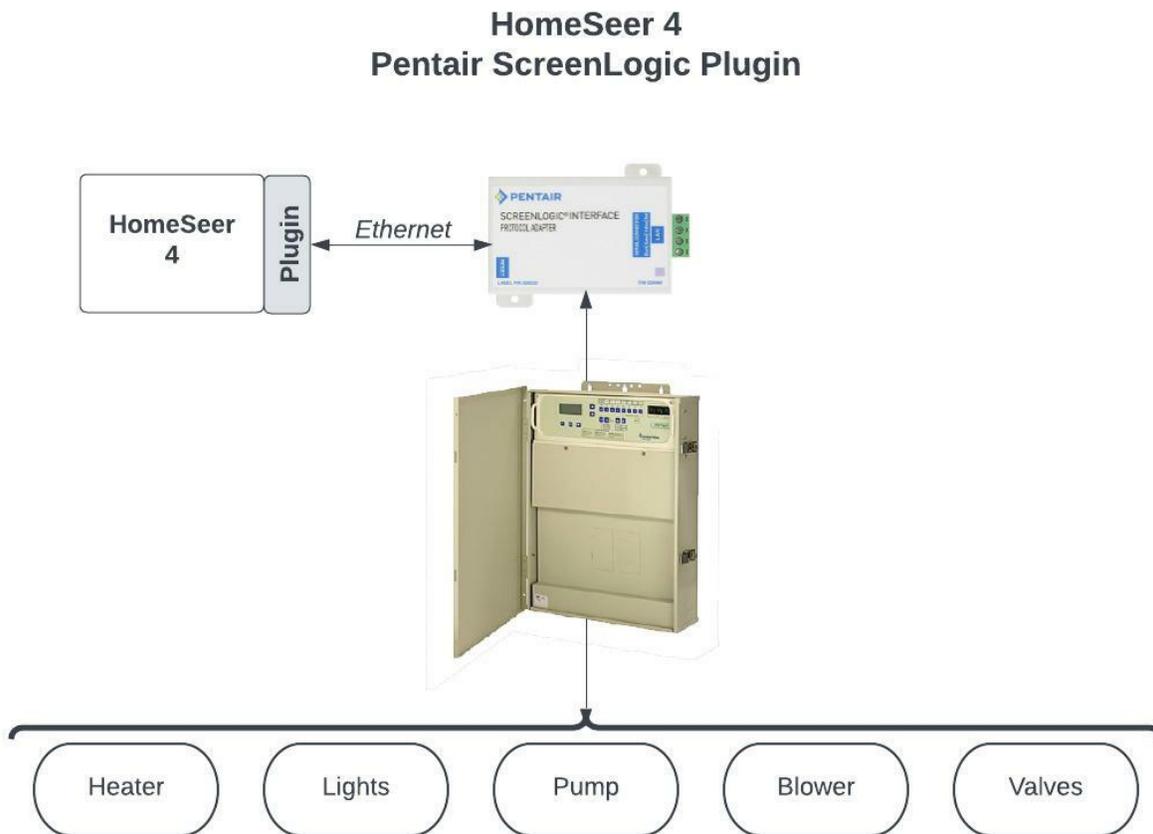
The ScreenLogic Plugin integrates HomeSeer 4 with the **Pentair ScreenLogic Protocol Adapter** over your local area network to manage and monitor the **Pentair EasyTouch Controller**. Once started, the Plugin performs Auto Discovery to locate the Adapter hardware on the network. The HomeSeer root Device is created and named with the familiar “Pentair: XX-XX-XX” format, where the XX’s represent the last 6 digits of the Adapter’s network MAC address. The Plugin then periodically polls the Adapter to create and update the configuration information. Some Feature values are settable as described in the tables below. The ScreenLogic Root Device (ie Pentair: 11-22-33) may be renamed should you prefer.

