

ReefRun® Dual Controller

User Manual

ENG



 Red Sea

ReefRun[®] Dual Controller

User Manual

 **Red Sea**

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Introduction

Congratulations on your purchase of Red Sea's ReefRun Dual Controller.

The ReefRun Dual controller provides control of up to 2 ReefRun compatible DC return pumps, DC skimmer or a combination of both.

The ReefRun Dual controller provides the basic functionality of switching each pump on/off and setting the flow intensity. The ReefBeat App provides a complete range of features for controlling each of the pumps connected to the ReefRun Dual controller such as daily schedules or pulsing wave programs.

The ReefRun controller also allows the installation of an optional dual action Skim-sensor that enables the automatic self-leveling to prevent over-skimming and collection cup overflow.

The ReefRun Dual Controller is part of Red Sea's suite of smart devices that are operated via Wi-Fi by Red Sea's ReefBeat® App, which needs to be installed on a smart mobile device with internet connectivity.

Welcome to Red Sea's smart reef-keeping.

Sincerely,

The Red Sea Team

Safety

PLEASE READ AND FOLLOW ALL SAFETY INSTRUCTIONS

THIS DEVICE IS INTENDED FOR INDOOR USE ONLY.

DANGER: To avoid possible electric shock, special care should be taken when handling a wet aquarium. For each of the following situations, do not attempt repairs yourself; return the appliance to an authorized service facility for service or discard the appliance.

WARNING: To guard against injury, basic safety precautions should be observed, including the following:

Do not operate any appliance if it has a damaged cord or plug, if it is malfunctioning, or if it is dropped or damaged in any manner.

This appliance can be used by children aged from 8 years and above and persons with

reduced physical, sensory, or mental capabilities or lack of experience and knowledge if they

have been given supervision or instruction concerning use of the appliance in a safe way and

understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

The appliance is only to be used with the power supply unit provided with the appliance.

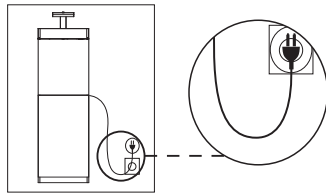


Figure 1: Drip Loop

Close supervision is necessary when any appliance is used by or near children.

To avoid injury, do not contact moving parts.

Always unplug an appliance from an outlet when not in use, before putting on or taking off parts, and before cleaning. Never pull the cord itself to remove the plug from the outlet. Grasp the plug and pull to disconnect.

Do not use an appliance for anything other than its intended use. The use of attachments not recommended or sold by the appliance manufacturer may cause unsafe conditions.

Do not install or store the appliance where it will be exposed to the weather or to temperatures below freezing point.

Make sure an appliance is securely installed before operating it.

Read and observe all the important notices on the appliance.

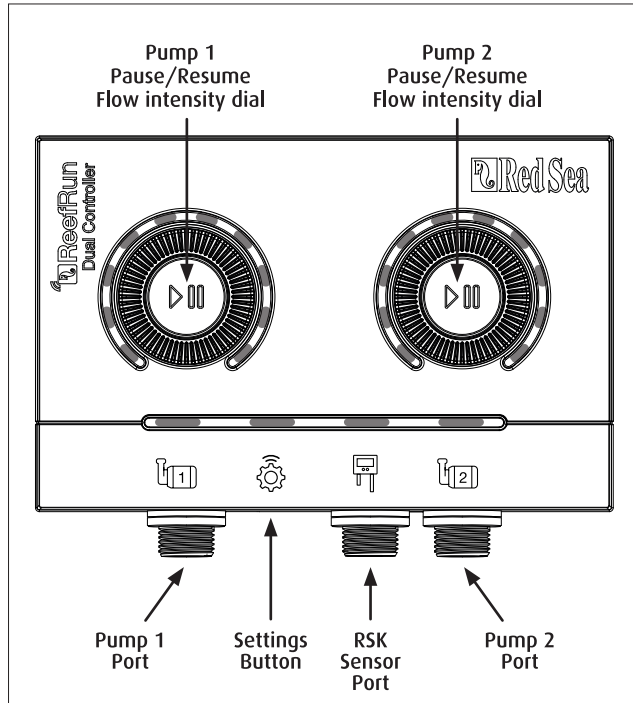
Note: A cord rated for less amperes or watts than the appliance rating may overheat. Care should be taken to arrange the cord so that it cannot be tripped over or pulled accidentally.

