bPentair Driver

bPentair is a driver that controls Pentair pool equipment. It supports all basic functionality such as pool and spa temperature reporting, setpoints, heating modes and circuit/aux control. bPentair also can control IntelliBrite lighting, iChem water chemistry controller (PH, ORP and LSI setpoints and alarm events), iChlor hardware (chlorination setpoints and salt alarm events) and variable speed pump RPMs and watts.

Unlike the standard Pentair driver, bPentair does NOT require the use of an expensive iLink or ScreenLogic hardware and instead uses a standard RS485 to RS232 protocol adapter to connect directly to Pentair. This direct connection gives bPentair a greater level of control, monitoring, flexibility and reliability.

Features At A Glance

- Supports IntelliTouch and EasyTouch
- Implements all standard Pool Proxy features
- Command ACK / retry logic for enhanced reliability
- Pool, Spa and Air setpoint and temperature graphing
- IntelliBrite control
- Heater name customization, heat rate tracking, variables and conditionals
- C4 – Pentair Time synchronization
- iChem Water Chemistry Controller Integration
    - PH, ORP and LSI setpoints, variables, conditionals, graphing, events and alarms
    - Operational alarms (No Flow, Lockouts, Dose Limits, Tank Levels)
- iChlor Integration
    - Pool and Spa chlorination setpoints
    - Salt graphing, events and alarms
    - Operation alarms (No Flow, Super Chlorination status)
- Variable Pump Integration
    - View current RPM and Watts
    - Change pump speeds
    - Spa Warmup Speed

Table of Contents

Setup

1) Install and wire your RS485/RS232 protocol adapter between the C4 controller and Pentair. See Protocol Adapter section for more information
2) Within your Control4 project, install an instance of the bPentair driver
3) Customize the properties in the bPentair Setup section of the Advanced Properties / Properties tabs
4) In the Connections tab, create a connection between bPentair's Serial RS-232 Input and the Controller's Serial Port
5) Once bPentair starts receiving messages from the serial connection, it will begin the auto setup process including AUX, pump and IntelliBrite discovery

Protocol Adapter

Pentair uses a RS485 serial bus for communication between devices while Control4 controllers have RS232 inputs. Therefore, it is necessary to use a protocol adapter to directly connect the hardware platforms.

While not endorsing this product, I have successfully been using this protocol adapter manufactured by DTECH and currently available for $23 on Amazon here: https://a.co/d/eUn0PH2. You may also couple the protocol adapter with a DB9 to 3.5m adapter if bPentair will be installed on a controller that does not have a DB9-type serial input port.

Using the below table, make all four connections between the Protocol Adapter and Pentair

DTECH Protocol Adapter	Pentair RS485
GND	GND (Black)
T/R-	DT- (Green)
T/R+	DT+ (Yellow)
VCC	15V+ (Red)

Command Ack / Retry Logic

One of the primary reasons for writing bPentair stemmed from my frustration with constant command failures. While Pentair does implement command acknowledgement, it is not exposed via the iLink. Furthermore, the iLink too often fails to even send a command and simply replies with a "Busy" error – not exposed via the standard C4 Pentair driver.

bPentair implements a serial queue whereby one command is sent at a time. The next command in the queue is not sent until either the command is acknowledged by Pentair or, if the command is to ask for information or status, the expected result is published.

Additionally, commands are divided into two categories – "High" priority and "Normal" priority. High priority commands are commands like changing setpoints and turning heaters and pumps on/off. Normal priority commands are non-critical status requests like get date/time or get temperature – status items that are published regularly and not particularly time-sensitive. High priority commands are attempted 10 times before the command is flagged as failed and the next command in the queue is attempted. Normal priority commands are attempted 5 times.

Properties

Driver Setup

Driver Version	Installed driver version
MAC Address	Unique network interface identifier for the Controller
Upgrade Mode	BNet Solutions drivers automatically update themselves. Options are "Automatic", and "Upgrade Now". See "Upgrade Mode" section below
Admin Token	Token required to access the driver's Admin Portal

bPentair Setup

Panel	Pentair panel equipment. IntelliTouch is currently supported
Pump Equipment	Configure bPentair to treat the pump equipment as shared or separate. When sharing equipment, either the pool or spa can be controlled but not both. Separate equipment allows for simultaneous control of the pool and spa. This setting also impacts how spa temperature is reported.
Temperature Correction	When Disabled, temperatures are displayed when and as reported. When Enabled, temperature changes (and events) are ignored for the first 5 minutes after equipment is turned on to allow for "smoothing" temperature variations.
Pool Heaters	Configures the number and names of available pool heaters
Spa Heaters	Configures the number and names of available spa heaters
Pump Integration	Enables or Disables Pump-specific Aux entries and events
iChlor Integration	Enables or Disables iChlor-specific Aux entries and events
iChem Integration	Enables or Disables iChem-specific Aux entries and events

Debug Settings

Debug Mode	Sets where the driver outputs debug information. See "Troubleshooting" section below for more information
Debug Level	Sets how much debug detail the driver outputs
Msg ID Filter	Filters messages based on Command ID. Blank disables filtering
Msg To-From Filter	Filters message based on source and destination. Blank disables filtering