### **ScreenLogic V2 Plugin** debuts with

- **C# Network Stack:** Utilizes a native *C# Network Stack* to communicate with the Adapter, which eliminates the restrictions imposed by the Python implementation in V1, and also paves-the-way for adding new features in future releases.
- **Performance:** Polling boasts a *10 fold performance increase* on all platforms, and plugin size is reduced dramatically.
- **New Platforms:** HomeTroller running *Windows 7 is now supported..!*
- **Instant Updates:** The most requested feature, the Adapter’s *instantaneous updates* are now processed by the Plugin which receives changes from the Controller and immediately updates HomeSeer. [See details below](#)
- **Product Improvement Opt-In:** This major release also allows *opting into Product Improvement Analytics*. [See details below](#)

## New in this release:

- Added EasyTouch Clock and AutoDST
  - Provides [Sync] button to synchronize HomeSeer time with the EasyTouch Clock
  - Includes ClockSync.vb script which can be run periodically, or when the Clock updates.
- Added Adapter Firmware
- Fixed decoding of IntelliChem data



## Manual Configuration

**Auto Discovery could fail if HomeSeer is not on the same network segment as the Adapter**, for example if they are on different VLANs. Should this occur an Error is written to the HomeSeer Log and also the Device Status. The ScreenLogic Settings page contains a section to manually configure the Adapter. The page includes an example to cut, paste and edit to specify the Pentair Adapter name (ie, "Pentair: 11-11-11") and IP Address (ie, 192.168.1.1) .. *the formatting is critical* and typos will cause Discovery to fail and write errors in the Log.

## Dynamic Naming

The ScreenLogic Circuit Names are specified in the Pentair EasyTouch Controller. If a Circuit Name is changed in the Controller, the next poll will *dynamically update* the name in HomeSeer and a message written in the Log. The Feature Reference Id is not altered so that Events and HSTouch are not affected. **Dynamic Naming is disabled** by manually changing a Circuit's Name in the HomeSeer UI which will write a message to the Log. **Dynamic Naming is re-enabled** for a Circuit by manually changing the Name to "\*" (asterisk, without the quotes). During the next polling interval HomeSeer will be updated with the Circuit name specified by the Controller and a message written to the Log.

**Note:** *HomeSeer does not automatically refresh the web interface when the name changes. Manual page refresh is required.*

## Windows and Linux

The ScreenLogic Plugin runs on Windows, Linux and the Raspberry Pi and Docker out of the Box. This includes older HomeTroller products running on Windows 7. Please post a message on the HS4 ScreenLogic forum If you experience any problems with your setup. A link to the [Forum](#) is on the ScreenLogic About page for your convenience.

## Instantaneous Updates

The ScreenLogic Plugin is able to receive Instantaneous Updates sent asynchronously by the Adapter. The Adapter sends updates when things like the Air Temperature changes, or you've manually turned on the spa from the Controller or Pentair App. However, some data is only available during polling.

**Note:** *Some specific features are dependent on your ScreenLogic Configuration*

The data available in the Instant Update includes:

- Circuit State: On, Off and Delay
- Air Temperature
- Pool and Spa: Last Temperature, Heat Status, Heat Mode, Heat SetPoint, Cool SetPoint
- Delays: Pool, Spa and Cleaner
- Freeze Mode
- SaltPPM, pH, pHTank, ORP, ORP Tank, Saturation

## Product Improvement Analytics

The Settings page contains a checkbox where you can opt into Product Improvement Analytics. This will help the development team to be more proactive at validating the different Pentair EasyTouch configurations. During plugin initialization, the JSON configuration of your EasyTouch is uploaded for analysis. This does not include any personal information. You can opt out at any time. The JSON configuration can be seen in Plugins → ScreenLogic → Export

## Plugins → ScreenLogic → Settings

The ScreenLogic Settings page allows you to:

- Set the logging level: Error, Warning, Info, Debug, Trace
- Specify how often to poll the Adapter, from 10 to 300 seconds (default is 30)
- Enable or Disable Polling
- Manually configure the Adapter Name and IP Address
- Opting In or Out of Product Improvement Analytics
- Adapter-specific Settings for Salt Cell Calibration