Do not use if cord is damaged. In case of need, do not attempt to replace or repair yourself; return the appliance to an authorized service facility for service or discard the appliance.

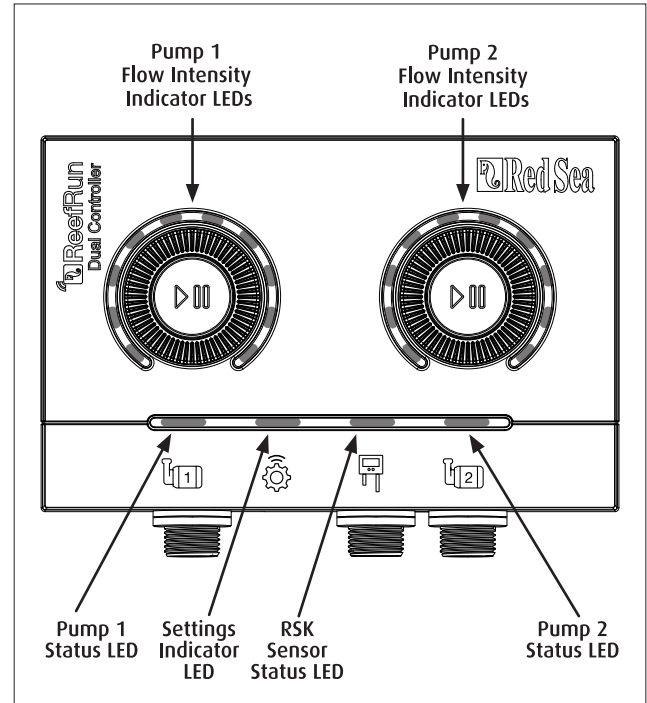
In case of need, do not attempt to replace yourself; return the appliance to an authorized service facility for service or discard the appliance.

Guide to the ReefRun Dual Controller (RRDC)

Buttons & ports



LED indicators



LED Indicators

Pump 1 - 2 Status LED Indicator:

- Solid Red light – Pump PSU is attached.
- No Red light – Pump PSU is not attached.

Settings LED Indicator:

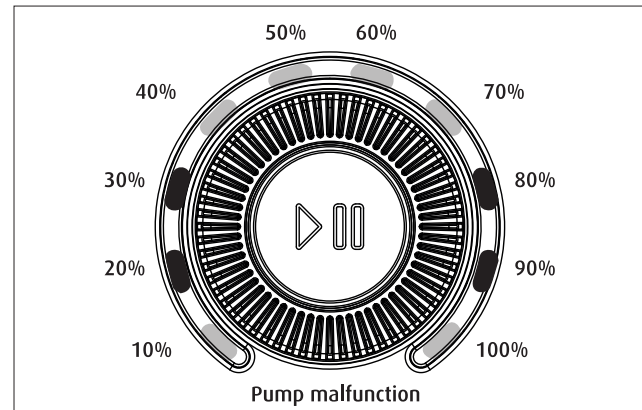
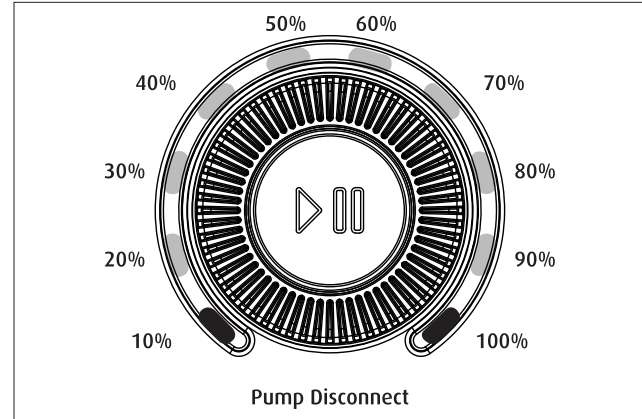
- Solid Red light – RRDC is connected to the home-network.
- Blinking Red light – RRDC is in Wi-Fi Access Point (AP) mode (can be discovered by Wi-Fi devices).
- Rapid Blinking Red light – Controller cannot access the home-network (network name and/or password are incorrect or known network has become unavailable)
- No Red light – RRDC Wi-Fi is off.
- Double blink – indicates change of status / end of process.