Actions

Reset Config	Initializes the driver depending on the option(s)

	selected. Each option is individually selected. Available options are: - Reset Pool Proxy - Get Initial Config - Rediscover Pentair Aux - Reset Integrations - Reset Events - Reset Custom Names - Reset Cache
Send Packet To Pentair	Used to send a custom command directly to Pentair via the serial bus. Intended for advanced debugging only
Send Packet To bPentair	Used to send a custom command to bPentair for processing. Intended for advanced debugging only

COMMANDS

Uses the C4 Pool Proxy Commands to set Pool/Spa Pump Modes, Setpoints and Heaters and Aux/Circuits

EVENTS

EVENTS - PHYSICAL AUX CIRCUITS

Aux XXX	All physical Aux Circuits have events dynamically added and named after the Aux's name. For example, "Waterfall" Aux would have an Event named "Aux Waterfall". Physical Aux Events are triggered when the Aux Circuit mode changes.

EVENTS - ICHEM

The When the iChem Integration Property is set to "Aux and Events", the following Events are added and available to the project

iChemLSIActual	Fired when the iChem actual LSI reading changes
iChemLSIAlarm	Fired when the iChem LSI Alarm setting changes
iChemLSIAlarmTriggered	Fired when the iChem LSI Alarm is triggered. See Alarm Notes section for more information
iChemORPActual	Fired when the iChem Actual ORP reading changes
iChemORPAlarm	Fired when the iChem ORP Alarm setting changes
iChemORPAlarmTriggered	Fired when the iChem ORP Alarm is triggered. See Alarm Notes section for more information
iChemORPSetpoint	Fired when the iChem ORP Setpoint setting changes
iChemPHActual	Fired when the iChem actual PH reading changes
iChemPHAlarm	Fired when the iChem PH Alarm setting changes
iChemPHAlarmTriggered	Fired when the iChem PH Alarm is triggered. See Alarm Notes section for more information
iChemPHSetpoint	Fired when the iChem PH Setpoint setting changes. See iChem Setpoints section for more information

ALARMS - ICHEM

When the iChem Integration Property is set to "Aux and Events", the following Alarms are added and available to the project. Alarms are considered elevated Events. When an Alarm is

triggered, the Event is fired and added to the History Agent.

iChem PH	Triggered if, after an hour of operation, the actual iChem PH reading is "PH Alarm Variance" greater than or less than the PH Setpoint
iChem ORP	Triggered if, after an hour of operation, the actual iChem ORP reading is "ORP Alarm Variance" greater than or less than the ORP Setpoint
iChem LSI	Triggered if, after an hour of operation, the actual iChem LSI reading is "LSI Alarm Variance" greater than or less than 0 (zero)
iChem No Flow	Triggered if, after 5 minutes of the initial no flow detection, the flow has not returned to normal
iChem PH Tank Low	Triggered when the iChem detects or infers the PH tank is at a low level
iChem ORP Tank Low	Triggered when the iChem detects or infers the ORP tank is at a low level
iChem PH Lockout	Triggered when iChem's PH reading is outside the configured allowable range. This is set on the iChem equipment
iChem PH Daily Dose	Triggered when the iChem has dosed more PH than the configured allowable amount as set on the iChem equipment
iChem ORP Daily Dose	Triggered when the iChem has dosed more ORP than the configured allowable amount as set on the iChem equipment

EVENTS - ICHLOR

The When the iChlor Integration Property is set to "Aux and Events", the following Events are added and available to the project

iChlor Salt Actual	Fired when the iChlor actual Salt reading changes
iChlor Salt Alarm	Fired when the iChlor Salt Alarm setting changes
iChlor Salt Alarm Triggered	Fired when the iChlor Salt Alarm is triggered. See Alarm Notes section for more information
iChlor Super Chlorination Started	Fired when the iChlor Super Chlorination starts
iChlor Super Chlorination Ended	Fired when the iChlor Super Chlorination ends

ALARMS - ICHLOR

When the iChlor Integration Property is set to "Aux and Events", the following Alarms are added and available to the project. Alarms are considered elevated Events. When an Alarm is triggered, the Event is fired and added to the History Agent.

iChlor Salt	Triggered if, after an hour of operation, the actual iChem Salt reading is "Salt Alarm Variance" greater than or less than the 3500 ppm
iChlor No Flow	Triggered if, after 5 minutes of the initial no flow detection, the flow has not returned to normal

EVENTS - INTELLIBRITE

During Aux discovery, if bPentair finds one or more Intellibrite circuits, a virtual Intellibrite Aux is

added and available to the project.

Intellibrite	Fired when the Intellibrite setting changes

EVENTS - POOL AND SPA

C4 Pool Proxy Events	Pump/Spa Mode Changed, Pool/Spa Setpoint Changed, Pool/Spa Temp Changed, Air Temp Changed
Pool/Spa On/Off	Fired when the Pool/Spa is turned on/off (4 events)
Pool/Spa Heater On/Off	Fired when the Pool/Spa Heater is turned on/off (4 events)
Pool/Spa HeatPump On/Off	Fired when the Pool/Spa Heat Pump is turned on/off (4 events)
Pool/Spa Setpoint Reached	Fired when the Pool/Spa reaches its setpoint (4 events)

EVENTS - PUMPS

Pump X RPM / Watts	Pump RPM and Watts events are added for each discovered pump and named numerically according to the pump's assigned address on the Pentair controller. For example, Pump 1 RPM or Pump 3 Watts

VARIABLES

"C4" prefixed variables belong to the Pool Proxy and are set depending on the proxy's state. All other variables are created and managed by bPentair.

