



Gen2 Pooled Controller

USER MANUAL

pooled.au

Benefits of Installing a Pooled Controller

The Pooled unit is one of the most advanced pool management platforms on the market today.

Pooled is designed to automatically assist in keeping your pool sanitised and the levels of chlorine and pH correctly balanced in your pool by using the real time sensor readings to control and run your chlorinator and filter pump.

Pooled continuously monitors and adjusts the run time of your chlorinator to keep your pool within comfortable swimming limits, whilst reporting all sensor reading directly to you via the App installed on your mobile device.

Default running

Pooled requires cellular access to make connection to the cloud platform and the App. Initial installation contains a default run schedule, that can be adjusted via the App once the unit makes a cellular connection. The Pooled controller gives customers control at their fingertips to monitor the health of their pool.

Installation

Your Poolwerx Franchise Partner will have installed the IPC for you, adding sensors into the pipework that provide readings through to your app.

Operating Your IPC

The IPC is designed for use with all types of pools to measure and automatically adjust equipment run times to maintain your pool in a comfortable swimming range whilst running your equipment in the most energy efficient manner possible. Your IPC has an LCD screen that will cycle through the sensor readings from your pool. These same readings are sent through to the cloud platform and are available in your App.



Your IPC unit is a single box with a power cable that plugs into an accessible power outlet in your pool equipment area. This would usually take the socket that your existing Chlorinator or Pump is currently plugged into.

The unit has four illuminating buttons, three status lights and a small LCD screen. There is a menu button to allow you to access and pair remote accessories with the IPC.

Manual start/stop buttons for each the Pump and Chlorinator, and an OK button for use in navigating the menu.

The status buttons will each indicate the status of, starting from the left, device operation, cellular connectivity and connection to the cloud. Under normal operation all three status buttons should be illuminated blue. There is a light sensor next to the status lights.



LCD Display

Flow Rate

The flow rate is calibrated on the pipe size of where the flow sensor is installed. This will be displayed on the LCD in litres per minute



pH

pH is the measure of acidity/alkalinity and is displayed in units of the pH scale.

The pH level of your water will be displayed on the LCD. This may fluctuate in the week after the initial installation as the sensor reaches equilibrium in the new pool. You may be asked to calibrate the pH sensor via a notification in your App, just follow the step-by-step guide in the App.



ORP

For over 20 years pool shops and equipment operators have used Oxidation-Reduction Potential (ORP or REDOX) values as a measure of the Chlorine activity in water.

ORP is a measure of the oxidising properties of the Chlorine in the water and is monitored by the IPC multi-probe sensor.



The Australian Academy of Science has great resources to understanding your pool, why we add chemicals to the water and general information on pool water sanitation <https://www.science.org.au/curious/everything-else/swimming-pool>

Salinity

Most chlorinator models require a minimum of 3500 parts per million (ppm) to generate Chlorine to sanitise your pool. You should follow your chlorinator manufacturer's recommendations on your salt dosing of your pool to avoid damage to your chlorinator and to ensure adequate chlorine production for your pool. The IPC will display your current salinity levels on the display in PPM



Temperature

The temperature of your pool water is used in calculations for pH and ORP. It is displayed in degrees Celsius.



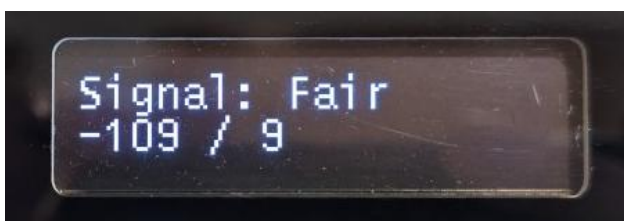
Signal Strength

Check Signal Strength after installation, or if your controller consistently goes offline. Press the menu button three times. Signal strength will display in the LCD

The thresholds are:

	RSRP (dBm)	SINR (dB)
Excellent	-95	15
Good	-105	10
Fair	-115	5
Poor	< -115	< 5

Both thresholds need to be exceeded to meet the rating (Fair needs to be equal to or above -115 dBm RSRP AND equal to or above 5 dB SINR).