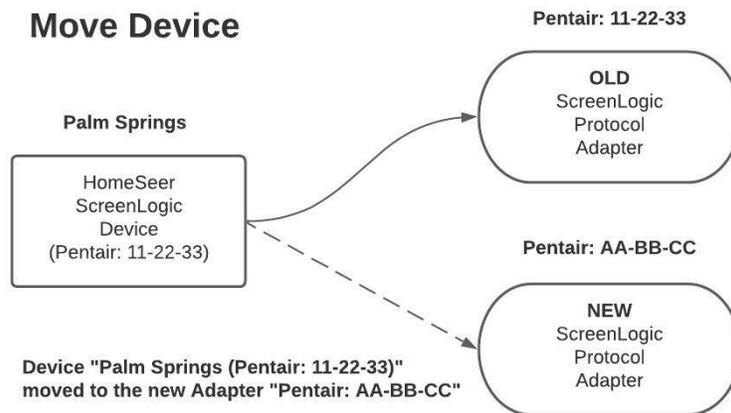
The screenshot shows the HomeSeer Web Control interface. At the top, there is a dark blue header with the HomeSeer logo and the text "HomeSeer Web Control". Below the header is a navigation bar with links for "Devices", "Events", "Cameras", "Setup", "Tools", and "Plugins". A search bar is visible on the right side of the navigation bar. The main content area has a blue breadcrumb trail: "ScreenLogic" > "Pentair-xxxxxx". Below this, the page title is "Plugin Settings: ScreenLogic". The "Logging Level" is set to "Debug". The "Polling Interval (10 to 300 seconds)" is set to "60". The "Polling Enabled" toggle is turned on. There is a text area for "Manually Configured ScreenLogic Adapters. See About page" which is currently empty. Below this, an example JSON configuration is shown: "Example: { 'adapters': [ { 'Name': 'Pentair: xx-xx-xx', 'IPAddress': '192.168.1.1', 'Port': 80 } ] }". The "Product Improvement Analytics Opt-In" toggle is also turned on. At the bottom right, there are two buttons: "CANCEL" and "SAVE".

## Plugins → ScreenLogic → Import / Export

Additionally, the ScreenLogic Plugin supports **Importing** and **Exporting** the configuration information in a JSON format. These functions are only needed if directed by Tech Support.

## Plugins → ScreenLogic → Move

When the plugin discovers the ScreenLogic Adapter for the first time, a new HS Device is created, and associated-with and named-after the new Adapter using its unique Address (ie, Pentair: 11-22-33). In the rare event that you must replace your Adapter, the HS Device needs to be “moved” to the new Adapter, which will update the Device association to the new Adapter’s new unique Address.



### *FAQ: When should I move the ScreenLogic Device?*

Perform the Move operation prior to installing the new Adapter; the Move tool has the instructions. Look on the Adapter for its Address (ie, Pentair: AA-BB-CC) and use this value when asked.

### *FAQ: I added the new Adapter before moving the Device*

**Failing to Move the Device prior to installation of the new Adapter breaks ScreenLogic Events, Scripts and HS Touch operations.** This is because the Device is still referencing the old Adapter, which is no longer present in your configuration. Adding the new Adapter before moving will discover the new Adapter, create a new HS Device and associate it with the new Adapter. **You can still move the original Device**, but after the Move you should delete the new Device that was created; it is now orphaned with no associated Adapter. This can be done manually from the HS Device page, or use the Move tool toggle: *“Delete orphaned Device after Move?”*. When this toggle is enabled, after associating the original Device

with the new Adapter, the Move tool will delete the newly orphaned Device. The toggle has no effect if the Move results in no orphaned Device.

After Moving a Device to a new Adapter, be sure to check the Log to verify Discovery completes properly and the new Adapter is now Connected.

## ScreenLogic Features

- *Temperatures are displayed in degrees F or C depending on the EasyTouch configuration*
- *Temperature trending arrow is based on the previously received value*
- *Circuits and Features could vary depending on your specific EasyTouch configuration*

Name	Description	Example	Settable
Pentair: XX-XX-XX	Root Device, Pentair Controller Type	EasyTouch2 4	
Freeze Mode	EasyTouch Freeze Mode	Off	
Config Ok	EasyTouch Configuration is Ok	Yes	
Cleaner Delay	Pump Delay for Cleaner Mode	Off	
Pool Delay	Pump Delay for Pool Mode	Off	
Spa Delay	Pump Delay for Spa Mode	Off	
Equipment	Controller optional hardware	Chlorinator	
Status	Adapter IP address, or error (see Log)	192.168.27.129	
Air Temperature	Ambient air temperature	58 °F ↑	
Pool Heat Mode	Off, Solar, Solar Preferred, Heater	Off	✓
Pool Heat Status	Off, Cooling, Heating	Off	
Pool Heat Set Point	Pool Heater Temperature	85 °F	✓
Pool Cool Set Point	Pool Cooler Temperature	82 °F	✓
Pool Last Temperature	Pool water last temperature	72 °F ↓	
Spa Heat Mode	Off, Solar, Solar Preferred, Heater	Heater	✓
Spa Heat Status	Off, Cooling, Heating	Off	
Spa Heat Set Point	Spa Heater Temperature	97 °F	✓
Spa Cool Set Point	Spa Cooler Temperature	85 °F	✓