Variable Name	Description	Example
C4_AIR_TEMPERATURE	Air temperature	70
C4_AUXMODES	Proxy Aux Modes – N/A	
C4_BUTTON_NAMES	Proxy Button Names – N/A	
C4_HASAIR	Proxy Air Configuration	True
C4_HASPOOL	Proxy Pool Configuration	True
C4_HASSOLAR	Proxy Solar Configuration	True
C4_HASSPA	Proxy Spa Configuration	True
C4_HEATMODE	Proxy HeatMode – N/A	
C4_POOL_HEATMODE	Proxy Pool HeatMode - N/A. Use POOL_HEATMODE	
C4_POOL_SETPOINT	Pool Setpoint	85
C4_POOL_TEMPERATURE	Current Pool Temperature	74
C4_PUMPMODE	Current Pool Pumpmode	On
C4_PUMPMODE_NAMES	Proxy PumpMode Names – N/A	
C4_SCALE	Temperature Scale	FAHRENHEIT
C4_SPAMODE	Current Spa Pumpmode	Off
C4_SPA_HEATMODE	Proxy Spa HeatMode – N/A. Use SPA_HEATMODE	
C4_SPA_SETPOINT	Spa Setpoint	100
C4_SPA_TEMPERATURE	Current Spa Temperature	74
ICHEM_LSI_ACTUAL	Reported Langelier Saturation Index (LSI)	-0.25

ICHEM_LSI_ALARM_VARIANCE	Variance from (+/-) reported LSI that triggers LSI Alarm	0.5
ICHEM_ORP_ACTUAL	Reported Oxidation Reduction Potential (ORP)	701
ICHEM_ORP_ALARM_VARIANCE	Variance from (+/-) reported ORP that triggers ORP Alarm	250
ICHEM_ORP_SETPOINT	ORP Setpoint	700
ICHEM_ORP_DOST_TIME	Cumulative time (seconds) ORP has dosed for current session	9300
ICHEM_PH_ACTUAL	Reported PH	7.18
ICHEM_PH_ALARM_VARIANCE	Variance from (+/-) reported PH that triggers PH Alarm	0.2
ICHEM_PH_SETPOINT	PH Setpoint	7.4
ICHEM_PH_DOSE_TIME	Cumulative time (seconds) PH has dosed for current session	45
ICHLOR_SALT_ACTUAL	Reported Salt Level in ppm	3650
ICHLOR_SALT_ALARM_VARIANCE	Variance from (+/-) reported Salt that triggers Salt Alarm	200
ICHLOR_SALT_SETPOINT	Salt Setpoint	3500
POOL_CURRENT_HEATRATE	Average time (hours) to raise pool temperature one degree (F/C). Updated after each pool temperature change while heating	0.3
POOL_HEATMODE	Name of currently selected Pool Heatmode of "Off"	Heater
POOL_LAST_HEATRATE_TO_SETPOINT	Average time (hours) taken to raise pool temperature one degree (F/C) during the previous heat cycle. Resets to zero when a new heating session starts	0
POOL_LAST_RUNTIME	Time (minutes) of the previous pool run cycle	0
POOL_LAST_RUNTIME_TO_SETPOINT	Time (hours) taken to raise pool temperature to heat setpoint during the previous heat cycle. Resets to zero when a new heating session starts	0
PUMP_XX_RPM (1-16)	Current RPMs of Pump XX	1800
PUMP_XX_WATTS (1-16)	Current Watt usage of Pump XX	276
SPA_CURRENT_HEATRATE	Average time (hours) to raise spa temperature one degree (F/C). Updated after each pool temperature change while heating	0
SPA_HEATMODE	Name of currently selected Spa Heater or "Off"	HeatPump
SPA_LAST_HEATRATE_TO_SETPOINT	Average time (hours) taken to raise spa temperature one	0

	degree (F/C) during the previous heat cycle. Resets to zero when a new heating session starts	
SPA_LAST_RUNTIME	Time (minutes) of the previous spa run cycle	0
SPA_LAST_RUNTIME_TO_SETPOINT	Time (hours) taken to raise spa temperature to heat setpoint during the previous heat cycle. Resets to zero when a new heating session starts	0

CONDITIONALS

In addition to the C4 Pool Proxy Pool/Spa Pump Mode and temperature conditionals, bPentair also provides:

Aux XXX	All physical Aux Circuits have conditionals dynamically added and named after the Aux's name. For example, "Waterfall" Aux would have a Conditional statement of "Aux Waterfall is On/Off".
Aux IntelliBrite	When an IntelliBrite circuit is detected, a conditional named "Aux IntelliBrite is" is created and can be used to test the On/Off status or the currently set color
Pump X RPM / Watts	Pump RPM and Watts conditionals are added for each discovered pump and named numerically according to the pump's assigned address on the Pentair controller. For example, "Pump 1 RPM <= 2500" or "Pump 3 Watts > 1000"
Pool / Spa [Heatername]	Pool / Spa heater conditionals are added according to the Pool / Spa Heaters driver properties. For example, if Pool Heaters is set to "Heater", a conditional named "Pool Heater is" is added. If Spa Heaters is set to "Heater, Solar Pref, Solar", a conditional named "Spa Heater is" and a conditional name "Spa Solar is" is created. When more than one heater is configured in the Pool / Spa Heaters property (excluding the "Pref" heater) an AnyHeater conditional is also created and will return true if any of the heaters are active. Using the above example, this conditional would be named "Spa AnyHeater is".

iChem Integration

When enabled via the iChem Integration driver property, bPentair can receive, display, alert and change the settings of a connected iChem.

