

# Aquamate

Aquamate is an aquarium monitoring and automation system for mass scale aquariums in Sri Lanka. we introduce two separate units for indoor and outdoor tanks. By this method we can reduce the cost for un-necessary sensors. We implement only the indoor unit. We used temperature sensor and pH sensor for this unit. We can measure pH value and temperature of indoor tank. There is a dashboard for this unit. Parallely, we designed a fish feeder. The fish feeder is programmable via the dashboard to feed at any time interval.

Mainly there are two main parts of this unit. They are fish feeder and PCB contained box. pH sensor unit and main PCB is contained in this box. All sensors are connected to this box. Fish feeder is a cube shaped box. There is a lid that opens and closes to fall fish seeds into the tank at the specified time interval.

This is a user-friendly monitoring system. We have a web page and user can watch necessary information of the fish tank through that webpage. And also, user can control the fish feeder unit through this webpage. You can connect several tanks to monitoring system. Each tank has separate tab in our webpage. Our sensors are smoothly calibrated and you will have more accurate values. Our main unit is waterproof and well designed.

Main web site can be accessed by anyone using the link <http://aquamate-global.web.app>. Users can click relevant button with tank name to see the corresponding dashboard. It will pop-up in a new window. But those details can only be accessed by the people who have connected to the same local network, as same network which the Aquamate device is connected. If the user is powering up the Aquamate device for the very first time, there is a small configuration needs to be done. Those details are shown in the web page as well. Those steps can be carried out by anyone who has basic knowledge of computer networks. Most importantly, these steps need to be done only once for each device. After that when powering on, Aquamate device will automatically connect to the previously configured local network.