Name	Description	Example	Settable
Spa Last Temperature	Spa water last temperature	80 °F ↑	
Spa	Toggles Spa Operation <ul style="list-style-type: none"> <li>• May toggle Pool setting</li> </ul>	On, Off	✓
Air Blower	Configurable Circuit, example only	On, Off	✓
Pool High	Configurable Circuit, example only	On, Off	✓
Pool	Toggles Pool Operation <ul style="list-style-type: none"> <li>• May toggle Spa setting</li> </ul>	On, Off	✓
Feature 1 : Feature N	Optional Feature which the end-user can configure in their EasyTouch Controller.  Note: <ul style="list-style-type: none"> <li>• Your configuration may have more or less Features.</li> <li>• These Features can be hidden in HomeSeer to reduce UI clutter.</li> </ul>	On, Off	✓
Clock	The EasyTouch Clock	Mon May 1, 2023 13:21:56	✓ <sup>1</sup>
AutoDST	The EasyTouch Clock Auto DST	On, Off	✓
Adapter Firmware	ScreenLogic Adapter Firmware Version	POOL: 5.2 Build 738.0 Rel	

## Light Features (if so equipped)

Name	Description	Example	Settable
Pool Light	Turns Light On or Off  <b>Note:</b> <ul style="list-style-type: none"> <li>• Your configuration may contain zero or more Light Circuits, ie, Pool, Spa, Jets, ...</li> <li>• Each Light Circuit can be turned On and Off individually.</li> </ul>	Off	✓
Light Mode	Off, On, Set, Sync, Swim, Party, Romance, Caribbean, American, Sunset, Royal, Save, Recall, Blue, Green, Red, White, Magenta, Thumper, Next, Reset, Hold	Blue	✓

<sup>1</sup> The ScreenLogic Plugin sets the EasyTouch *Clock* by Synchronizing the time with the running HomeSeer system. Doing so will also set *AutoDST* to Off, which can be manually set back to On if so desired. See [The EasyTouch Clock](#) for more information.

Name	Description	Example	Settable
	<p><b>Note:</b></p> <ul style="list-style-type: none"> <li>Changing the Light Mode will turn ALL Light Circuits On.</li> <li>HomeSeer will remember the Light Mode <u>after</u> it is set.</li> <li>EasyTouch supports a <u>single</u> Light Mode which controls ALL Light Circuits.</li> </ul>		

## Chlorine Generator Features (if so equipped)

Name	Description	Example	Settable
Spa Chlorine Generator	Chlorine Generator percentage while in Spa Mode (0 to 100%)	0 %	✓
Pool Chlorine Generator	Chlorine Generator percentage while in Pool Mode (0 to 100 %)	15 %	✓
Salt PPM	Chlorine Generator Salt Parts Per Million	4,200 ppm	
Super Chlorinator Timer	<p>Super Chlorination Timer</p> <p><b>Note:</b></p> <ul style="list-style-type: none"> <li>Setting timer may turn on the Pool or Spa</li> </ul>	0 hours	✓

## Pump Features (if so equipped)

- Multiple Pumps may be displayed depending on your configuration
- Pump name (ie, Pool Pump) is specified by the EasyTouch Controller
- Some Pump features are dependent on your configuration

Name	Description	Example	Settable
Pool Pump	Turns Pump On or Off	On	
Pool Pump Current RPM	<p>Pump current RPM</p> <ul style="list-style-type: none"> <li>If so equipped</li> </ul>	2,700 rpm	
Pool Pump Type	Pump Type	Intelliflo VS	
Pool Pump Current Watts	<p>Pump current power consumption</p> <ul style="list-style-type: none"> <li>If so equipped</li> </ul>	1,137 W	

Pool Pump Current GPM	Pump current GPM • If so equipped	60	
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## IntelliChem Features (if so equipped)

Name	Description	Example	Settable
Current pH		7.43 pH	
Current ORP		762 mV	
pH Setpoint		7.4 pH	
ORP Setpoint		750 mV	
pH Last Dose Time		15 Sec	
ORP Last Dose Time		3 Sec	
pH Last Dose Volume		32 mL	
ORP Last Dose Volume		6 mL	
pH Supply Level		5	
ORP Supply Level		6	
Saturation		-0.48 Isi	
Calcium Hardness		250 ppm	
Cyanuric Acid		0 ppm	
Total Alkalinity		90 ppm	
Salt/TDS		0 ppm	
pH Probe Water Temperature		54 °F	
Flow Alarm		0	
pH Alarm		0	
ORP Alarm		0	
Ph Supply Alarm		0	
ORP Supply Alarm		0	

