



Pacific Sun



CalcFeeder PRO

Controller for Calcium reactor

with stepper motor feeding pump

User Manual

ver. 3.0

www.Pacific-Sun.eu



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1. Introduction

Dear Customer,

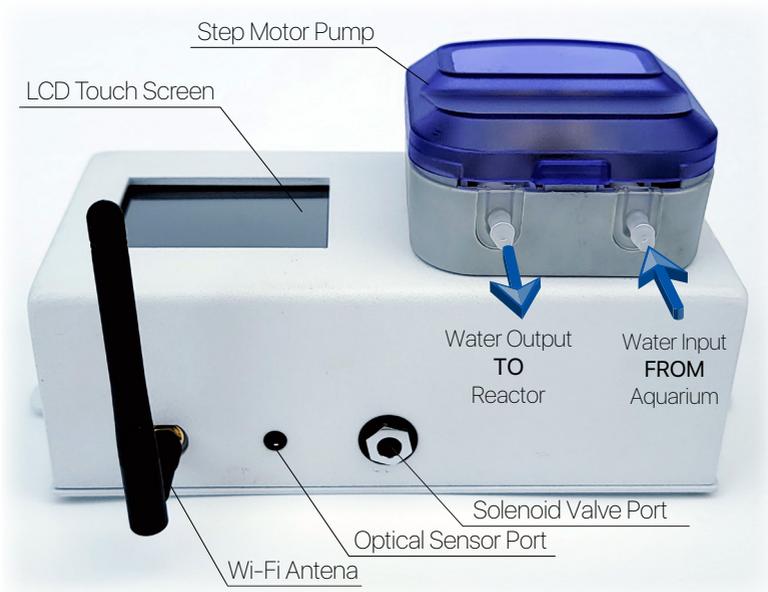
Thank you for purchasing the Pacific Sun CalcFeeder PRO Controller.

With the purchase of this unit, you have selected a top quality product. It has been specifically designed for aquaristic purposes and has been tested by experts. With this unit and CalcFeeder PRO calcium reactor, you are able to adjust the calcium level as well as the carbonate hardness in your seawater tank simply and efficiently in order to achieve optimum levels.

For best results, please read through this instruction manual before installing the CalcFeeder PRO Controller on your system.

During or after installation, please do not hesitate to contact our technical support team at service@pacific-sun.eu if you have any questions about your new CalcFeeder PRO Controller.

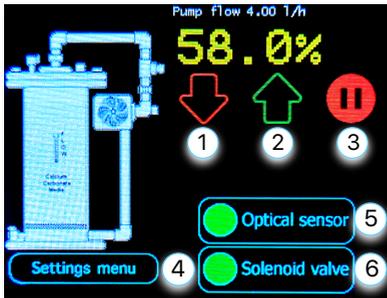
2. CalcFeeder PRO Controller



The Controller unit was designed to work with CalcFeeder PRO calcium reactor but can be used also as a very precise feeding pump for any other Calcium Reactor brand (require turning the "**Standalone**" mode to **ON**).

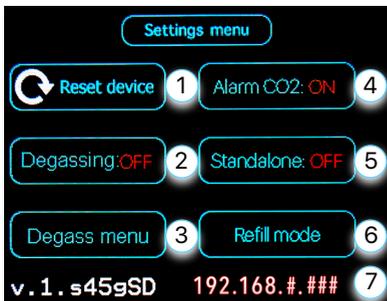
The CalcFeeder PRO controller is equipped with an ultra-precise Stepper Motor pump with four rollers. Built-in LCD touch-screen allows for very easy flow adjustments and controller operations. The Controller firmware updates can be performed by the internal USB port.

2.1. Controller Touch-Screen Operations



Main screen

- ① **Decreasing** flow effluent button.
- ② **Increasing** flow effluent button.
- ③ Dosing pump "**Pause**" button.
- ④ "**Settings menu**" button.
- ⑤ Optical sensor status indicator.
- ⑥ Solenoid valve status indicator.