Manual Pump Override

Using the pump button on the front of the **IPC** you can initiate an override for the pump. This is set to run for 6 hours by default.

Using the override function in the App, you can specify a specific run time for the override of the pump.

You can also use the button to stop the pump or chlorinator when it is running on your automated plan by pressing the button.

Manual Chlorinator Override

Using the CHL button on the front of the IPC you can initiate an override for the chlorinator. This is set to run for 6 hours by default. When you initiate the chlorinator override, your pump will engage first for 60 seconds before the chlorinator becomes active.

Using the override function in the App, you can specify a specific run time for the override of the chlorinator. When you initiate the chlorinator override, your pump will engage first for 60 seconds before the chlorinator becomes active.

You can also use the button to stop the pump or chlorinator when it is running on your automated plan by pressing the button.

General Pump Operation When Using a VSD

When your installation is operating with the optional VSD installed, you will notice some differences to your pool operation from before the IPC was installed. The VSD will have two noticeable impacts,

- 1) A change in sound of the running of our pool pump
- 2) A change in the force of the water coming out of the water jets in your pool

The change in sound is due to the VSD adjusting the frequency of the AC output to your pool pump to run the pump at a slower speed. You will be able to see the speed that the VSD is operating at by observing the screen on the VSD. You will also notice a change in the flow rate on the IPC LCD.

This change in speed of the pool pump will lower the pressure / force of the water on its return to the pool after going through your filter and chlorinator. This doesn't affect the efficiency of the water filtration or the efficiency of the chlorination and sanitation of your pool.

Pairing an External Zigbee Power Outlet to the Controller

The IPC has been designed to work with a Mercator ikuu SPP02GIPI Smart Weatherproof double power point that is IP54 rated, and able to connect to the IPC via ZigBee. You do not need to use the manufacturer ZigBee Hub or the manufacturer App.

The integration allows you to pair the zigbee socket directly to the pool controller, so that you are able to manage all your pool equipment in the Pooled IPC App.



To pair the Mercator ikuu outdoor power point you will need to plug in the outlet to a power source and affix to the wall. Once this is installed and energised you can follow the instructions below to add it to your pool controller. There is no need to use the Mercator ikuu App.

Using the MENU button make sure your controller LCD is awake. The Press the MENU button again to enter into the device pairing menu.



Put you Pooled IPC into pairing mode by pressing the “OK” button, and you will be prompted to activate pairing mode on the Mercator ikuu zigbee outdoor power point



Make sure your zigbee controller device is in pairing mode by holding down one of the power switches for approximately 10 seconds. You will see a red light flashing, which indicates it is in pairing mode. The device and zigbee controller will pair automatically, and you'll see a notification on the screen.



The ZigBee controller will now appear in your app, and you can now set a name, set a run schedule or manually switch it on and off. Note – this may take up to 5 minutes to pair.

Tip: If you do not receive this last message on the IPC LCD. Press the menu button again to exit the pairing process. You can now try the pairing process again.