Name	Description	Example	Settable
Probe Fault		0	
pH Lockout		0	
pH Daily Limit Reached		0	
ORP Daily Limit Reached		0	
pH Dosing State		1	
ORP Dosing State		0	
IntelliChem Firmware		80.001	

## The EasyTouch Clock

The EasyTouch panel provides a built-in clock with which it maintains local schedules. The Clock drifts over time and requires manually resetting with the Pentair app. The ScreenLogic Plugin displays the EasyTouch Clock via two Device Features:

Feature	Display Value	Numeric Value
Clock	Mon May 1, 2023 13:21:56	1682961716 <i>ie, Seconds since January 1, 1979 00:00:00</i>
AutoDST	Off, On	0, 100

The EasyTouch panel's *AutoDST* setting automatically adjusts the *Clock* during DST change over and may be turned On and Off from the Plugin.

The WebUI Device page shows two times for the *Clock*, which can be confusing. The "EasyTouch Time" value is read from the Adapter. Then beside that, HomeSeer shows when that value was updated in the system; ie, the Time when the Adapter Poll occurred.



**PLEASE NOTE:** *The local EasyTouch Schedules can become confused when a Schedule is modified or the Clock is changed. For example, Pool Start and End times. In either case, the behavior observed were local Schedules temporarily stop functioning properly, ie, the Pool doesn't turn off at the right time, but works correctly the next day. This is not a bug in the ScreenLogic Plugin but a feature of the panel 😊 This of course only occurs with local EasyTouch-based Schedules and not with HomeSeer Events.*

The ScreenLogic Plugin displays the latest polled EasyTouch **Clock** value. The Clock can also be synchronized with the HomeSeer System Clock via the **[Sync]** button in the WebUI. Pressing the [Sync] button (or setting the Clock to **Sync** from an Event) synchronizes the EasyTouch Clock and disables AutoDST. The assumption is you'll want to continue managing the EasyTouch Clock from the Plugin. But should you need it, the AutoDST value can be re-enabled (set to On) manually or via an Event.

## Synchronizing the Clock

The ScreenLogic Clock Synchronization function can be performed either manually in the WebUI or by an automated HomeSeer Event. Provided in the HomeSeer Scripts folder is the **ClockSync.vb** script which determines if the EasyTouch Clock has drifted and requires synchronization. For example, the Event below executes the script is every 12 hours.

The **ClockSync.vb** script takes two arguments, separated with a semicolon ( ; )

- Adapter Name
  - Which you may have renamed in the WebUI
- Clock Drift (in seconds)
  - The drift value should take into account the Adapter polling interval.

Groups / Pool / Sync ScreenLogic Clock

**IF**

The event will automatically trigger every 12h, 0m, 0s **Execute ClockSync.vb every 12 hours**

**THEN**

Action  
Run a Script or Script Command

Script  
ClockSync.vb

New Script

Sub or Func

Parameters  
Pentair: 11:22:33; 300 **Adapter Name ; Second Drift**

Immediate Command  Wait for script to finish  Only run one script at a time

**EDIT SCRIPT**

The ClockSync.vb script could also be executed whenever the Clock value has changed, which would occur during every poll of the Adapter.

**If**

Trigger  
A Device's Value is...

Trigger Type  
This Device Has a Value that Just Changed:

Device  
Plugin-ScreenLogic-Pentair: ██████-Clock

Has a value that just changed

**THEN**

Run the script: ClockSync.vb  
and only allow one instance of the script to run at a time.