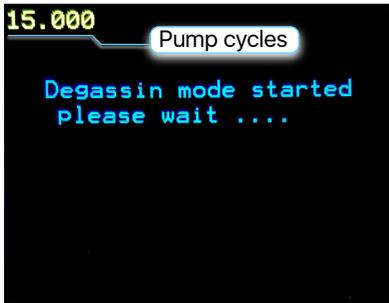
Settings menu

- ① Reset controller button.
- ② ON/OFF automatic "**Degassing**" button.
- ③ Automatic "**Degassing menu**" settings button.
- ④ ON/OFF automatic "**Alarm CO2**" tank button.
- ⑤ ON/OFF "**Standalone**" working mode button (when turn ON pump is running without connected optical sensor).
- ⑥ Reactor water **refill manual mode** enable button.
- ⑦ WiFi IP address when connected to the network



Degass Menu

- ① Manual enable **degassing** button.
- ② Degassing setting **once per week**.
- ③ Degassing setting **twice per week**.
- ④ Degassing setting **every day**.
- ⑤ Degass Menu **Exit** button.



Manual degassing screen

The controller **pump work cycles** are counted in the upper left corner. The degassing process takes **200** cycles.



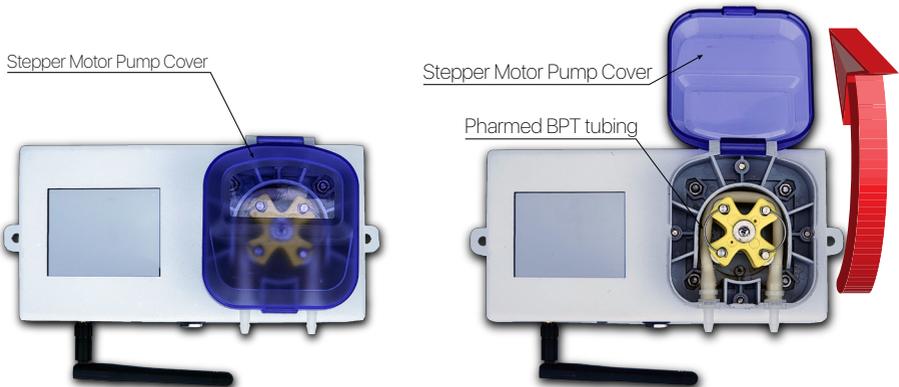
Reactor manual water refills screen

In order to Turn OFF the refilling process, press and hold the „**Turn off refill mode**“ button for **3** seconds.

2.2. Controller Maintenance

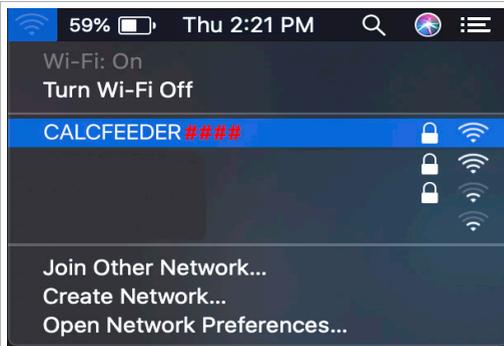
Stepper motor allows for heavy-duty work **24/7** without any limits. The controller allows setting the rate at which calcium and carbonate are dosed in the tank from **100 ml/h to 7200 ml/h**.

Please remember about regular tubing inspections and maintenance. Used Pharmed BPT tubing has an **MTBF (Mean Time Before Failure)** of an average of **2000 hours** and needs to be replaced after that time. Regular lubrication by using silicone grease will extend tubing lifespan and protect the device against leaking and damage.



3. Controller Wi-Fi Pacific Sun Cloud setup

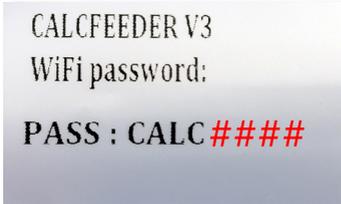
3.1. Connecting Controller to your home Wi-Fi network



1 Connect power to **CalcFeeder Controller**.

Find your **CalcFeeder Controller** on you Wi-Fi network list devices.

Click **Connect** directly to the CalcFeeder Controller Wi-Fi Network.