RSK Sensor Status LED Indicator:

- Solid Red light – Self-leveling is enabled
- No Red light – Self-leveling is disabled.
- Blinking Red light – Pump intensity is “Self-leveling”

Flow intensity LED Indicator:

- Solid Red lights – Pump intensity from 10% to 100%
- No Red lights – Pump is OFF.
- Blinking Red lights 10% & 100% – Pump is missing/disconnected
- Blinking Red lights 20%,30%,80% & 90% – Pump malfunction (stalled or not in water)



Settings Button – Function

If indicator LED is off (ReefRun Dual Controller Wi-Fi is off): Pressing button for 5 seconds (until double blink) activates Wi-Fi AP mode.

If indicator LED is blinking (ReefRun Dual Controller Wi-Fi is in AP mode): Pressing button for 5 seconds (until double blink) switches Wi-Fi off.

If indicator LED is on (ReefRun Dual Controller Wi-Fi is connected to a Wi-Fi network): Pressing button for 5 seconds (until double blink) disconnects the ReefRun Dual Controller from the network and switches it to Wi-Fi AP mode. (Note: before disconnecting a ReefRun Dual Controller from a network, delete the specific ReefRun Dual Controller from the ReefBeat App via the Device Manager).

Note: All settings are retained and can be restored when reconnected to the ReefBeat.

Reboot: Pressing and releasing the button for less than 2 seconds will cause the unit to shut down and restart. Wi-fi and pumps will stop momentarily during the process. User settings are not affected.

Clear Settings: Pressing the button for 15 seconds (until double blink) deletes all user settings and switches the Wi-Fi to AP mode. Complete the reset process by disconnecting and reconnecting the DC power.

Pause/Resume and Flow-intensity Dial

After a pump has been set up on the RRDC the Pause/Resume and Flow-intensity Dial becomes active.

When a pump is running, a short press on the dial will switch the pump off. A second short press will switch the pump back on and resume whatever intensity is currently scheduled for the pump.

If a pump is in a malfunction state, and after the issue has been resolved, a short press on the dial will restart the pump.

To manually change the flow intensity for a pump from the controller, press on the dial for 5 seconds until the indicator LEDs around the dial start to blink. While the LEDs are blinking, rotate the dial clockwise / counter-clockwise to increase / decrease the flow intensity. When you have reached the desired new intensity press on the dial for 5 seconds to save the new settings.

Note: In the App, flow intensity can be set in increments of 1%. The LED indicators on the dial show the intensity in 10% bands. When rotating the dial, each “click” is equivalent to a 2% change in intensity so it will take 5 clicks to advance from one indicator LED to the next.

Introduction to the ReefBeat app

All Red Sea's connected devices are operated via the ReefBeat app which must be installed on a mobile device with an internet connection (including tablets). See the full list of supported mobile devices on our website.

Through your personal user account, ReefBeat enables you to set up and manage any number of aquariums and add multiple devices to each of them.

For full functionality, each RRDC must have a permanent connection to the internet through your home Wi-Fi network. In this mode of operation, you will be able to see the current status of your RRDC units, change the settings or receive notifications on your mobile device whenever you have access to the internet.

The ReefBeat homepage will show you the current status of all your connected devices, and links you directly to the Settings page of each unit.

You can install the ReefBeat on multiple devices by entering the same user account details. All mobile devices will have the same rights for operating and changing all the settings. You should keep this in mind before giving your user details to any 3rd party.

If you do not have a home network or your home network does not have an active internet connection, you can connect and control your RRDC units in Offline or Direct Mode. However, certain functionalities such as remote access, multiple mobile devices or status notifications will not be available.

ReefBeat is constantly under development. For the most up to date operation instructions, view or download the latest user guide from the Red Sea website at www.redseafish.com

If this is your first Red Sea connected device, it is recommended that you complete the physical installation of your RRDC before installing the ReefBeat app.

Preparations before installing the ReefRun Dual Controller

Locate the RRDC controller in a convenient position and attach the mounting bracket using the screws or adhesive tape provided. The controller is designed to operate in a humid environment but it is not waterproof. Please take the appropriate precautions in choosing its location or when removing the controller from the mounting bracket.

Install one or two ReefRun compatible return DC-pumps or DC-Skimmers, or one of each according to the installation instructions provided with the product. Make sure that the pumps are in water before they are switched on as the pumps enter a malfunction state if they identify that they are running dry.

Connect the PSU-connector of the control-cable to the outlet cable of the pump power supply.

Connect the pump-connector of the control-cable to the pump cable.