App Functionality

Login

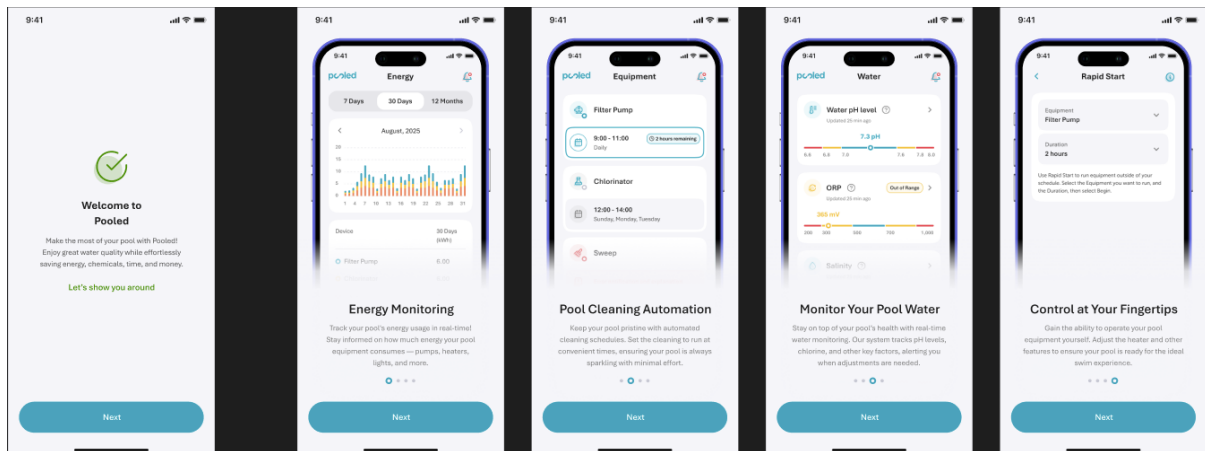
Login using your mobile number

A unique code will be sent that will be valid for 5 minutes

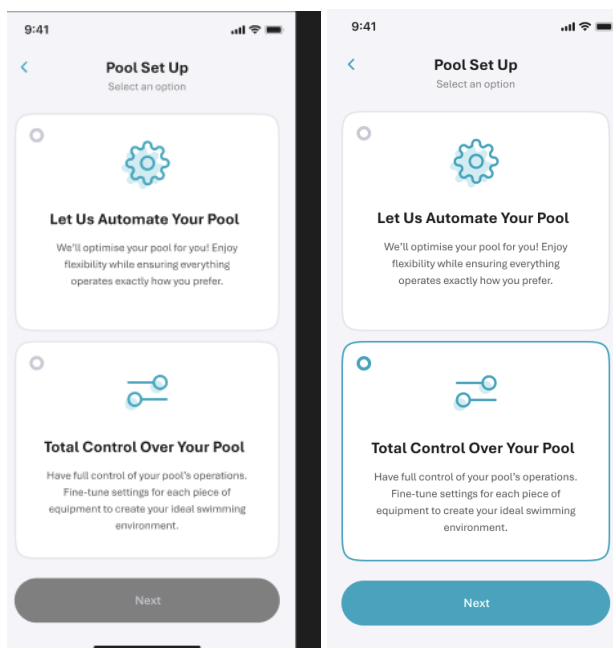
If the code is not received check the phone number has been entered correctly

First entry

On boarding screens educate the customer about the app.



Pool Set Up



On first entry of the app, the customer will be asked to select between:

- “Let us automate your pool”
- OR
- “Total control over your pool”

New customers should select “Total control over your pool”

They then need to set a plan that mimics the plan they have been running before installing the Pooled controller.

This allows the chemical sensor time to be saturated to allow for accurate readings, and the algorithm to learn the pool cleaning system.

The customer should bring a water sample into your store for testing after 2 weeks, and this reading should be used to calibrate the sensors to Poolwerx levels.

The customer can then switch their pool (or the Franchise partner can do this via the dashboard (see Pool device Metrics/Pool Schedule/Automation) after 2 weeks to Automation from the My Pools section of the app.

Landing Page

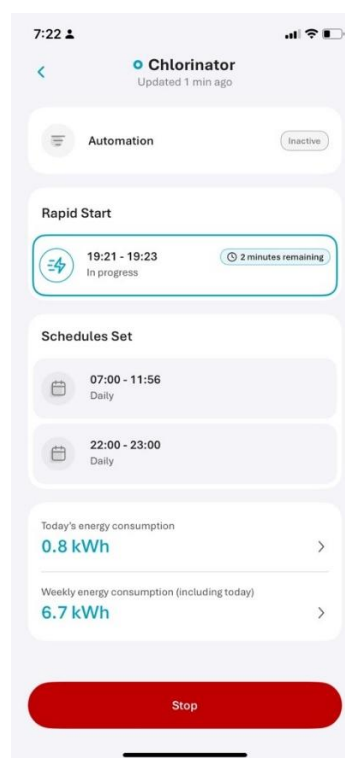
The customer is presented with a summary of their pool health. All elements can be selected and will drive the customer deeper into the app for more detailed information.