ORP, PH, and LSI all have “Actual” and “Alarm” Extras entries. PH and ORP have “Setpoint” entries while LSI does not (LSI’s setpoint is by definition zero).

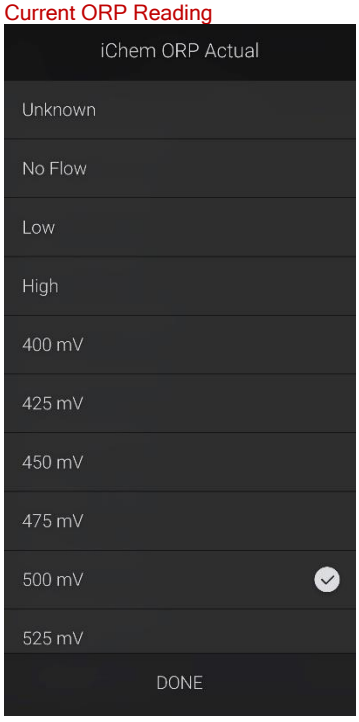
Below are the available iChem measurements, their Actual reporting range, available setpoint range and well as the Alarm Variance range. For example, ORP is reported between 400 and 800 in increments of 25, can be set between 650 and 800 in increments of 50 and the alarm can be set between Setpoint +/-100 and Setpoint +/-300 in increments of 100.

If any of the measurement are outside their defined Actual ranges, bPentair will set their Actual to “Low” or “High” as appropriate. When the pump is off, the “No Flow” setting will be used. “Unknow” is the initial value for all measurements and will be updated once actual values are received.

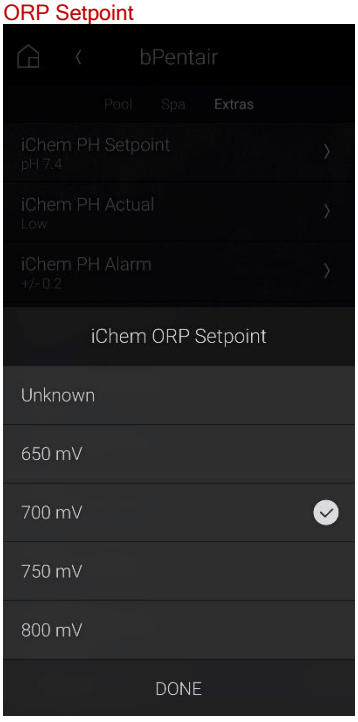
Measurement	Actual (Precision)	Setpoint (Precision)	Alarm Variance
ORP	400<->800 (25)	650<->800 (50)	+/-100<->+/-300 (100)
PH	6.8<->8.0 (.1)	7.2<->7.6 (.1)	+/-.2<->+/-1.0 (.2)
LSI	-3.0<->+3.0 (.5)	N/A	+/-.5<->+/-3.0 (.5)

Using the ORP Extras, below are examples of iChem Aux integrations for an Actual, Setpoint and Alarm Setting:

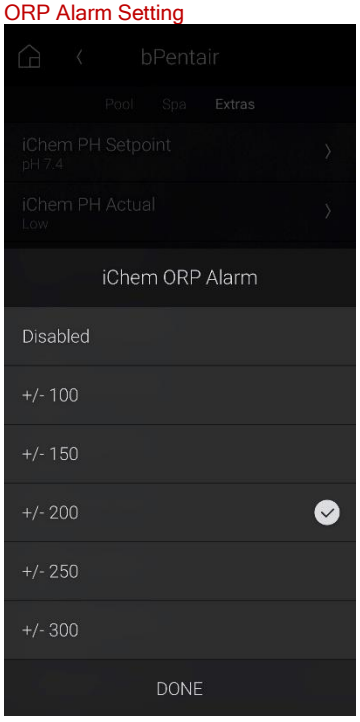
Current ORP Reading



ORP Setpoint



ORP Alarm Setting



Unlike other bPentair Alarms, iChem values are checked against their alarm setting once - one hour after the pump is started. This gives the pool enough time to mix and level-out any fluctuations cause by no circulation.

The iChem Flow Alarm is the exception. The Flow Alarm is triggered if the filter pump is On and flow is not restored within 5 minutes after the event is initially reported by the iChem. This Alarm will not repeat but may be triggered multiple times if the iChem clears the alert then subsequently alerts again.

iChlor Integration

When enabled via the iChlor Integration driver property, bPentair can receive, display, alert and change the settings of a connected iChlor.

Salt has “Actual” and “Alarm” Extras entries but not a “Setpoint” entry. Instead, bPentair uses Pentair’s recommended of 3500 ppm as the salt ‘setpoint’.