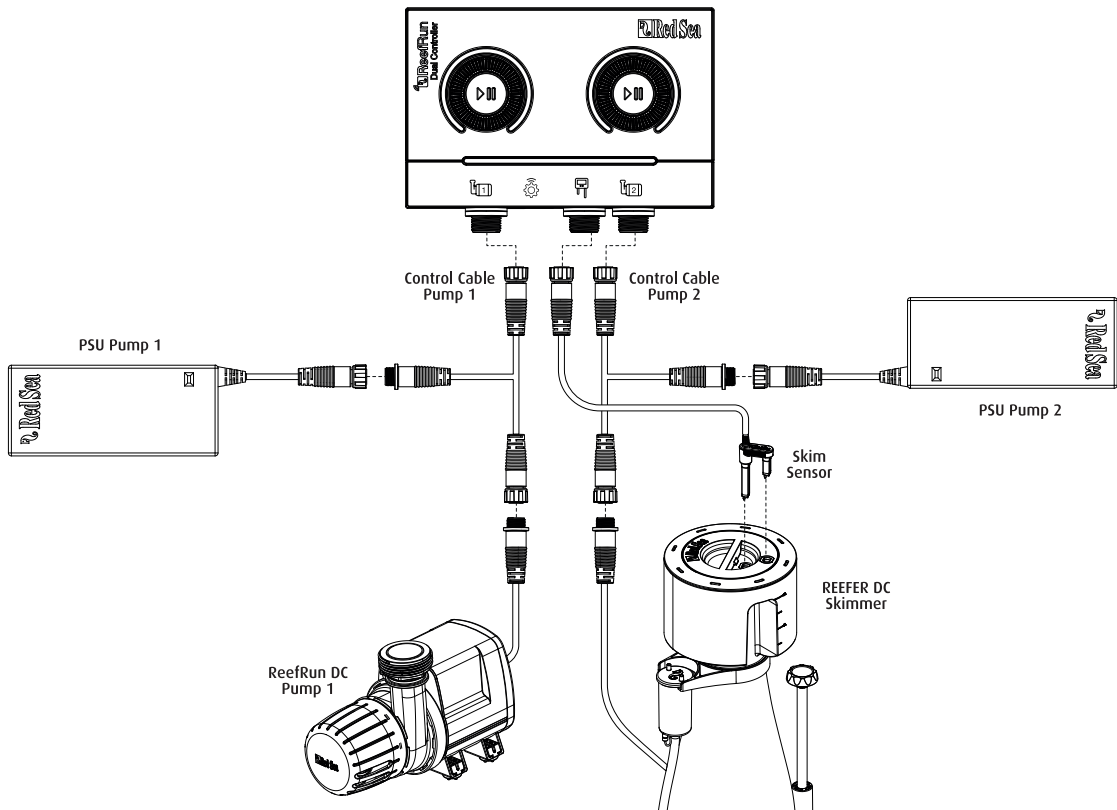
Connect the controller-connector of the control-cable to one of the pump inlets ports on the controller.

If the optional RSK-sensor is to be used, connect it to the sensor port on the controller.

Make sure that the inlet port covers remain on any of the connector ports that are not being used.

When all preparations are complete, connect the AC cable of the power supplies to the wall outlet. The pump status LED will turn on to show that the pump power supply is connected, however, the pumps will not work until the controller has been onboarded to the ReefBeat App and the pumps have been set up.

ReefRun Dual Controller Connection Diagram



Connection and initial Setup

Download and install the ReefBeat-App from the app Store or Google Play as appropriate for your Mobile Device. (In countries without access to Google Play, an APK file and installation instructions can be downloaded from Red Sea's website.)

After installing ReefBeat, you will be guided through the set-up of your ReefBeat user account and aquariums, then you can start adding your Red Sea connected devices. All your user account details can be edited, but only when your mobile is connected to the internet.

For full functionality Red Sea's connected devices should be connected to the internet and your aquariums should be set to "Online". If you do not have an available Wi-Fi network at your Aquarium, set it as "Offline". You can change this setting later when Wi-Fi becomes available.

Make sure that you select the correct world time zone for where your aquarium is located. The default is the same time zone as your mobile which might be set for a different location. There is also a "Daylight saving Time" (DST) toggle that needs to be manually switched at the beginning and end of DST for your location.

If you have set up more than one aquarium, select the aquarium from the dropdown menu at the top of the screen before proceeding.

When first connecting a new device it should be in AP mode and the setting indicator LED should be blinking. If not, set your RRDC to AP mode by pressing the settings button until the settings indicator LED starts blinking (approximately 5 seconds).