2 Find a sticker on the **CalcFeeder Controller** with a Wi-Fi **network password**:

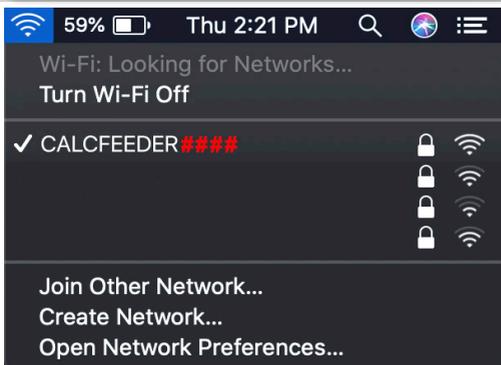
CALC####

Note:
- it's your unique number



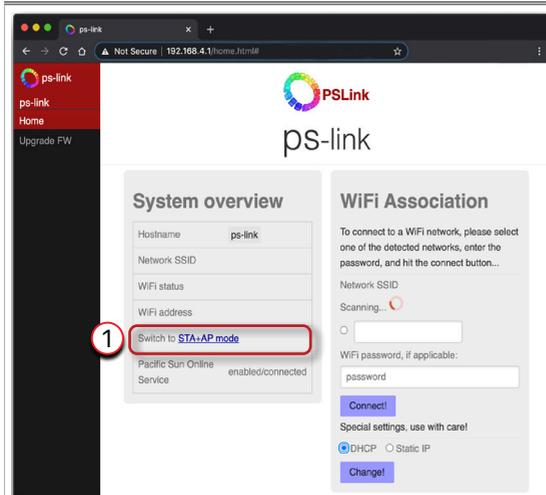
3 Enter your **CALCFEEDER###** Wi-Fi **network password**.

1 Next Click **Join**



4 Make sure you are connected to **CALCFEEDER####** Hotspot.





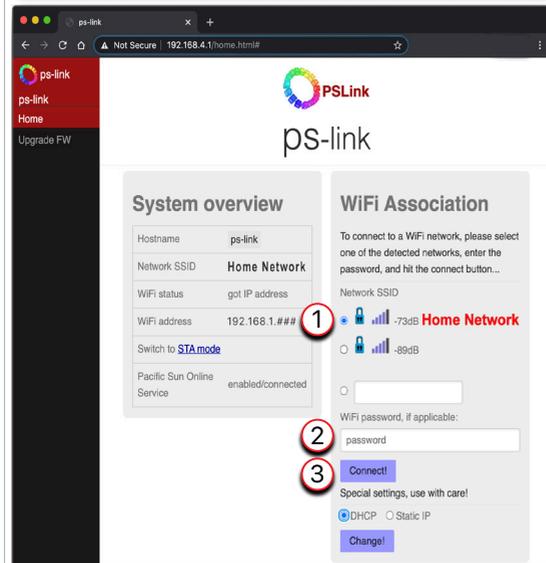
5 Open the **Controller WiFi network setup**.

Open your Internet Browser and type the **Controller WiFi network IP address 192.168.4.1** into the address field.

<http://192.168.4.1>

① Switch to **STA+AP mode**

Under **WiFi Association** you should see **Scanning** for available home Wi-Fi networks.



6 Connect Controller to **Home WiFi network**.

① Select your **Home WiFi network** under Network SSID.

② Type in your **Home WiFi network** password, if applicable.

③ Next Click: **Connect!**

After this step Controller will be available under your **Home WiFi network** usually with IP address format:

192.168.#.###

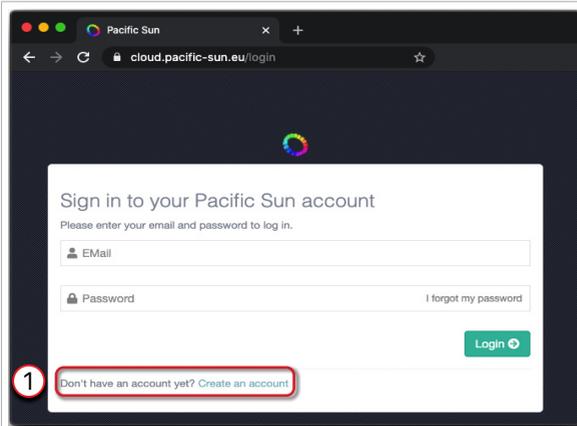


7 Restart Controller.

Power OFF and ON the Controller. **Disconnect** power and **Connect** back.

① On the controller "**Setting menu**" screen, see and take a note of the IP Address in a similar format.

