



AGMAC AUTOMATION WATER WATCHER MANUAL



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1 SIM activation

** Unless otherwise organised, all new water watchers are supplied with a 4G Aldi prepaid SIM card installed. If you have organised another SIM to be used, you can skip this step. **

You will find the Aldi SIM activation code inside the supplied SIM package (the SIM is already installed in the unit). If this is your first ALDImobile SIM, follow the instructions on the SIM package to create a MyALDImobile account and activate the sim. We recommend doing this on a computer rather than a mobile as it is easier to navigate the website. **Please keep your account number and password in a safe location as this will be required to add credit to the SIM in the future.** Existing ALDImobile customers need only to login to their account and activate the new SIM.

When asked whether you are keeping your phone number, select no. You will want to receive a new phone number. We have had instances where people have selected to keep their existing number and inadvertently transferred their personal phone number to this new SIM.

For recharge type, you must select Pay As You Go, rather than a monthly plan. Aldi PAYG credit is valid up to 365 days. Initial credit is no longer included with the SIM, so we recommend adding \$25 to \$35 credit to cover a season of use.

Once the SIM is activated you will receive a notification to the email address or primary mobile contact number specified when you set up your MyALDImobile account. This information will contain the new phone number of the Water Watcher.

Once you have your new phone number then wait about thirty minutes for any activation to be completed. Send a text message to the new number. The body of this message should contain a parameter and a value, separated by a space (' '). To set the first phone number, send phone1 yournumber.

EG Send:

Phone1 0412345678

Be sure no spaces are included in the mobile number. Up to five mobile phone numbers can be set to each Water Watcher. If successful, the Water Watcher will send the following message to the sent mobile number "Bay Sensor: Phone number 1 set to yournumber."

2 Use and longevity guide.

For most people, the unit will work out of the box. Simply set your mobile number to the machine and you will be ready to go.

To use and keep your AGMAC Water Watcher in good working order, follow the steps below.

2.1 Reset before each use

The unit will only trigger once per reset (Either by pressing the 'reset' button or using the 'reset' command). If the reminder function is enabled, the unit will continue to send reminder messages at the set interval until it is reset.

Hold the reset button until the status LED blinks once. If the reset button has not been pressed within the last 30 seconds, a message will go out to all numbers active on the device. Then place the water watcher in a paddock during irrigation. Be sure to place the unit with the solar panel facing towards the sun (North in Australia). When water is detected underneath the unit, it will send a text message to the set mobile numbers and the LED beacon will flash after the subtime has expired.

2.2 During the off season

To protect the longevity of the unit:

- Turn the sleep switch to off. This will put the unit into a dormant state which uses very little power. The unit will not function while the sleep switch is set to 'off'.
- Keep the unit plugged into power or in good sunlight to maintain the battery level and prolong its service life. Unless in the sleep mode, the status LED on the face of the unit will flash while charging and be constant on when fully charged. The unit will still charge while in sleep mode

AFTER A LONG PERIOD OF THE UNIT BEING IDLE, WE STRONGLY RECOMMEND TESTING THE UNIT AT LEAST 2 WEEKS BEFORE IT NEEDS TO BE USED TO ALLOW TIME TO REPAIR OR REPLACE COMPONENTS IF NECESSARY.

3 Commands

To change the settings on the unit, send a text message to it with the correct command. The unit will respond accordingly if successful.
Note: Commands are not case sensitive.

Commands consist of a parameter and a value, separated by a space (' '). Commands are not case sensitive.

Unless otherwise specified, the response message will be only sent to the number it came from if it is saved in the internal phonebook, otherwise it will be sent to all active numbers in the phonebook.

3.1 Set the mobile numbers the unit sends messages to

The AGMAC water watcher can store up to 5 mobile numbers to send messages to.

To set phone number 1, send:

Phone1 0412345678

The unit will respond: *"*Bay Sensor: Phone number 1 set to yournumber and notifications turned on"*

To set phone numbers 2-5, simply replace the 1 in the parameter with the desired phonebook number. Each phone number can be turned on and off individually, as explained in the next section.

3.2 Turn the mobile numbers in the phonebook on/off

The numbers in the phonebook can be individually turned on and off. Numbers are automatically set to 'on' when they are added.

To activate phone number 1, send:

Phone1 on

To deactivate phone number 2, send:

Phone2 off

The unit will respond: *"*Bay Sensor: Phone number 1 notifications on/off"*

3.3 Change the name of the unit

The unit name may be personalized before delivery, however the default unit name is 'Bay Sensor'. To change the unit's name, send:

Unitname Your new unit name

The unit will respond: *"*Bay Sensor: Unit name changed to Your new unit name"*

Unit names are case sensitive and can include spaces and symbols, however some symbols may be recognized unexpectedly by the unit and send a different character. Unit name can be a maximum of 25 characters including spaces.

3.4 Remotely reset the unit

Water watcher bay sensors can be reset remotely via text message. This is the same function as if the reset button is pressed. The response is sent to all active numbers in the phonebook.

To remotely reset the unit, send:

Reset

The unit will respond: *"*Bay Sensor: Unit is ready
Battery voltage: *current battery voltage*
Signal strength: *current signal strength**

NOTE: Signal strength quality table is located at the end of this document

NOTE: Battery voltage level table is located at the end of this document

3.5 Check the contents of the internal phonebook

You can check which numbers are saved in the unit and whether they have notifications turned on.