Below are the available iChlor measurements, their Actual reporting range and the Alarm Variance range. For example, Salt is reported between 2000 and 4500 in increments of 250 and the alarm can be set between Setpoint +/-100 and Setpoint +/-500 in increments of 100.

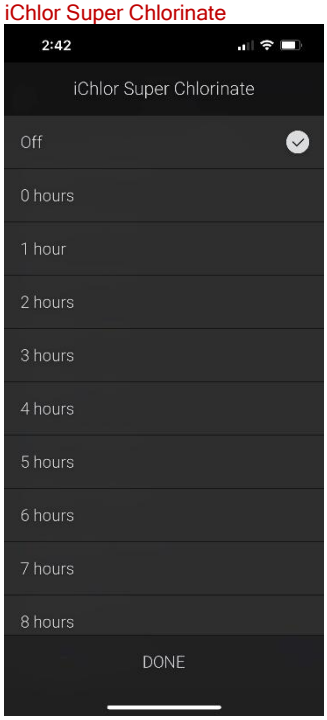
If any of the measurement are outside their defined Actual ranges, bPentair will set their Actual to “Low” or “High” as appropriate. When the pump is off, the “No Flow” setting will be used. “Unknow” is the initial value for all measurements and will be updated once actual values are received.

Measurement	Actual (Precision)	Setpoint (Precision)	Alarm Variance
Salt	2000<->4500 (250)	N/A	+/-100<->+/-500 (100)

Below are examples of the iChlor Aux integrations:

iChlor Pool Setpoint

iChlor Super Chlorinate



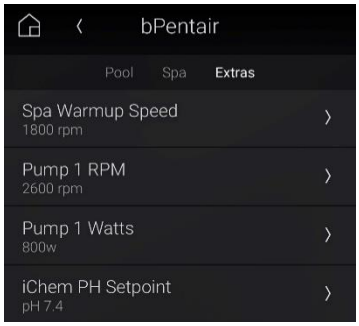
Pump Integration - Variable Speed Pumps

bPentair can control the speed of certain variable speed pumps. During the initial auto discovery and setup phase of installation, bPentair search for compatible variable speed pumps. When the Pump Integration property is set to “Aux and Events”, an RPM and a Watts Aux entry is added to the Extras tab for each discovered pump.

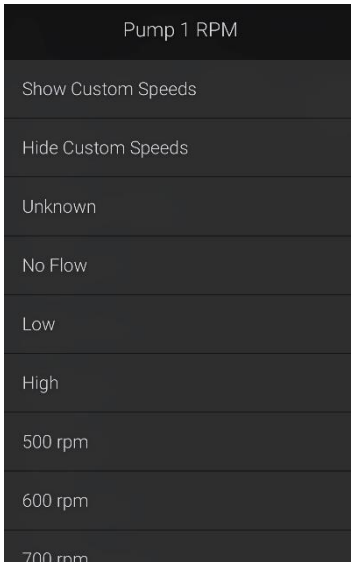
Spa Warmup Speed

Additionally, a Spa Warmup Speed entry is added when bPentair detects that the Spa circuit is associated with a compatible variable speed pump and set to the default “Same As Spa” setting. If, for example, a warmup speed of 1800 RPMs is selected, bPentair will set the Spa speed to 1800 the next time the Spa is turned on and in heat mode and will revert the speed to the original setting once the Spa reaches its setpoint. bPentair will change the speed only on the initial warmup to avoid toggling speeds when the Spa is likely in use even if the temperature subsequently drops below the setpoint. The Spa Speed is also reverted if the Spa is turned off before reaching the setpoint.

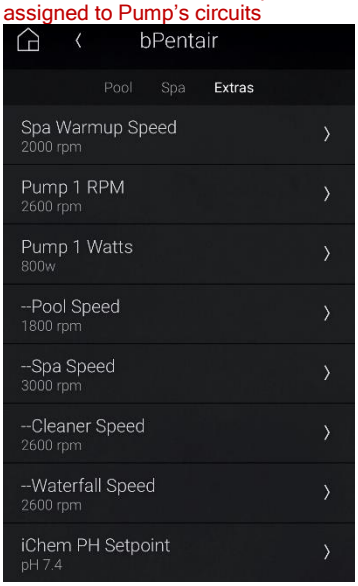
Select Pump XX RPM



Select “Show Custom Speeds”



Extras will rebuid to show speeds assigned to Pump’s circuits



Pentair sets the speed of a pump to the highest assigned speed of all on circuits assigned to that pump. In the above example, Pump 1’s RPM is 2600 because either the Cleaner or Waterfall circuits are on. When Spa, Cleaner and Waterfall circuits are off, Pump 1’s RPM will fall to the Pool’s speed of 1800.

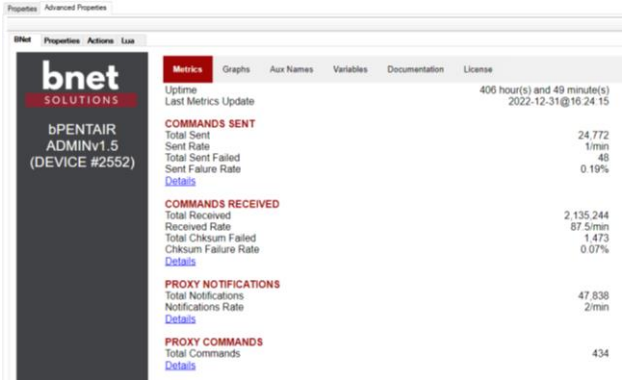
*Mobile navigators (iOS) require a refresh after changing Aux Extras

CUSTOM COMPOSER TABS

In addition to the standard Variables, Documentation and License Tabs, bPentair also provides the below Tabs. All Custom Tabs are also available via the Admin Portal.