The customer can select [Rapid start](#). This will present a page, where the customer will choose the hardware – Pump or Chlorinator and a run time.

The customer can select to run this for 24 hours

This can be used to increase the cleaning time, or to help heat the pool – in the instances that a heater requires the pump to run at the same time

To see the Rapid start functioning, go to Equipment then select on the Equipment.
E.g. Chlorinator



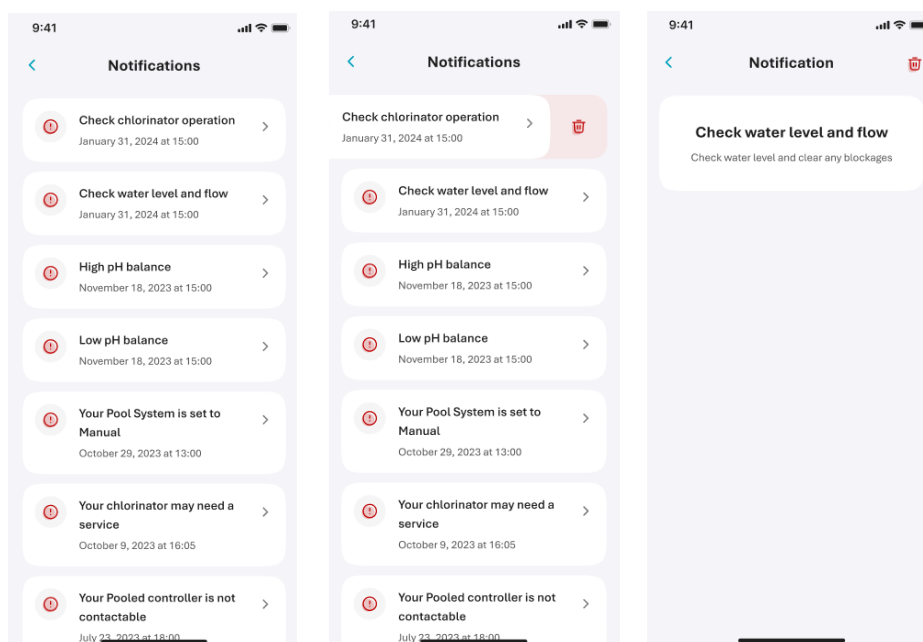
Notifications

There is a bell icon in the top right-hand corner of the app.

When there is a red circle, there are new notifications

Select on the bell to open the notification panel

Notifications will be listed by the most recent first



- Select on the > to open the notification and read further detail
- Clear the notification by swiping it away in the Notification list screen
- Or using the rubbish bin icon within the application to delete

Water

The water page is a summary of the chemical levels of the pool

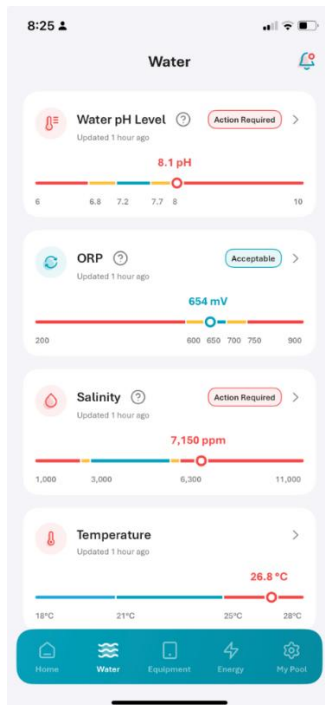
This shows the reading the pool currently is returning