**ADVANCED OPTIONS**

# ScreenLogic Device Example:

Plugin   ScreenLogic					
<b>Pentair:  (8118)</b>	EasyTouch2 4				
 <b>Status (8125)</b>	192.168.27.169	Today 11:28:43 AM			
 <b>Equipment (8124)</b>	Chlorinator	11/16/2022 8:34:25 PM			
 <b>Air Temperature (8126)</b>	87 °F	Today 11:22:43 AM			
 <b>Freeze Mode (8119)</b>	Off	9/3/2022 9:22:51 PM			
 <b>Config Ok (8120)</b>	Yes	Today 12:20:34 AM			
 <b>Cleaner Delay (8121)</b>	Off	9/3/2022 9:22:51 PM			
 <b>Pool Delay (8122)</b>	Off	9/3/2022 9:22:51 PM			
 <b>Spa Delay (8123)</b>	Off	9/3/2022 9:22:51 PM			
 <b>Pool Heat Status (8127)</b>	Off	Today 10:58:40 AM			
 <b>Pool Heat Mode (8128)</b>	Heater	Today 8:33:04 AM	OFF	HEATER	
 <b>Pool Heat Set Point (8129)</b>	85 °F	Today 8:33:11 AM	75	80	85
			<input type="text" value="85"/>		
 <b>Pool Last Temperature (8130)</b>	85 °F	Today 10:32:42 AM			
 <b>Spa Heat Status (8131)</b>	Off	Yesterday 7:19:54 PM			
 <b>Spa Heat Mode (8132)</b>	Heater	11/18/2022 4:43:23 PM	OFF	HEATER	
 <b>Spa Heat Set Point (8133)</b>	98 °F	5/8/2023 10:37:11 AM	95	97	99
			<input type="text" value="98"/>		
 <b>Spa Last Temperature (8134)</b>	98 °F	Yesterday 7:26:30 PM			
 <b>Spa Chlorine Generator (8135)</b>	0 %	5/8/2023 10:40:54 AM	<input type="text" value="0%"/>		
 <b>Pool Chlorine Generator (8136)</b>	10 %	5/8/2023 10:40:54 AM	<input type="text" value="10%"/>		
 <b>Salt PPM (8137)</b>	4,600 ppm	Yesterday 8:04:21 AM			
 <b>Super Chlorinator Timer (8138)</b>	0 hours	5/18/2023 3:04:06 AM	<input type="text" value="0 hours"/>		
 <b>Pool Pump (8139)</b>	On	Today 8:00:40 AM			
 <b>Pool Pump Current RPM (8140)</b>	2,900 rpm	Today 9:00:42 AM			
 <b>Pool Pump Type (8141)</b>	Intelliflo VS	9/3/2022 9:22:51 PM			
 <b>Pool Pump Current Watts (8142)</b>	1,456 W	Today 11:26:43 AM			
 <b>Spa (8143)</b>	Off	Yesterday 7:48:04 PM	OFF	ON	
 <b>Pool Light (8144)</b>	Off	Today 6:19:19 AM	OFF	ON	
			OFF	ON	SET

				SYNC	SWIM	PARTY
				ROMANCE	CARIBBEAN	
				AMERICAN		
 <a href="#">Light Mode (8145)</a>	Blue	2/22/2023 9:02:26 PM		SUNSET	ROYAL	SAVE
				RECALL	BLUE	GREEN
				RED	WHITE	MAGENTA
				THUMPER		NEXT
				RESET		
				HOLD		
 <a href="#">Air Blower (8146)</a>	Off	4/22/2023 1:41:21 PM		OFF		ON
 <a href="#">Pool High (8147)</a>	On	Today 9:00:07 AM		OFF		ON
 <a href="#">Pool (8148)</a>	On	Today 8:00:07 AM		OFF		ON
 <a href="#">Feature 1 (8149)</a>	On	Today 8:00:07 AM		OFF		ON
 <a href="#">Feature 2 (8150)</a>	Off	12/12/2022 4:02:55 AM		OFF		ON
 <a href="#">Feature 3 (8151)</a>	Off	12/17/2022 7:23:42 AM		OFF		ON
 <a href="#">Feature 4 (8152)</a>	Off	12/14/2022 7:51:27 PM		OFF		ON
 <a href="#">Feature 5 (8153)</a>	Off	12/17/2022 10:48:43 PM		OFF		ON
 <a href="#">Feature 6 (8154)</a>	Off	10/3/2022 12:04:44 PM		OFF		ON
 <a href="#">Feature 7 (8155)</a>	Off	10/3/2022 12:04:48 PM		OFF		ON
 <a href="#">Feature 8 (8156)</a>	Off	10/3/2022 12:04:51 PM		OFF		ON
 <a href="#">AuxEx (8157)</a>	Off	9/3/2022 9:22:52 PM		OFF		ON
 <a href="#">Pool Pump Current GPM (8158)</a>	0 gpm	9/4/2022 1:30:01 PM				
 <a href="#">Spa to Set Point Duration (9974)</a>	1+ Days	4/30/2023 8:16:53 PM				
 <a href="#">Auto DST (9997)</a>	Off	5/9/2023 12:57:54 PM		OFF		ON
 <a href="#">Clock (9998)</a>	Mon May 22, 2023 11:28:20	Today 11:28:43 AM			SYNC	
 <a href="#">Adapter Firmware (9999)</a>	POOL: 5.2 Build 738.0 Rel	5/8/2023 8:04:31 PM				

Showing 45 of 196 Devices/Features