Tap the Add Device button from the Device Manager page, select the icon and follow the instructions in the app. This may take a few seconds. If no devices appear on the list, check that the RRDC is in AP mode and/or refresh the page.

ReefBeat-App will now display a list of Wi-Fi networks and signal strengths that are available to the RRDC from its current location.

Select your preferred network and wait a few moments while the RRDC connects to it. The indicator LED will now be a solid red. Follow the instructions on the app for initial settings.

If you have set the aquarium to Offline, select the "Direct Mode" option at the top of the screen to skip the network connection. The indicator LED will continue to blink as the RRDC Wi-Fi remains in AP mode.

Follow the instructions in the app for connecting the RRDC to the ReefBeat App and cloud.

If you already have the pumps connected to the ReefRun Dual Controller follow the instructions in the App for setting them up. Pumps can be added or deleted and their settings can be changed at any time.

Setting up ReefRun DC pumps

Follow the instructions in the App to setup your pumps.

The RRDC automatically identifies which model of pump has been setup on each of the two ports.

Set the desired flow intensity for each pump by toggling between the 2 tabs on the settings page. Before saving, you can check the effect of the intensity by pressing the preview button. Each pump can also be switched OFF from the settings page without losing its intensity setting, which will be reinstated when the pump is turned back ON. Remember to press the save button at the top of the screen to implement the desired intensity.

By default, the pump will run continuously 24/7 at the flow intensity shown in the settings page of the App. If you wish to set a customized daily schedule or use the pumps as wave pumps see the instructions below.

If you are running dual return pumps they can be "linked" to work

together as a single unit sharing all the same settings such as schedule and all on/off actions etc.

If you are planning to use the DC-pumps as wave pumps you can customize the wave pulse time for a uniform wave for each pump. If the pumps are linked, they can be synced to pulse together or anti-synced to pulse alternately.

Uniform Wave Settings

To use the DC-pumps as wave pumps you can customize the wave pulse time for a uniform wave for each pump. If the pumps are linked, they can be synced to pulse together or anti-synced to pulse alternately.

Homepage>Settings Page>Pump>More Settings>Uniform Wave

If you wish to create a daily schedule of different pump intensities or wave pulse times see the Custom daily schedule option below.

Note: If you disconnect and reconnect a different model of pump to the one set up on each port, the flow intensity LED Indicators 10% & 100% will blink and the ReefBeat App will display the message “incorrect pump”. Simply reconnecting the correct pump will restore the unit to normal operation.

Setting up REEFER DC-Skimmer

Full instructions for installing the Reefer Skimmer are provided in the Reefer Skimmer instruction manual. Make sure that you have purchased the DC version of the skimmer or the Reefer Skimmer upgrade kit that includes the PSK DC-1200 pump, skim sensor and control cable so that it

can be connected to the RRDC.

The RRDC will identify that you have connected the PSK DC-1200 pump, however, you will need to select your Reefer Skimmer model (RSK300/600/900) to implement the correct default pump intensity settings, as they all use the same pump. The default pump intensity for each model has been set to provide the optimal airflow and air/water contact time. This setting considers the size of the reaction chamber and performance of the venturi. You can manually adjust the flow intensity at any time however we recommend that you use the default intensities.

The default setting is for a continuous operation of the skimmer (Always ON) at the pump intensity shown in the settings page of the App. The skimmer can be set to OFF with the intensity setting saved, which will be reinstated when it is turned back ON. Alternatively, the skimmer can be set to “Self-leveling” which will automatically regulate the intensity if either over-skimming or full-cup conditions are reached. The RRDC will identify if you have connected the skim sensor, which needs to be connected before the ReefBeat App will enable the setting option for the self-leveling features. Remember to press the save button at the top of the screen after making any changes to the settings.

DC-Skimmer Self-leveling

The Self-leveling feature of the ReefRun controller automatically regulates the flow intensity of the DC skimmer pump based on the dual action skim sensor located in the neck and collection chamber of the collection cup. Before using the self-leveling features, the skimmer should be set up as fully explained in the Reefer Skimmer instruction manual by using the mechanical flow regulator to adjust its performance.

Each of the self-leveling sensors can be activated / deactivated by toggling each one individually in the App.