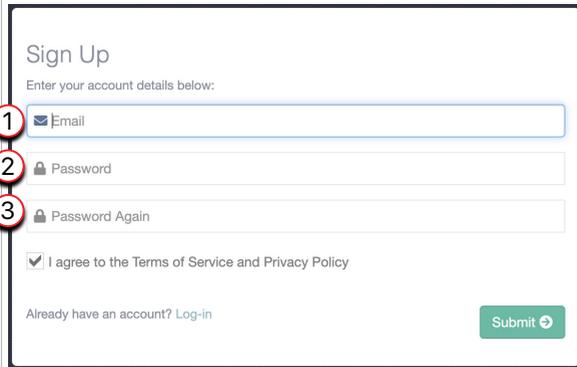
3.2. Adding Controller to Pacific Sun Cloud



1 Connect to **your home Wi-Fi internet network**, open Internet Browser, and go to the following address:

<https://cloud.pacific-sun.eu>

1 Click 



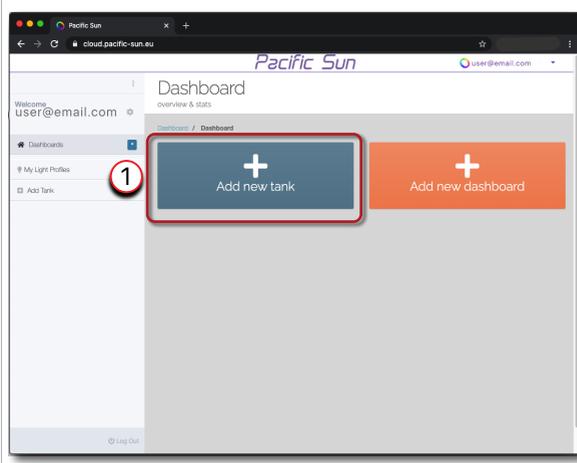
2 Create **Cloud Pacific Sun account**.

