



Reef Aquatics SMARTSUN™ LED Controller User Manual

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Thank you for using SMARTSUN LED Controller from Reef Aquatics, South Africa

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1. Health and Safety Information and Precautions

Warning: Prevent electric shock, fire, and explosion

- Do not use damaged power cords or plugs, or loose electrical sockets.
- Do not touch the power cord with wet hands, or disconnect the cable connectors by pulling on the cords.
- Do not bend or damage the cables.
- Do not use or touch your device with wet hands.
- Do not short-circuit the power supply or the LED outputs.
- Do not drop or cause an impact to the device or the power supplies.
- Do not use power supplies that are not approved by the supplier.
- Do not use your device during a thunderstorm. Your device may malfunction and your risk of electric shock is increased.



Keep your device dry and dust free

- Humidity and all types of liquids may damage device parts or electronic circuits.
- When wet, switch off immediately and remove the power supply cables. Dry your device with a towel and take it to a service centre.
- Water damage to your device voids your manufacturer's warranty.
- Do not use or store your device in dusty, dirty areas. Dust can cause your device to malfunction.

General Safety

- Do not store your device on slopes. If your device falls, it can be damaged.
- Do not store your device near magnetic fields. Your device may malfunction or the battery may discharge from exposure to magnetic fields.
- Do not store your device near or in heaters, microwaves, hot cooking equipment, or high pressure containers
- Do not drop your device or cause impacts to your device.
- The screen of your device may be damaged.
- If bent or deformed, your device may be damaged or parts may malfunction.

2. SMARTSUN LED Controller Product Information



3. Installation

Step 1: Make sure the controller is **SWITCHED OFF** (on/off switch at top of unit).

Step 2: Connect the LED cables on the **RIGHT side** of the controller.

Step 3: Screw the connector caps onto the connectors. **DO NOT** over-tight these caps.

Step 4: Connect the power cables on the **LEFT side** of the controller.

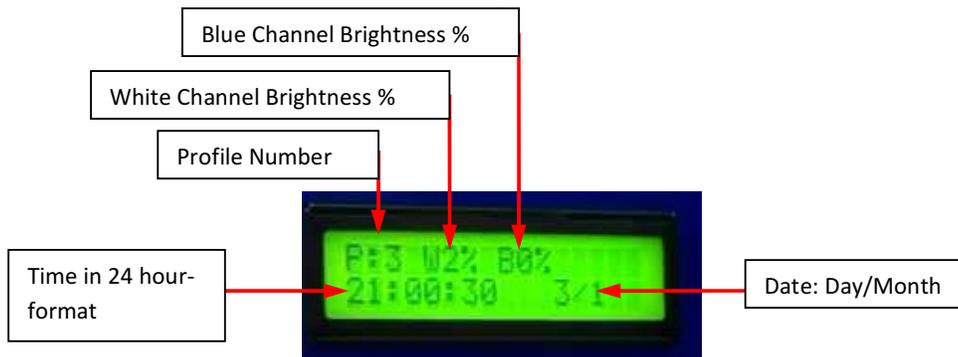
Step 5: Screw the connector caps onto the connectors. **DO NOT** over-tight these caps.

Step 6: Switch on controller at **On/Off switch**.

A welcome message will appear and after the preset Date and Time.

After a few seconds, the controller will execute the preset lighting profile (setting).

Step 7: Note the Date and Time and the Profile Number:



Profile 2 is the default profile, programmed in the controller, set by Reef Aquatics, simulating the sun’s brightness at the tropics. Every time the controller is switched on, the default values are re-written in the microcontroller’s memory. **DO NOT** edit this profile (DEFAULT).

Step 8: Set the current profile to the Default (Profile 2) using *Section 4.4, page 12: (Edit PROFILE)*.

Step 9: Set the correct Date and Time, using *Section 4.5, page 13: (Edit TIME)*.

Software Guide

Menu Items:

3.1. Execution of Current Profile

The main program is the execution of the Current Profile.

