

USER'S MANUAL

***SMART AQUARIUM
CONTROLLER***

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1. GENERAL INFORMATION

General Information section explains in general terms the system and the purpose for which it is intended.

1.1 System Overview

Smart aquarium controller is an electronic user interface based system to provide dosing or food to the aquarium at the right time. The system implements calendar thus helping in starting the system at any time. Various other controls include automatic backlight turn off for power efficiency, recurrent alarm modes etc.

1.2 Organization of the Manual

The user's manual consists of five sections: General Information, System Summary, Getting Started, and Operation.

General Information section explains in general terms the system and the purpose for which it is intended.

System Summary section provides a general overview of the system. The summary outlines the uses of the system's hardware and software requirements, system's configuration, user access levels and system's behavior in case of any contingencies.

Getting Started section explains how to setup controller and install it on the aquarium. The section presents briefly system menu.

Operation section provides a detailed description of system functions.

2. SYSTEM SUMMARY

Smart Aquarium Controller contains display and joy-stick based control for simple and efficient user controls. Device facilitates separate controls for four different motors which can be used for dosing carbon-di-oxide, or other.

2.1 System Configuration

Smart Aquarium controller is based on arduino operating system which internally implements good power efficiency and interrupt controller. System is also compatible with Android 1.5 API level 3 and higher versions. Next versions of this controller provides options for data logging and system control through anywhere in world over internet, internal GPS receiver for location, SMS based control etc.

After installation of the device in aquarium, device can be used immediately without any further configuration.

2.2 User Access Levels

Everyone can use application, but latest versions of the device recommends internet connection for connection to COSM for data logging.

2.3 Contingencies

In case of power outage, data will be maintained through battery supply. However, if dosing is mandatory for all times, UPS should be provided.

3. GETTING STARTED

This section explains how to install the device on your aquarium and setting up the device.

3.1 Installation and Logging In

The newest versions recommend connection to COSM web. User ID and password are delivered to user together with device package.

3.2 Setting up time on first run

On device startup for first time, a menu will be shown to user for setting the current time. However, if the time is correct, this can be skipped by pressing the [SET] button. Use the below steps to set the time.

- * use [UP]/[DOWN] joystick buttons to change time.
- * use [RIGHT]/[LEFT] buttons to scroll through menu.
- * press [SET] once done.

4. OPERATION

Once device got started, Current time will be shown on the main screen. In addition to that, status of all alarms will be scrolling on the screen.

4.1 Viewing the already set alarms

Alarms already setted on the device can be viewed by pressing the [VIEW] button.

4.2 Setting Alarms

On pressing [ALARM] button, a menu will be displayed asking the user to set the recurrent days on a week. Use [UP]/[DOWN] buttons to Turn ON/OFF the device, scroll through the menu through [LEFT]/[RIGHT] buttons, Marking/ Unmarking days can be down through [UP]/[DOWN] buttons. Once done, press [SET] button, device will show the menu for all four alarms.

For each alarms set, device will prompt user for time which can be set in similar way as described in section. Dosing prompt will take the dosing level in ML for each alarms.