1 Enter **Email** address

2 Enter **Password**

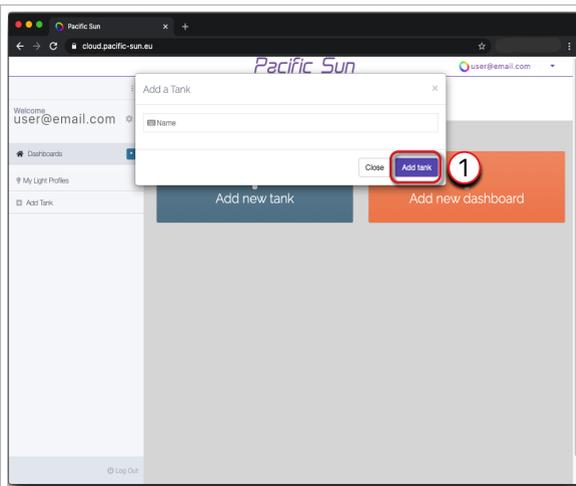
3 Enter **Password Again**

Next Click 



3 After login, on the **Dashboards**:

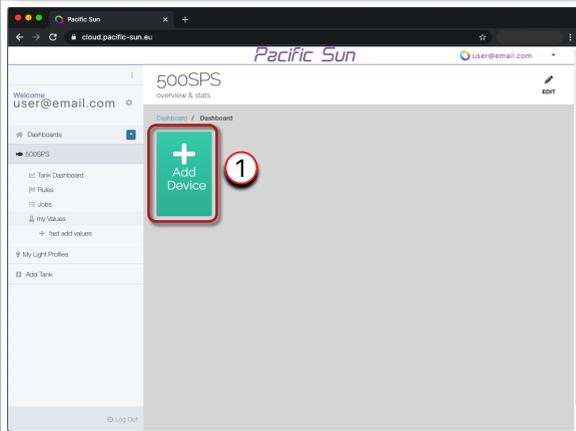
1 Click 



4 Add a Tank:

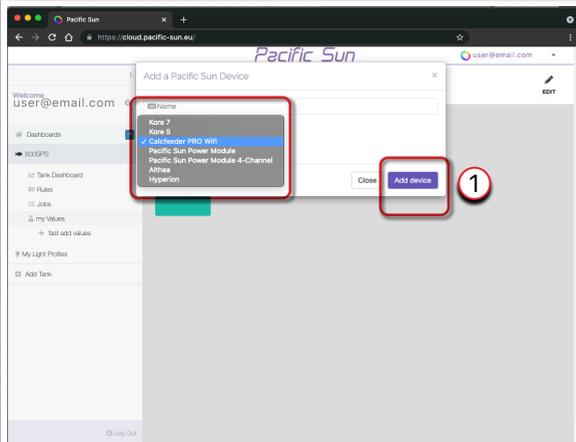
Type in your preferred **Name**

1 Click **Add tank**



5 Under your tank Name:

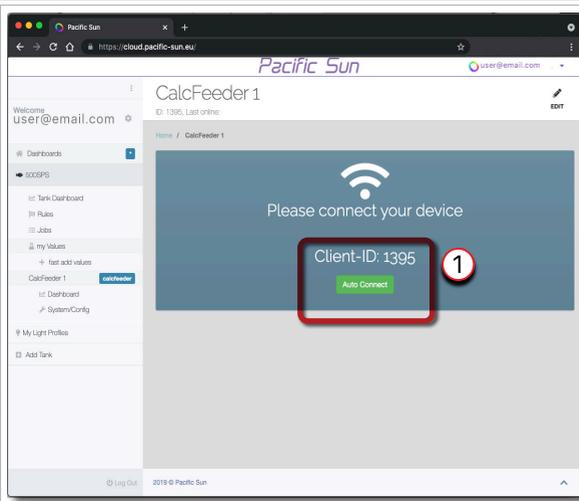
1 Click **Add Device**



6 Type In your preferred Name and select the device from the list:

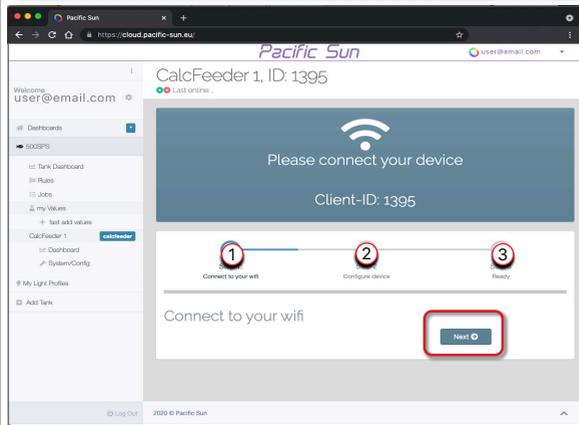
Calcfeeder PRO WiFi

1 Click **Add Device**



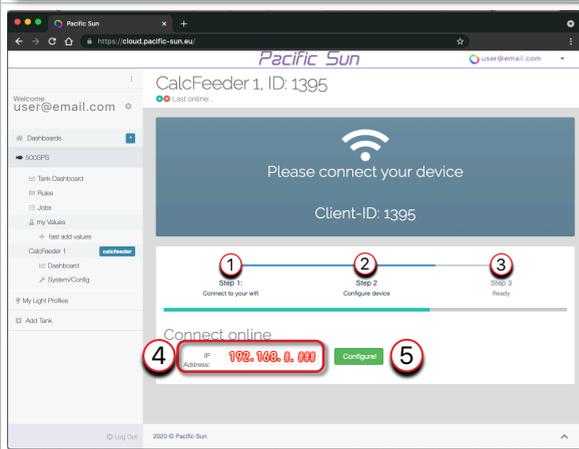
7 Under your **Client ID**:

1 Click **Auto Connect**



8 Connect Controller to **Pacific Sun Cloud**:

Step 1
Click **Next**



9 Configure device and Ready:

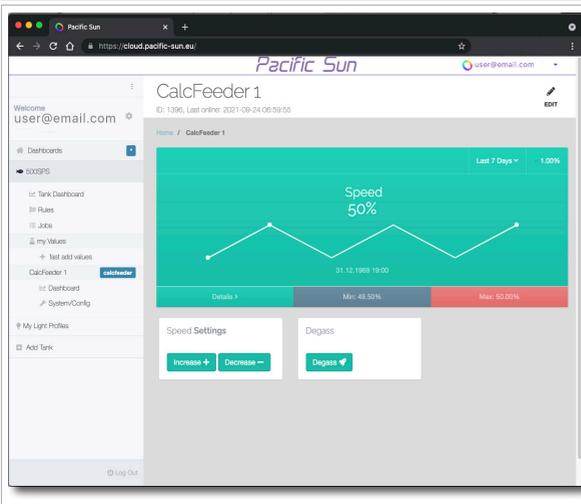
Step 2 and **3**

4 Use your **Controller** IP address

5 Click **Configure!**

Note: You can see the Controller IP address on the **LCD** screen after power OFF/ ON in a similar format:

192.168.#.###



10 **The Controller** added to the PS Cloud, ready for the configuration process and operation.