Choosing and setting up a specific profile, allows the unit to simulate the sun's brightness at specific times. The controller automatically calculates the gradually increase/ decrease of brightness and executes it.

3.2. Profile demo

Running the Profile Demo gives you as the user a visual feedback of the brightness settings as per each hour (24 settings in total for White and Blue).

Step 1: Press: **MENU**

Step 2: ---> **D: Demo**

Step 3: ---> **U: Profile Demo**

Press Button:



MENU

DOWN

UP

Storm Demo

The Storm Demo can be run at any time. This will showcase the lightning function of the controller.

To edit the Storm Demo, follow the steps in *Section 4.7, page 15: (Edit STORM DEMO)*.

Step 1: Press: **MENU**

Step 2: ---> **D: Demo**

Press Button:

Step 3: ---> **D: Storm Demo**



MENU

DOWN

DOWN

EDIT Modes

3.3. Edit PROFILE

You may choose a certain Profile at any time and may even edit the brightness settings. The program requests that a brightness value be programmed for each hour. The controller will automatically and linearly increase/ decrease the brightness between hours in six equal steps.

Step 1: Press: **MENU**

Step 2: ---> **U: Edit mode**

Step 3: ---> **MENU**

Step 4: ---> **U: Profile**

Step 5: Use **DOWN / UP** button to select a profile number. For the very first time, choose **“DEFAULT”**.

Step 6: Press **“MENU”** to save profile number

Step 7: When asked: **“Edit Brightness?”** press: **“D:YES”** when not set yet. If values are set for each hour or **“DEFAULT”** are chosen, press: **“U:NO”**.

Step 8: Use the **DOWN/ UP** buttons to set the brightness values in percentage for each hour (00H00 – 23H00), first for the White channel and then for the Blue channel.

3.4. Edit TIME

The Date and Time must be set correctly to deliver accurate operation. The time format is 24-hour. The controller has a built-in backup 3-Volt lithium cell battery to keep the time. This lithium cell can last up to 10 – 12 years.

Step 1: Press: **MENU**

Step 2: ---> **U: Edit mode**

Step 3: ---> **MENU**

Step 4: ---> **D: Time**

Step 5: Use **DOWN / UP** buttons to change values and **MENU** to save the Year, Month, Day, Hour and Minute.

Step 6: ---> **MENU**. This will save the set time. The Date and Time will be shown on the LCD for a few seconds as confirmation.

3.5. Edit STORM ALARM

The Storm Alarm can be programmed to start on a specific day at a specific time. You also have the option to set it to occur: **ONLY ONCE, EVERY DAY, EVERY SECOND DAY, until EVERY 30 DAYS.**

Step 1: Press: **MENU**

Step 2: ---> **U: Edit mode**

Step 3: ---> **MENU**

Step 4: ---> **M: Storm**

Step 5: ---> **U: Alarm**

Step 6: Use **DOWN / UP** buttons to change values and **MENU** to save the Year, Month, Day, Hour and Minute for the Storm Alarm to occur.

Step 7: Use **DOWN / UP** buttons to change values of the **Storm Intensity**, from **Very Rapid** to **Very Weak**. Press **MENU** to save the setting.

Step 8: Use **DOWN / UP** buttons to change values of the **Storm Duration** (in minutes from 1 minute – 59 minutes). Press **MENU** to save the setting.

Step 9: Use **DOWN / UP** buttons to change values of the **Storm Frequency** (in days from once only to every 30 days). Press **MENU** to save the setting.

3.6. Edit STORM DEMO

Step 1: Press: MENU

Step 2: ---> U: Edit mode

Step 3: ---> MENU

Step 4: ---> M: Storm

Step 5: ---> D: Demo

Step 7: Use DOWN / UP buttons to change values of the Storm Intensity, from Very Rapid to Very Weak. Press MENU to save the setting.

Step 8: Use DOWN / UP buttons to change values of the Storm Duration (in minutes from 1 minute – 59 minutes). Press MENU to save the setting.

END OF MANUAL