Selecting on a tab will drop the user into a more detailed page that will show the last 30 days of readings. You can use this to review the previous level of readings and determine the next action

The levels are denoted as

- Acceptable
- Warning
- Action required

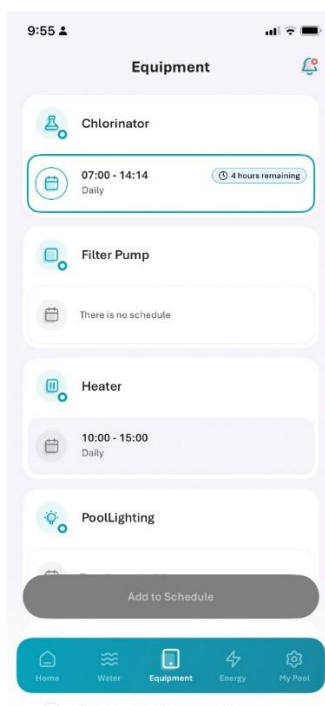
When an action is required, you need to take a water sample to their pool shop for verification and advice.



Equipment

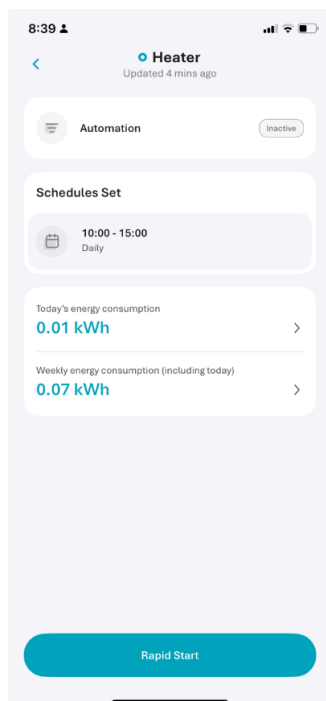
The equipment page provides the schedule that the equipment is set to run.

When equipment is running, the timeframe is highlighted, and a countdown of time remaining is shown.



When Add to Schedule is greyed out – this indicates that the Gen 2 controller is working on an Automation schedule.

You can select on the hardware name, and you will see the schedule and the energy used.



When automation is off you can edit schedules, or add new schedules for paired equipment

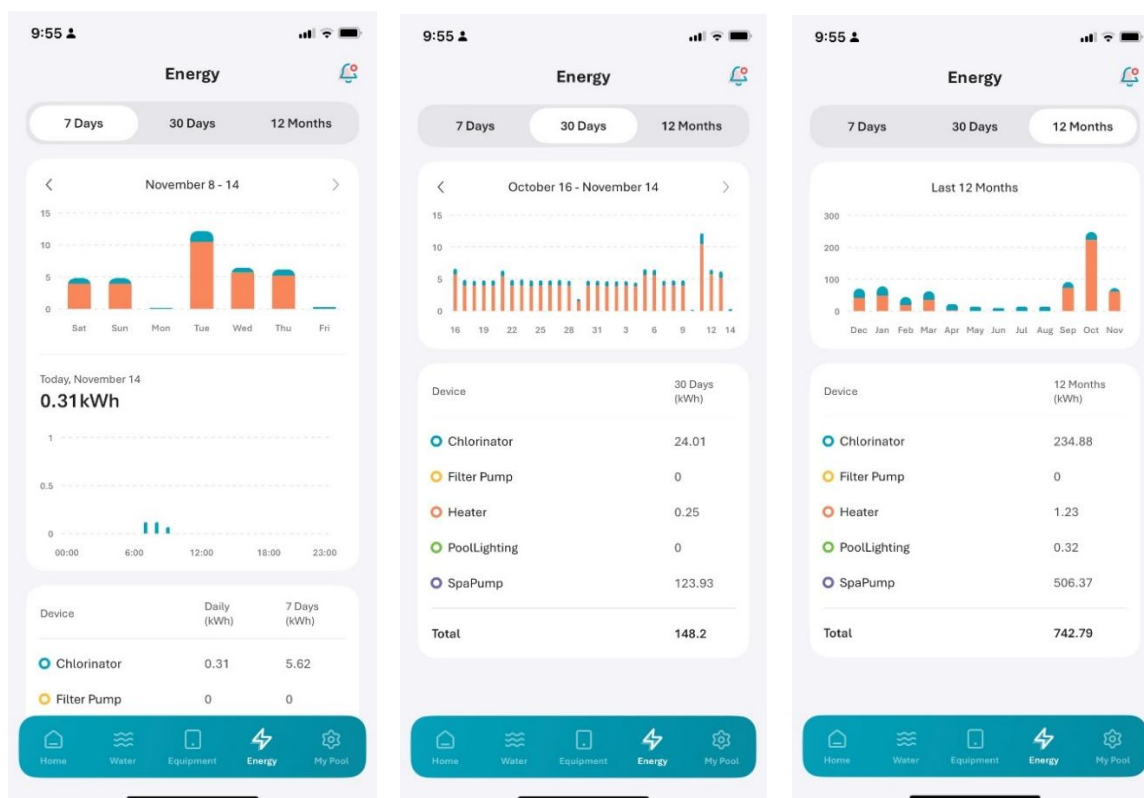
Note: To turn Automation off, go to My Pool/Automation Preferences, and toggle Automation off