3.3. Linking CalcFeeder Controller Pro with Kore 7th kHLab

Pacific Sun Cloud is giving all users the opportunity to add all WiFi PS Cloud-ready devices, configure them and link them to enable additional functionality and more automatic control to the aquarium. You can link CalcFeeder Controller Pro to Kore 7th kHLab and have Kore 7th control and adjust CalcFeeder effluent automatically based on the measured Alkalinity levels. To link CalcFeeder Controller Pro with Kore 7th kHLab follow the steps.

1 After adding CalcFeeder to the PS Cloud under

Kore7

go to:

Linked devices

1 Click **CalcFeeder** icon

2 Enable:

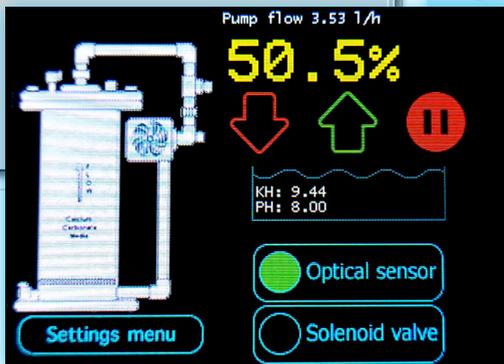
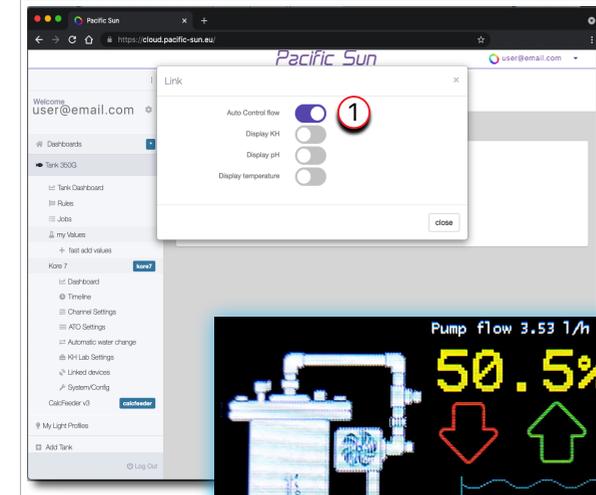
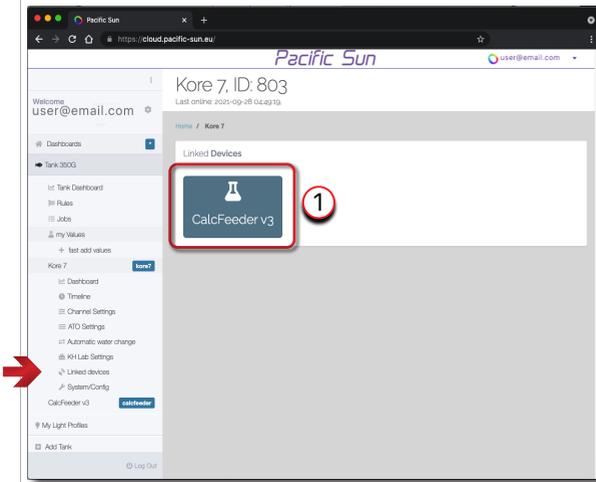
1 **Auto Control flow**

Optionally you can enable:

Display KH

Display pH

Display temperature



4. CalcFeeder Controller Firmware Upgrade

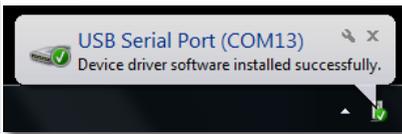


Warning!

Switching OFF the power supply during the Firmware updating process may damage your doser CPU. Uploading wrong Firmware may damage your doser and void your warranty. The damage may require returning the doser to our service department to restore it's original functionality. Use only **dedicated firmware upgrade software** available for download on www.pacific-sun.eu in the [Download](#) section.



1. Connect your computer to the device via USB port.



2. Windows Operating System should be able to discover and install the new device USB device and show the communication COM port number.