Over-skim regulation:

The sensor in the neck monitors the wetness of the foam and will activate a self-leveling procedure whenever a potential over-skimming wetness is identified. When the wetness of the foam in the neck exceeds the “over-skim” threshold, the intensity of the pump is immediately reduced to prevent over-skimming and then gradually increased and/or decreased, a bit at a time, according to the foam wetness, until the preset pump intensity is reached and stable skimming is restored.

To optimize performance of the feature the over-skim threshold is adjustable from the App.

Lower the threshold if over-skimming is not prevented. Raise the threshold if the skimmer is often in self-leveling mode and little or no skimmate is being collected. *Homepage>Settings Page>Pump>More Settings>Over-Skim Regulation*

At any time during the automated self-leveling process the skimmer can be returned to normal skimming by pressing the resume button in the App or the pause/play button on the controller.

Full-Cup regulation

The sensor in the collection chamber identifies when the cup is full and needs emptying. When a full-cup is first registered the pump intensity will be reduced to allow for continued aeration of the water. Once a full-cup has been identified the system keeps monitoring the status and will automatically revert to normal operation if it is not full to the maximum capacity. Once maximum capacity has been reached the cup needs to be emptied and then normal skimming can be restored from the App.

In the event that the over-skim threshold is passed while the skimmer

is in full-cup, the skimmer pump will be switched off until the cup is emptied and normal skimming is restored from the App.

Skim-Sensor calibration

When selecting the Self-leveling setting for the first time the App will guide you step by step through the skim sensor calibration procedure. Each probe of the sensor needs to be calibrated individually and should be immersed, one at a time, in a cup of water taken from the sump. Immersing both probes at the same time or immersing the probe directly in the sump (instead of in a cup) will give an incorrect result that will affect the performance of the self levelling feature.

Skim sensor calibration will need to be repeated after a factory reset of the RRDC or if the skim sensor is replaced.

Custom daily schedule

The default setting for both the DC pumps and skimmers is for a continuous operation at the flow intensity set in the settings page of the App.

The customized daily schedule allows up to 10 time slots during the day with unique settings such as flow intensity or uniform wave pulse time (if the DC-pumps are to be used as wave pumps) for each time slot. The schedule can be used for example to coordinate the shutdown of a pump and/or skimmer with an automatic feeder that is not connected directly to ReefBeat or to shut down or lower the intensity or even shut off the skimmer for a period during the day or night.

Two return pumps that are linked together will share a common schedule. To set the custom schedule: *Homepage>Settings Page>Pump>More Settings>Customized Schedule*

Quick Action Settings

The Quick Actions are activated from the ReefBeat App and will be implemented simultaneously for all devices that are configured for each action.

Each pump is configured separately for the quick action buttons. If the 2 pumps are linked there is a single setting for both.

Feed

When connecting a pump to the Feed Quick Action there are 3 parameters to set:

Feed duration time – enter the desired time period for the Feed settings to be implemented. At the end of the duration time the pump will automatically return to the scheduled settings.

Feed mode Intensity – set the desired flow intensity for the ReefRun pumps during the Feed period. To switch the pump OFF, set the intensity to zero. The DC-Skimmer can only be switched OFF and not set at a different intensity.

Feed start delay – this will delay the start (and finish) of the Feed duration time for the specified “delay” period (in minutes). Use this setting, for example, if you want the skimmer to be switched OFF a few minutes before the return pump or visa-versa.

Maintenance/Emergency

Maintenance/Emergency modes will immediately shut down all devices that are configured for these Quick Actions buttons and will resume their scheduled settings when the Quick Actions is switched off.

To stagger the restart of the pumps when the Quick Actions is switched

off, set the desired “Quick Actions Return delay” for each pump individually. Setting a Zero delay will restore the scheduled settings immediately. Use this setting, for example, if you want the skimmer to restart a few minutes after the return pump to allow the water level in the sump to return to normal.

Notifications

When the RRDC has a permanent connection to the internet, a notification will be sent to your mobile whenever connection to the ReefBeat cloud is lost.

A “No Connectivity” message could be due to a power or internet outage, or router failure.

You will also receive notifications about issues that require your immediate attention such as a pump malfunction or a full skimmer cup.

ReefBeat Device Manager

The Device Manager is accessible from the Page menu in both the ReefBeat homepage and the device settings page, and contains a list of all the Red Sea connected devices that are installed on each aquarium.

The devices are listed according to type and in the order in which they were added to the aquarium. Tapping the individual device opens a list of available actions for the specific device. Tapping the 3-dot menu for the device type opens a list of actions that can be done simultaneously for all devices of the same type.