METRICS TAB

The Metrics tab details the serial bus activity and UI updates.



Each section can be expended to show additional details

COMMANDS SENT

Total Sent	24,774
Sent Rate	1/min
Total Sent Failed	48
Sent Failure Rate	0.19%

Details

COMMAND NAME	TOTAL	FAILED
Pub Pump (7)	16	0
Set Date/Time (133)	6	1
Set Circuit (134)	245	0
Set Heat/Temperature (136)	43	0
Set IntelliChlor (153)	3	0
Set Pump Config Ext (155)	16	0
Get Date/Time (197)	1	0
Get Heat/Temperature (200)	1	0
Get IntelliChlor (217)	24408	47
Get Pump Config Ext (219)	32	0
Get Light Groups/Positions (231)	2	0
Get SW Version (253)	1	0

*Get IntelliChlor is a polling item as it is not published regularly

COMMANDS RECEIVED

Total Received	2,135,434
Received Rate	87.5/min
Total Chksum Failed	1,473
Chksum Failure Rate	0.07%

Details

COMMAND NAME	TOTAL
Ack Message (1)	2300
Get IntelliChem (210)	245069
Pub Circuit (6)	123109
Pub Controller (2)	721241
Pub Custom Names (10)	40744
Pub Date/Time (5)	22997
Pub Heat/Temperature (8)	50
Pub IntelliChem (18)	243449
Pub IntelliChlor (25)	50321
Pub Light Groups/Positions (39)	8
Pub Pump (7)	174108
Pub Pump Config Ext (27)	89
Remote Control (4)	123117
SW Version (252)	10
Unknown (255)	1917
iLink P1 (109)	196
iLink P2 (110)	71148

PROXY NOTIFICATIONS

Total Notifications	47,850
Notifications Rate	2/min

Details

COMMAND NAME	TOTAL
AIR_TEMP_CHANGED	6218
AUXMODE_CHANGED	4569
NUM_AUXS	1
POOL_HEATMODE_CHANGED	50
POOL_HEATMODE_LIST_CHANGED	1
POOL_SETPOINT_CHANGED	2
POOL_TEMP_CHANGED	18428
PUMP_BUTTON_STATE_CHANGED	26
PUMP_MODE_CHANGED	60
SCALE_CHANGED	1
SPA_HEATMODE_CHANGED	43
SPA_HEATMODE_LIST_CHANGED	1
SPA_MODE_CHANGED	17
SPA_SETPOINT_CHANGED	5
SPA_TEMP_CHANGED	18428

PROXY COMMANDS

Total Commands	434

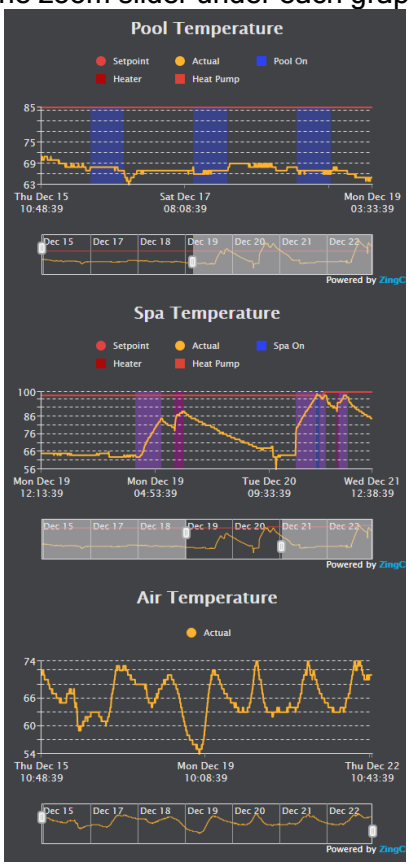
Details

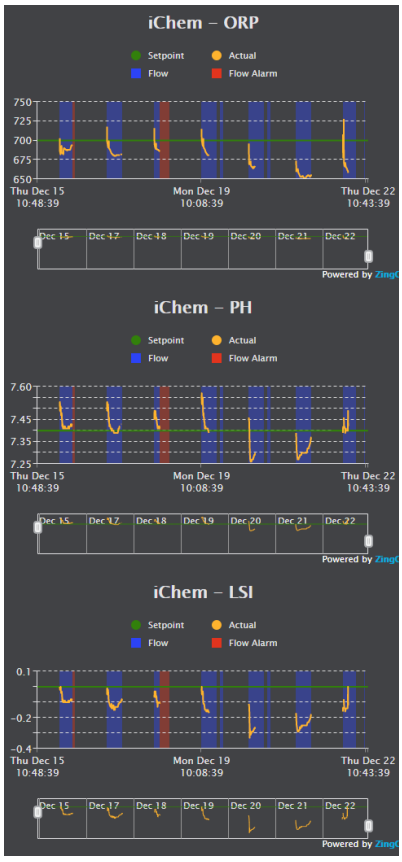
COMMAND NAME	TOTAL
GET_STATE_HANDLED	120
SET_AUX_MODE	221
SET_POOL_HEATMODE	29
SET_POOL_PUMPMODE	38
SET_SPA_HEATMODE	12
SET_SPA_PUMPMODE	12
SET_SPA_SETPOINT	2