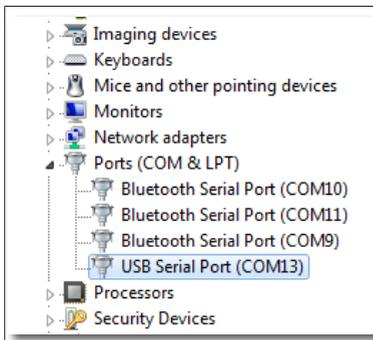
NOTE:

If for the first time, Windows will not be able to install the new device (especially under Window OS) then download from the Internet and install the USB-to-Serial Converter Drivers:

<https://www.ftdichip.com/Drivers/VCP.htm>
(CDM v2.12.28 WHQL Certified)

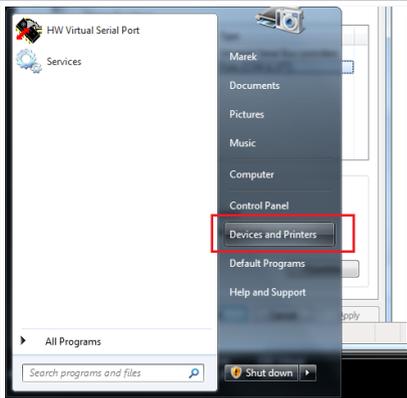
3. Windows Operating System has the two following options to verify the correct USB Serial Port COM **number**:

1. **"Device Manager"**
2. **"Devices and Printers"**

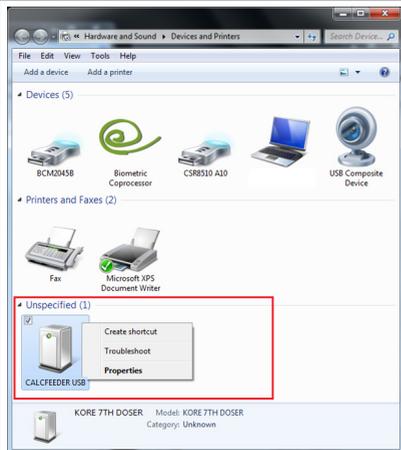


Option 1:

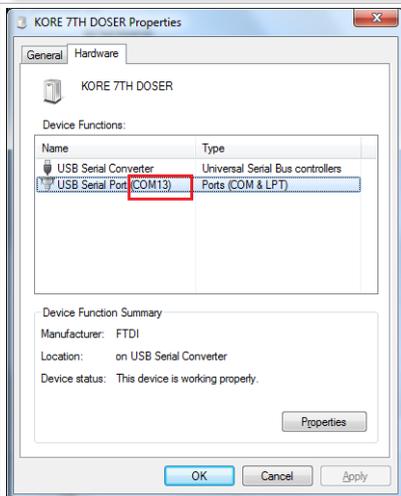
Verify the USB Serial Port COM **number** under **"Device Manager"**.



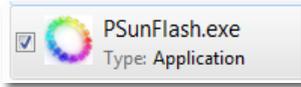
Option 2:
Verify the USB Serial Port COM **number** from **"Devices and Printers"**.



4. Right Click on the device and select **"Properties"**.



5. The USB Serial Port COM **number** will be visible under device Properties.

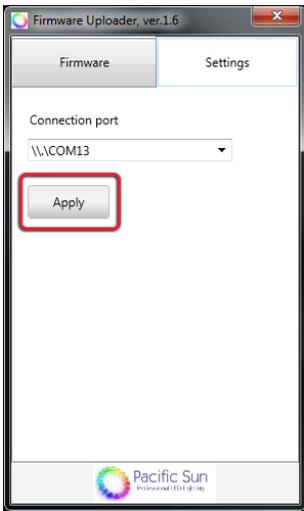


6. Download the **"Firmware Updater"** application from the Pacific Sun website: <http://www.pacific-sun.eu/pliki/PSunFlash32.zip>

Unpack the ZIP file and run the **"Firmware Uploader"**.

Note:

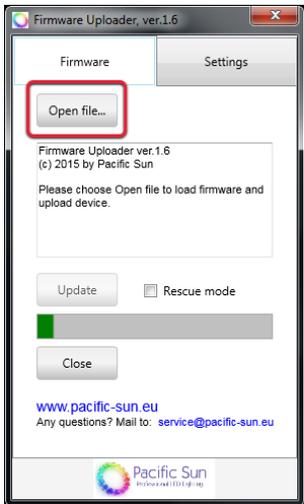
For the Mac OS version download from: <http://www.pacific-sun.eu/pliki/PSunFlash21.app.zip>



7. In the **"Settings"** tab, choose the port COM **number** the device is installed on the computer and click **Apply**

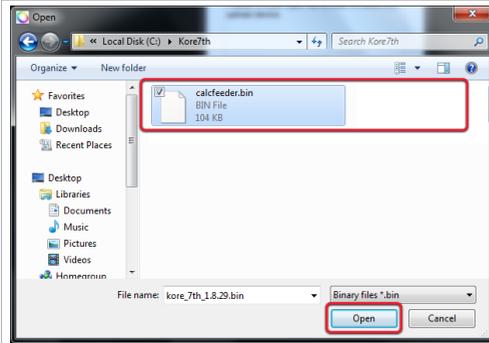
Note:

For the Mac OS version, select the device you want to update from the list.