Turn OFF / Turn ON

The device can temporarily be turned off/on without physically unplugging it or losing any of its settings.

For individual units: *Device manager > Device line menu > Turn OFF / ON.*

For device type: *Device manager > Device type menu > Turn OFF / ON*

Reconnecting a device to the ReefBeat Cloud

If you have received a disconnected notification for your device, it may need a reboot to reconnect it.

If the settings indicator LED on the device is ON click the Reboot button from the device manager: *Device Manager > Device Line menu > Reboot.*

If the settings indicator LED is OFF pressing the settings button on the device for less than 2 seconds will initiate the Reboot enabling the device to reconnect to the home network. If this does not resolve the issue, check that the network is available.

Firmware Updates

From time to time, you may receive a notification that a new firmware version is available for your device. It is important to keep your device firmware updated to ensure compatibility with updates to the ReefBeat App.

Individual units can be updated: *Device manager > Device line menu > Firmware Update.*

To update all units simultaneously: *Device manager > Device type menu > Firmware update*

Do not unplug a device while it is downloading and installing the new firmware.

Device Manager > Device Line menu > About - will show the currently installed firmware version. When the firmware update is complete, the "About" page will show the new version as the current version along with the date and time that the update was performed. All your previous settings will remain as before. If the firmware update is not successful, the device will automatically revert to the previous version. Repeat the process a few minutes later.

If your device does not seem to be performing correctly after the update, reboot the unit by pressing the settings button for less than 2 seconds.

Deleting a device

To remove a device from an aquarium, delete the unit from the ReefBeat App:

Device Manager > Device Line menu > Delete.

Deleting the device before it is switched off will prevent unnecessary notifications that it is disconnected from the cloud.

Clear settings

To permanently remove all user settings from the memory of the ReefMat and return it to its initial default state, perform the following steps.

If the device is connected to the ReefBeat, trigger the hard-reset option from the Device-Manager: *Device Manager>Hard-Reset*

If the device is not connected to the ReefBeat, press the Settings button for about 15 seconds (until the Wi-Fi indicator LED shows a double blink), release the button and wait for about 1 minute for the device to reboot.

The unit will restart without any user settings and with the Wi-Fi in AP mode, exactly as shipped from the factory. The unit will retain the latest installed version of the firmware.

Device Maintenance

RRDC

For continued smooth running of the RRDC, we recommended making sure that it is kept clean, dry, and free of any buildup of salt deposits on a regular basis.

The unit is not waterproof. Do not submerge in water or other solutions.

Back-up battery

The RRDC has a back-up battery to maintain the correct time when the unit is disconnected from the power supply. This battery will need to be replaced once every few years. To replace the battery, unscrew the 4 screws on the back of the controller and remove the back cover. Replace with a new 3V Lithium cell Battery CR1220 reassemble the back cover and tighten the 4 screws back into place. After reassembling the

unit and switching it on, the internal time will be reset as soon as the internet connection is restored.

The battery is being monitored and you will be advised through the ReefBeat App when the battery needs replacing

Skim sensor

Make sure that the sensor is kept free of any buildup of organic waste, algae growth, or salt deposits on a regular basis. The sensor is waterproof and can be safely washed under running water. The titanium tips can be brushed to remove any hard deposits.

It is recommended to rinse the sensor tips in the sump once a week as part of your regular cup maintenance. Before rinsing, switch the self-leveling function off to avoid triggering the self-levelling / full-cup. If you did not switch off before rinsing you will need to “resume” normal skimming from the App.

Pumps

The pumps and impellers are susceptible to the buildup of calcium carbonate deposits that over time will affect the performance and should be cleaned about once a month. Refer to the ReefRun pump / DC Skimmer manual for correct maintenance.

Troubleshooting

A full and up to date FAQ for the RRDC and the ReefBeat app is available in the app (Homepage Main Menu> Help> FAQ) and on our website.

Q. I am having trouble installing the ReefBeat App or it crashes or does not seem to be working as described in the manual.

A. Check that your specific mobile device is on the list of supported devices on our website.

Q. My mobile is on the list of supported devices but keeps crashing.

A. Uninstall and reinstall the app and sign in again with your username and password. If this does not help, contact customer support.

Q. I'm having difficulty connecting the RRDC to my home Wi-Fi network.

A. Check that the RRDC Wi-Fi is working correctly by using the "Offline Direct Mode" option. If it does, try connecting to the hot-spot of a mobile phone in the same room: Device Manager> Device Line menu> About > Connect.