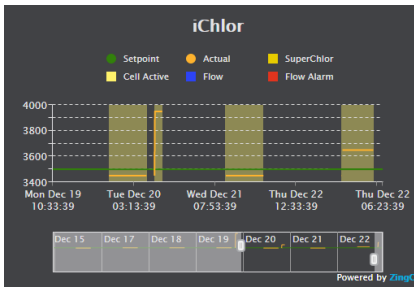
bPentair Driver

GRAPHS TAB

The initial graph view shows the trailing 24 hours and is available for the prior 7-day period using the zoom slider under each graph.

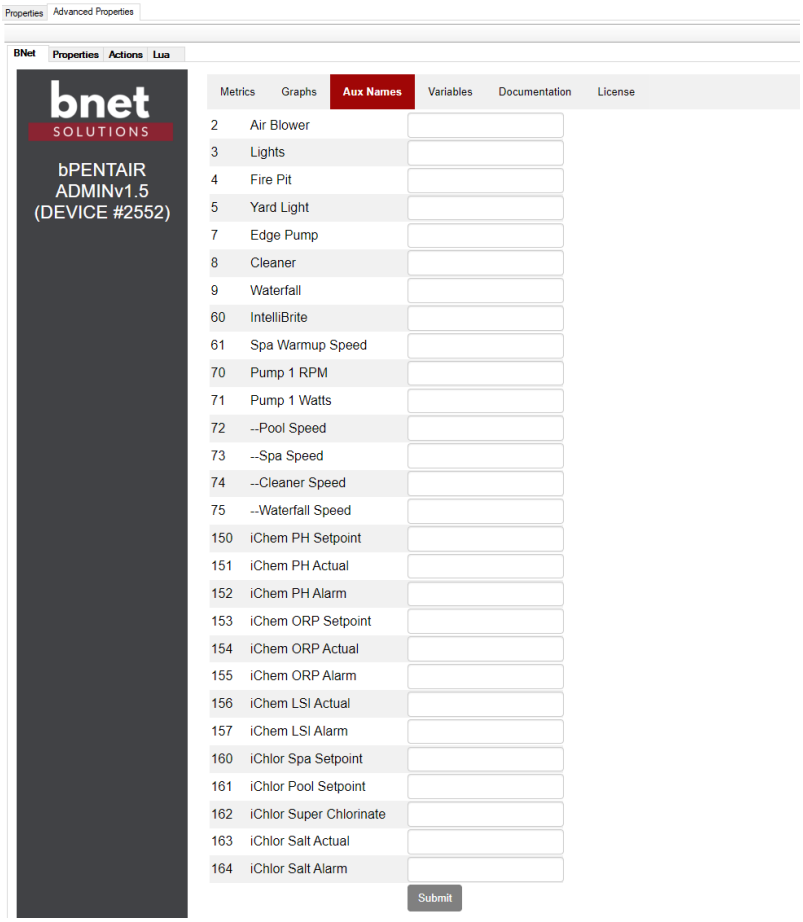






AUX NAMES TAB

The Aux Names Tab can be used to customize the name an Aux circuit



ADMIN PORTAL

BNet Solutions drivers have a built-in Admin Portal that include an Information, Properties, Variables, Actions, Lua, Documentation and License tabs. Additionally, if the driver supports additional custom tabs, these are displayed as well.

bPentair's Admin Portal can be reached at the following address template: https://[controller ip]/driver/bPentair/admin.html where "controller ip" is the IP Address of your Control4 Director.

Because of the security model used by modern browsers, there are two configuration steps to successfully connect to the Admin Portal:

1) The Admin Portal communicates to the controller via a secured websocket. The BNet Certificate Authority that signed the Admin Portal's server certificate must be trusted for your browser to make the SSL/TLS websocket connection. The BNet CA bundle must be downloaded and install as a root certificate. The bundle can be found at https://ca.bnet4solutions.com/get_ca_bundle.php
2) Each Director uses a privately signed Control4 server certificate that must be trusted

before your browser will allow you to navigate to the Admin Portal. On your first visit to the Portal, you will be asked to make a security exception and continue.

The Admin Portal is protected by a challenge page that requires a token to continue. By default, the token is "bPentairAdmin". Once authenticated, the token is stored in a cookie (technically hashed, then stored) so you won't need to log in every time. The token is configurable via the driver's property page. The Admin Server is enabled by default but can be disabled entirely via the driver's property page.

Upgrade Mode

BNet Solutions drivers can automatically update themselves. New driver functionality or capability is typically packaged as an incremental “Major” version (v3, v4 etc). “Minor” versions (v2.3, v2.4) are typically maintenance releases that update underlying libraries, address a specific issue or usability concern.

Automatic	When “Automatic” is selected, the driver will upgrade/update itself when a new version is available. This is currently the only available option.
Update Now	Checks for and upgrades to any newer Major or Minor version.