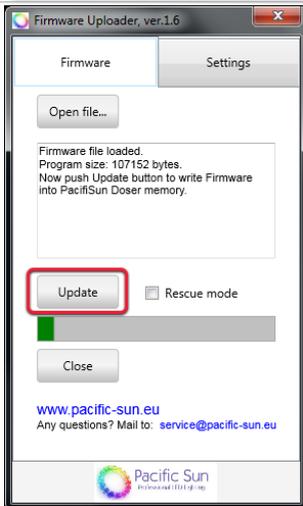


8. Go to the **"Firmware"** tab and click

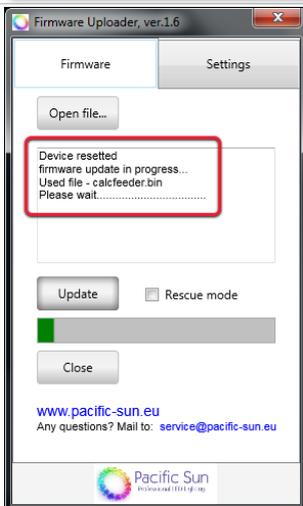
Open file...



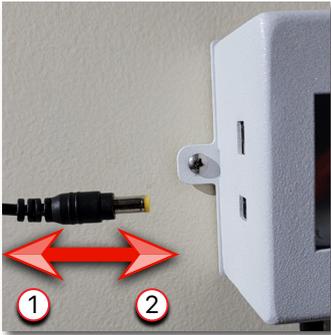
9. Select the previously downloaded Firmware file and click **Open**



10. Click **Update**

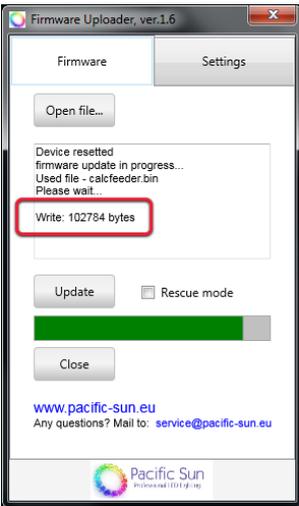


11. The Firmware upgrade will be in progress with message **"Please wait....."**

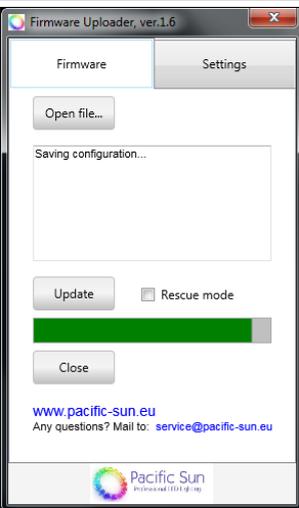


12. Now:

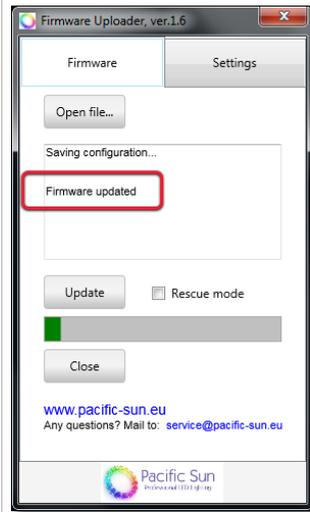
- 1 disconnect power cable from the controller
- 2 connect power back to the controller.



13. The Firmware writing process will start and the number in bytes will be increasing.



14. The Firmware upgrade status will be indicated with the green progress bar.



15. Final Firmware Upload steps:

1. At the end of the Firmware writing process program will show "**Firmware updated**".
2. Disconnect the USB cable from your computer and Pacific Sun device.
3. **Disconnect** device from the power source for a few seconds and **connect** the power back.
4. The Firmware upgrade process has been completed.



Pacific Sun

If you need technical support - please contact with service@pacific-sun.eu

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