When Automation is off, modify existing schedules, by selecting the equipment's schedule, this opens the edit schedule page. You can then change start time, end time and days of the week. The schedule could also be deleted for that hardware

Select [Add to Schedule](#) to add a new piece of hardware – then on the edit page, select the hardware, start time, end time and days of the week.

Energy

The Energy page is a summary of the Energy usage of the hardware associated with the Gen 2 controller



This information is tracked across the lifetime of the controller, and can be seen by week, month and year.

My Pool

Pooled FAQs

Link to [FAQs - Pooled](#)

Pool Maintenance

Here is where the customer can perform tasks

- Calibrate pH
- Calibrate Salt
- Guided Backwash
- Lower water levels
- Superchlorination cycle

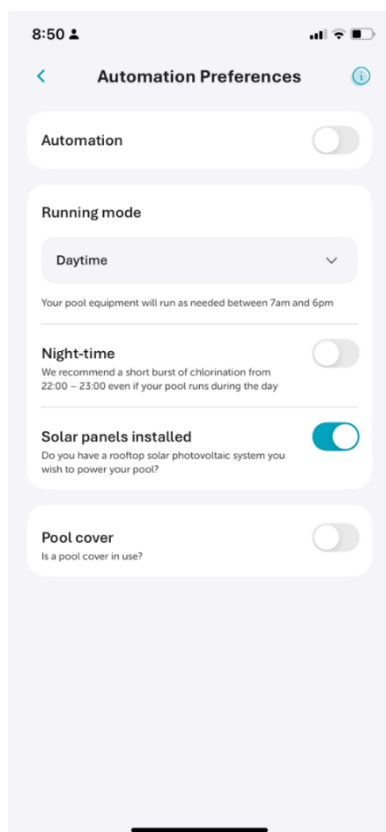
The customer is stepped through each of the tasks.

Note: Use rapid start & set the hardware to run for 20 minutes. When running, enter the calibrated value, the changed value will take effect within 15 minutes.

When the task completes, the date will be updated, so you have a record of the pool maintenance they have performed.

If you see a message “The data couldn’t be read because it is missing”, this is because there is no record of their last maintenance action.

Automation Preferences



Toggle Automation on & off

Running Mode: Select Daytime if solar panels are installed. Select Nighttime if not

Nighttime: Select to give your pool a boost of chlorine at night

Solar Panels installed: Select if you have solar panels, this will preface the equipment to run during the daytime

Pool Cover: Please select this if you are using the pool cover – typically when changing seasons. It will reduce the amount the algorithm needs to run for and ensure the water levels remain at safe levels.