Known Issues and Limitations

- Requires C4 OS v3.1.1 or greater
- Not an issue with the driver per se but of Control4’s handling of Script Actions: when an action is added to an event, that action and all its attributes is set and immutable. For example, when adding an action to turn on an auxiliary button (let’s say Lights) that button’s ID is hard coded into the script. If later, the Light’s Aux ID is changed from 3 to 7, the script will continue to issue the command to ID 3 (old ID) and not to ID 7 (new ID). This is similar to changing the contents of a Push Notification after adding the notification to a script – it will only show the message that was current at the time it was added.

Troubleshooting

All BNet Solutions products have an additional ‘Submit’ Debug Mode. With this mode selected, the driver creates a unique log file to capture the Lua output based on the selected Debug Level (usually set to "5 - Debug"). Once ‘Submit’ Debug Mode is deselected, either manually or when the Debug Timer expires, the Submit Debug Log is uploaded to the BNet Solutions Server for analysis.

The server notifies me when Submit files are uploaded but if you have not purchased a license, I will have no way to reach back out to you for troubleshooting so please email me your contact information.

Trial and Purchase

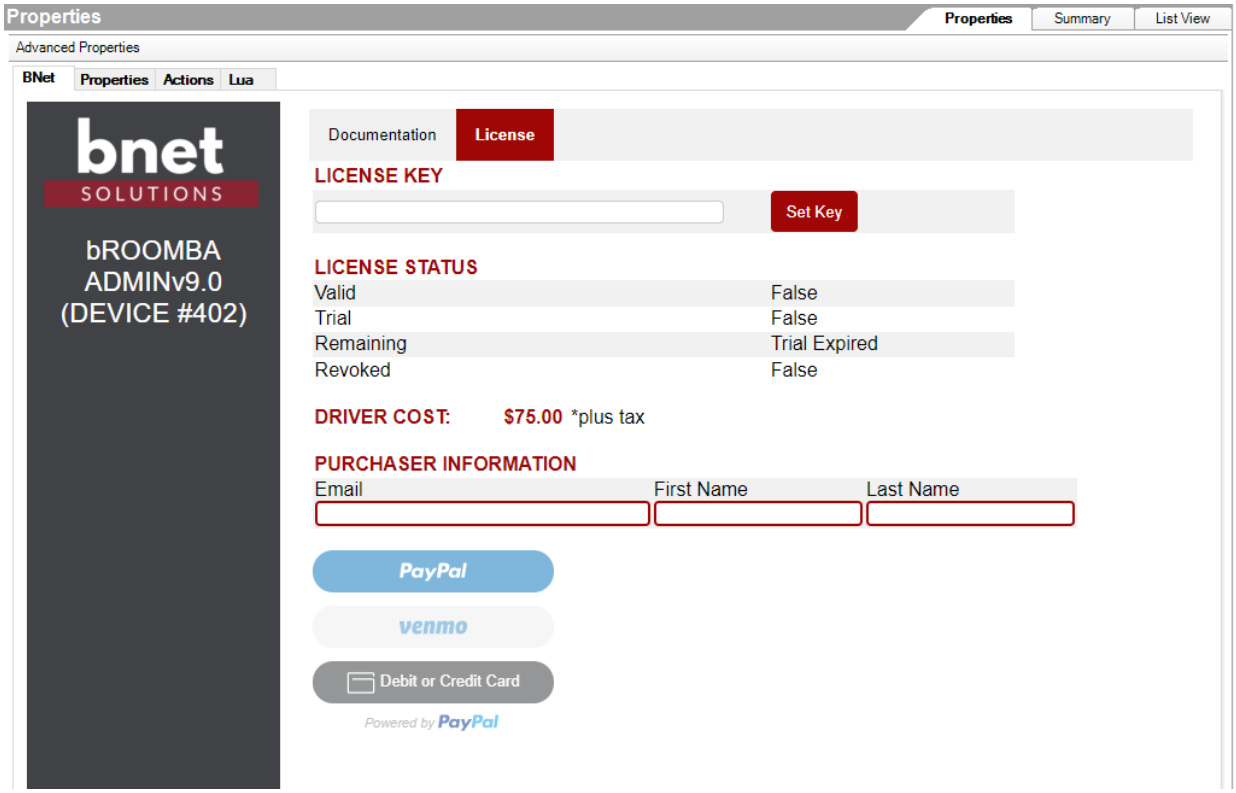
All BNet Solutions drivers are fully functional for a 7-day Trial Period. To continue usage after the Trial Period, you will need to purchase a license. Purchase functionality is provided by the License tab that may be accessed in one of two ways:

a) In Composer, on the System Design side panel, click on the driver. The License tab is displayed as a subtab of the BNet tab

b) In the Admin Portal, the License tab is displayed as one of the main tabs

Once the required fields are filled in, select one of the PayPal payment options and follow the prompts to complete the purchase. Upon completion, the driver will auto-populate the license key and activate. You will receive a receipt from PayPal for the transaction.

An example License tab:



There are no refunds so please review the documentation for any limitations or known issues and determine acceptance during the Trial Period.

LEGAL

By using this driver, you are indicating that you have read and agree with the Policies and Terms that govern its usage as published here.

CONTACT INFORMATION

You can reach me at blucas@bnet4solutions.com for comments or questions.

CHANGE LOG

v1 - 01/23 Initial Release