If neither of these options work, contact customer support. If they do work, the problem is likely with the router signal strength or its configuration, or it may be overloaded with devices.

- Check that the signal strength of your router is sufficient for a stable connection exactly where the RRDC is located. You may need to install a suitable Wi-Fi extender closer to the aquarium.
- The router may have too many devices already connected to it.
- Your router may be configured not to allow devices like the RRDC to be connected. This situation is common in an office environment, contact your IT professional.

Q. I keep getting notifications that my RRDC is not connected.

A. If your network router is not permanently connected to the internet, set your Aquarium as "Offline" My Aquariums> Device Line Menu>Offline. If your network router is meant to be permanently connected, check the quality of the Wi-Fi connection between the RRDC and your router or the stability of your internet connection.

Certificate of Warranty

Red Sea Products Limited Warranty.

Red Sea Aquatics (UK) Ltd. (hereinafter “Red Sea”) warrants the Product against manufacturer’s defects in material and workmanship for 24 months from your date of purchase.

The warranty provided by Red Sea is NOT TRANSFERABLE AND IS LIMITED TO THE ORIGINAL PURCHASER. If the Product is eligible under this warranty, Red Sea will either repair the Product free of charge (not including shipping costs) with new or refurbished parts or replace the Product with a new or refurbished Product at Red Sea’s sole discretion.

This warranty DOES NOT COVER normal wear and tear, or items that have a limited natural life or are consumable, such as, but not limited to impellers, sponges, filters, fans, tubes and “O” rings. It also DOES NOT COVER damage which occurs in shipment and/or failures or defects resulting from use outside the normal, and/or natural disasters, accidents, power line surges, neglect, improper installation, operation or maintenance, servicing of the Product conducted by anyone other than an authorized Red Sea service center, or failure to use or assemble the Product in accordance with any instructions provided (in the Product manual or otherwise) or the technical and/or safety standards of the country in which the Product is used. Additionally, any modification of the Product other than by an authorized Red Sea service center will invalidate this warranty.

In order to affect this warranty, please contact your local service center. For your convenience, details of authorized service centers can be found

on Red Sea’s website. Proof of purchase will be required before warranty performance is rendered.

The sole and exclusive remedy against Red Sea shall be for the repair or replacement of the Product as provided above. NO OTHER REMEDY (including but not limited to, incidental or consequential damages for lost profits, lost sales, or any other incidental or consequential loss) shall be available. Some jurisdictions do not allow the exclusion of incidental or consequential damage, so the above limitation may not apply to you. To the full extent allowed by applicable law, in no event shall Red Sea be liable for any loss or damage to aquatic life, and/or damage to other property and/or individuals resulting from the use of the Product or arising out of any breach of this warranty. All implied warranties are excluded to the full extent allowed by applicable law, and to the extent that they may not be excluded, are limited to the applicable warranty period set forth above. Some jurisdictions do not allow limitations on how long an implied warranty or condition lasts, so this limitation may not apply to you. The express warranties made in this warranty are exclusive and may not be altered, enlarged, or changed by any distributor, dealer, or other person, whatsoever.

USA

Some states do not allow the exclusion or limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the above exclusion or limitations may not apply.

European Union – Disposal Information:

This symbol means that, according to local laws and regulations, your product should be disposed of separately from household waste. When this product reaches its end of life, take it to a collection point designated by local authorities. Some collection points accept products for free. The separate collection and recycling of your product at the time of disposal will help conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment.

FCC Compliance Statement:

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received including interference that may cause undesired operation. Any changes or modifications not expressly approved by Red Sea could void the user's authority to operate the RF Module and/or the product that incorporates the RF Module. The user is cautioned to maintain a 20 cm (8 inch) spacing from the product to ensure compliance with FCC regulations.

CE Declaration of Conformity:

The equipment complies with the RF Exposure Requirement 2014/53/EU, Council Recommendation on the limitation of exposure of the general public to electromagnetic fields (0-300 GHz). This equipment meets the following conformance standards: EN 300 328, EN 301 489-17.



DISPOSAL: Do not dispose this product as unsorted municipal waste. Collection of such waste separately for special treatment is necessary. This product must not be disposed together with the domestic waste. This product must be disposed at an authorized place for recycling of electrical and electronic appliances. By collecting and recycling waste, you help save natural resources, and make sure the product is disposed in an environmentally friendly and healthy way.

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