To check the unit's internal phonebook, send:

Phonebook

The unit will respond: `**Bay Sensor: Phonebook
Ph.1: 0412345678, True
Ph.2: 9999999999, False
Ph.3: 9999999999, False
Ph.4: 9999999999, False
Ph.5: 9999999999, False`

3.6 Flash the unit beacon light

You can turn the unit beacon light on remotely.

To turn the beacon light on, send:

Light

The unit will respond: `**Bay Sensor: Light activated`

To turn the beacon light off, press the Reset button or send:

Reset

3.7 Turn low power mode on/off

During prolonged cloudy weather, the unit may not maintain charge. To overcome this, you can set the unit into low power mode. In this mode, the unit will only receive messages within 5 minutes of the reset button being pressed, during which time parameters can be changed. The unit will still send unsolicited messages that are not forwarded.

Any messages sent to the unit while in low power mode, including low credit notifications, will not be processed or forwarded.

To turn the low power mode on/off, send:

Lowpower on
Or
Lowpower off

The unit will respond: `**Bay Sensor: Low power mode on/off`

Default value: Off

3.8 Turn charge light mode on/off

When the charge light mode is turned on, the status LED will flash while the unit is charging the internal battery and be solid on when the battery is fully charged. If there is no power to the device from solar or a power pack, the light will remain off.

To turn charge light mode on or off, send:

ChargeLED on
Or
ChargeLED off

The unit will respond: `**Bay sensor: Charge light mode on/off`

Default value: On

3.9 Turn reminder mode on/off

When the reminder mode is turned on, the unit will send reminder messages on interval after the initial probe trigger until the unit is reset. To stop these reminders, the unit must be reset via the reset command or by pressing the reset button. The reminder interval can be adjusted as shown in the following command.

To turn reminder mode on/off, send:

Reminder on
Or
Reminder off

The unit will respond: “*Bay sensor: Reminder mode on/off

Default value: Off

3.10 Adjust the reminder timer

You can adjust the interval for the reminder messages sent after the first initial activation. The reminder interval is in minutes. Range: 1-4095

To adjust the reminder timer, send:

Reminder 123

The unit will respond: “*Bay sensor: Reminder timer set to 123 minutes”

Default value: 30

3.11 Set the trigger value of the probes

Under most circumstances, this can be left default. It can be adjusted if unit is having difficulty detecting ‘dirty’ water. Range 0-4095.

To adjust the trigger value of the probe, send:

Trigger 999

Response: “*Bay Sensor: Probe trigger threshold set to 999”

Test in the water to ascertain the correct operation. If this value is set above the true level of the water, the unit may not recognize the water.

Default value = 850

3.12 Set the probe submersion time

Sets the length of time the unit must detect water underneath it before sending an alert. Set in units of seconds. Range 0-4095

To adjust the probe submersion time, send:

Subtime 10

The unit will respond: “*Bay Sensor: Probe submersion time set to 10 seconds”

Default value: 10

3.13 Turn on/off auto reset mode

When the unit is in auto reset mode, if it has triggered and doesn’t detect any water for 5 minutes, it will automatically reset and be ready for another activation. No confirmation of a successful reset will be sent when in auto reset mode and the user will have to observe whether the beacon LED is blinking or not to confirm the current status. A manual reset can still be done via the reset button.

To turn auto reset mode on or off, send:

Autoreset on

Or

Autoreset off

A confirmation message will be sent if the change is successful.

Default value: off

3.14 Any unrecognized messages will be sent back in response.

4 Unsolicited messages from the unit

- “*Bay Sensor: Battery low, recharge now” – The internal battery requires charging
- “*Bay Sensor: Water has been detected” – The unit has detected water
- Courtesy messages from service providers will be forwarded to the phonebook.
- Messages that are not valid commands from numbers not in the phonebook will be forwarded to the phonebook, otherwise they will be forwarded to the sender.

5 Troubleshooting & LED Indicator meanings

- If you do not receive a message when the reset button is pressed, ensure the correct mobile number is set, that the number is active in the phonebook and the SIM is activated and has sufficient credit. Also be sure the unit is not in sleep mode. Try using the unit in an area with good mobile service. You may have poor service in some areas.
- LED indicators
 - 1 flash for a second– Unit has been reset
 - 2 flashes a second – the modem is trying to connect to a mobile network
 - In low power mode, the unit will flash when it tries to send a message, as it must re-connect to the network.
 - 2 flashes over 2 seconds – Water has been detected

While charge light mode is on:

- 1 flash per second – unit has good power and is charging
- Light solid on – unit has good power and is fully charged
- Light off – no power from charger or solar.

Table 1: Signal strength quality

Signal Strength	Quality
Greater than or equal to -80dB	Excellent
-80 to -90dB	Good
-90 to -100dB	Fair to poor
-100 to -120dB	Unusable

Table 2: Battery level

Battery voltage	Quality
Greater than or equal to 4.1V	100%
3.9V-3.8V	75%
3.7V	50%
3.5V	25%
3.5 - 3.1V Unit will shut down below 3.1V	Charge before use