My Swimming Pool Account

Summarised information about the pool

This is where the IMEI is presented that is the unique identifier of the pool controller.

Notifications

You will receive notifications on their app regarding maintaining their pool

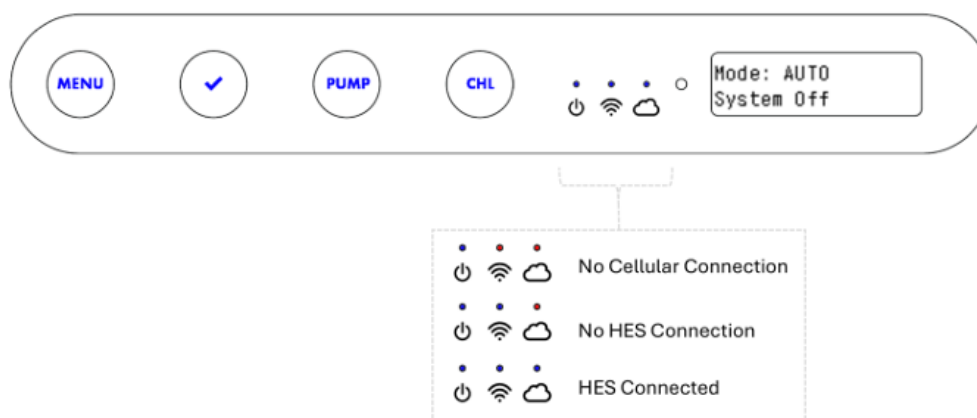
Dashboard title	Customer title	Message Body	Action
Monthly Salt	Your pool needs salt	Please add x 20 kg bags of salt and 25kg bag of magnesium minerals	Buy suggested salt & magnesium
Chlorinator Turned On But Zero Power	Check chlorinator operation	Ensure your chlorinator is powered on, connected to the Pooled Controller (IPC), and set to "Manual" mode	As per message body – contact your Poolwerx Franchise partner if message persists
Chlorinator Turned On But Less Power	Your chlorinator may need a service	Check salt and water levels. Clear blockages. Check chlorinator is in "Manual" mode. Check cell for calcium scale and clean or replace as required.	As above
Low Flow Pool	Check water level and flow	Check water level and clear any blockages	As per message body
High pH	High pH	Your pH reading is high. Please take a water sample to your Poolwerx shop. Enter the value as a recalibrated value in the app.	As per message body
Low pH	Low pH	Your pH reading is low. Please take a water sample to your Poolwerx. Enter the pool shop value as a recalibrated value in the app.	As per message body

Manual	Your Pool System is set to Manual	Did you mean to leave your Pool System in Manual? If not, please set it to 'Automation' in the app	As per message body
Offline	Your Pooled controller is not contactable	Check your pool controller is powered on. Try turning it off and on to reset the connection. Your pool will run without internet connection, but triggering maintenance functions from app or dashboard will not be available	You may require a high gain antenna to be installed, or modification of an installed antennas location.
Low Signal	Your controller has a low signal	Your pool has low signal strength. If problem persists, contact your Poolwerx shop for advice.	May require a high gain antenna to be installed if not already present

Troubleshooting

My Pooled IPC powers on but I cannot see it in my App

Your Pooled IPC has three status LEDs on the front panel.



These variously indicate the connected state of your device. If either of the second or third LEDs from the left are NOT blue, it is recommended that you contact the pool shop where you purchased your device, they will be able to rectify this problem remotely. There is no need for you to remove your Pooled IPC.

My Pool keeps going offline

Check your internet connectivity by pressing the menu button twice. You will see an output on the LCD that advises the signal quality and value. If it reads Fair or Poor, or oscillates between the 2, install an antenna on the right hand side, replacing the paddle antenna



The thresholds are:

	RSRP (dBm)	SINR (dB)
Excellent	-95	15
Good	-105	10
Fair	-115	5
Poor	< -115	< 5