

Pacific Sun

Hyperion R2

Bali Revision+

8channel LED aquarium lamp

1 Table of Contents

Contents

1 TABLE OF CONTENTS 2

1.a General 3

1.b Firmware update 3

1.1 Initial start 6

1.2 Daylight settings 8

1.2a Atmospheric 9

1.3 Colour settings 10

1.4 PAR Table 11

1.5 Moonlight settings 13

1.6 Custom scenario 14

1.7 Service tab 16

1.a

General

Pacific Sun lamps' firmware update instruction & manual.

Caution: Switching off the power supply during updating process may damage your lamp. Recommended distance between the lamp and the computer that you are using to update your lamp is between 1-2 meters. If you are using laptop with bluetooth module build-in – please use external, USB bluetooth module for better signal strength. It's very important for upgrade process!

Choose the appropriate firmware, compatible with your lamp model. **Uploading wrong firmware may damage your lamp and void your warranty.** The damage may require returning the lamp to our service department to restore its original functionality.

To check if your lamp is compatible with our newest firmware, contact our customer service – info@pacific-sun.eu. Make sure that your computer's Bluetooth (built-in or external, USB) operates correctly and the connection between the computer and the lamp is not interrupted.

1. b

Firmware update process:

Download the application on the computer that you are going to use to update your lamp's firmware. If you already have the Pacific Sun software installed on your computer – uninstall it and download the newest version available on

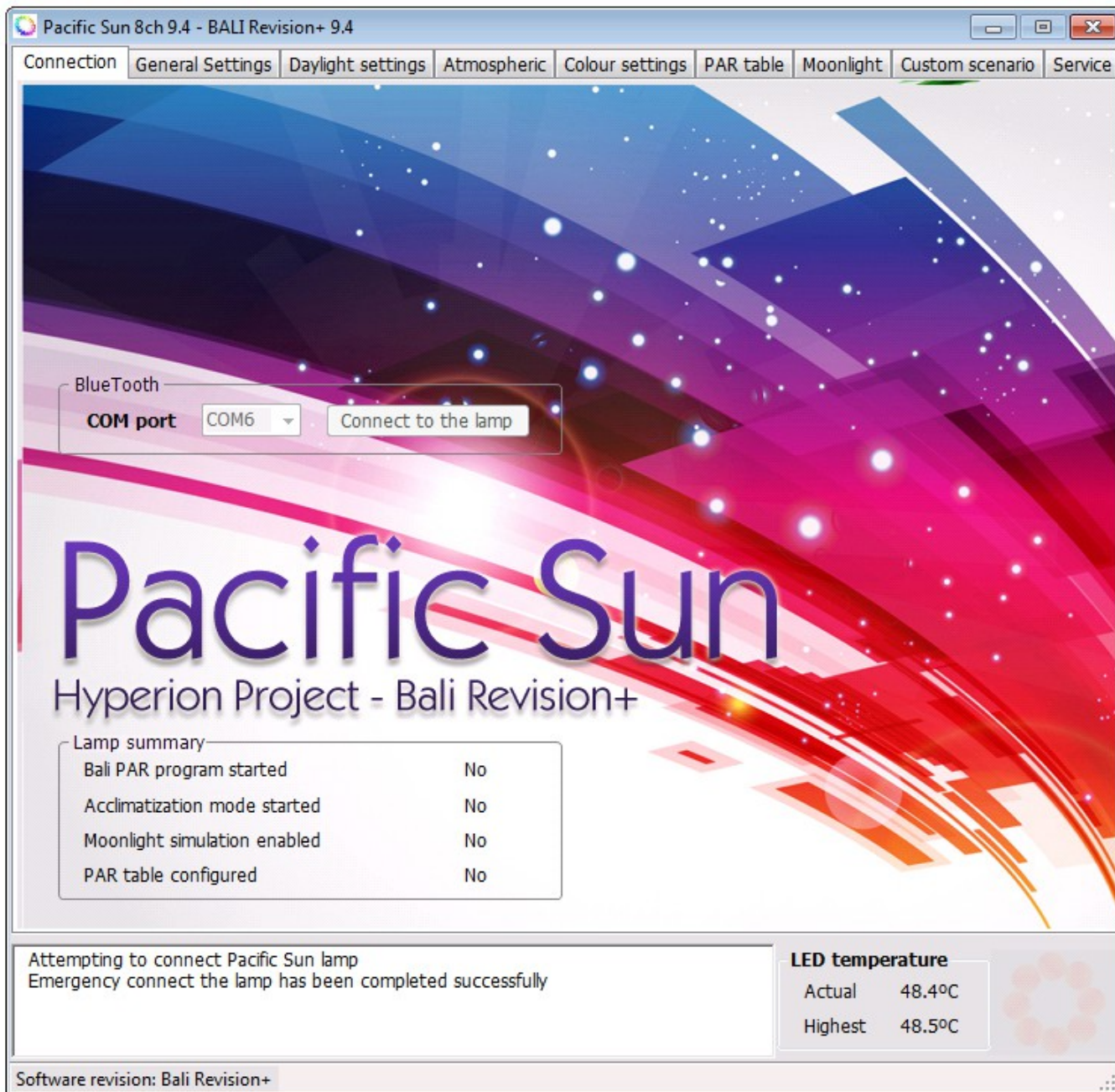
If using Bluetooth protocol:

Check on which **COM** port your lamp is installed. You can check this via Navigation Panel (in Windows) – [Bluetooth Manager](#) – **COM** ports.

Before clicking Connect to the lamp – restart the lamp – by disconnecting its power supply for a few seconds.

Switch on the lamp – select the appropriate **COM port** – and click **Connect to the lamp** button.

Click **Connect to the lamp** button.



Within a few seconds your computer should establish connection with your lamp (you will see „Transmission Status Connected”in the Status window.)

If the error occurs during transmission of the CRC and the firmware will not load properly - lamp will go to safe mode.

The screen appears:

Memory Erased. Upload firmware.

This means that the transmission process is not finished successfully.

To restore full functionality of the lamp you must perform the following steps:

a) Reduce the distance between the lamp and the computer to an absolute minimum - or use an external BlueTooth module.

b) restart the lamp by disconnecting it for a few seconds after the voltage

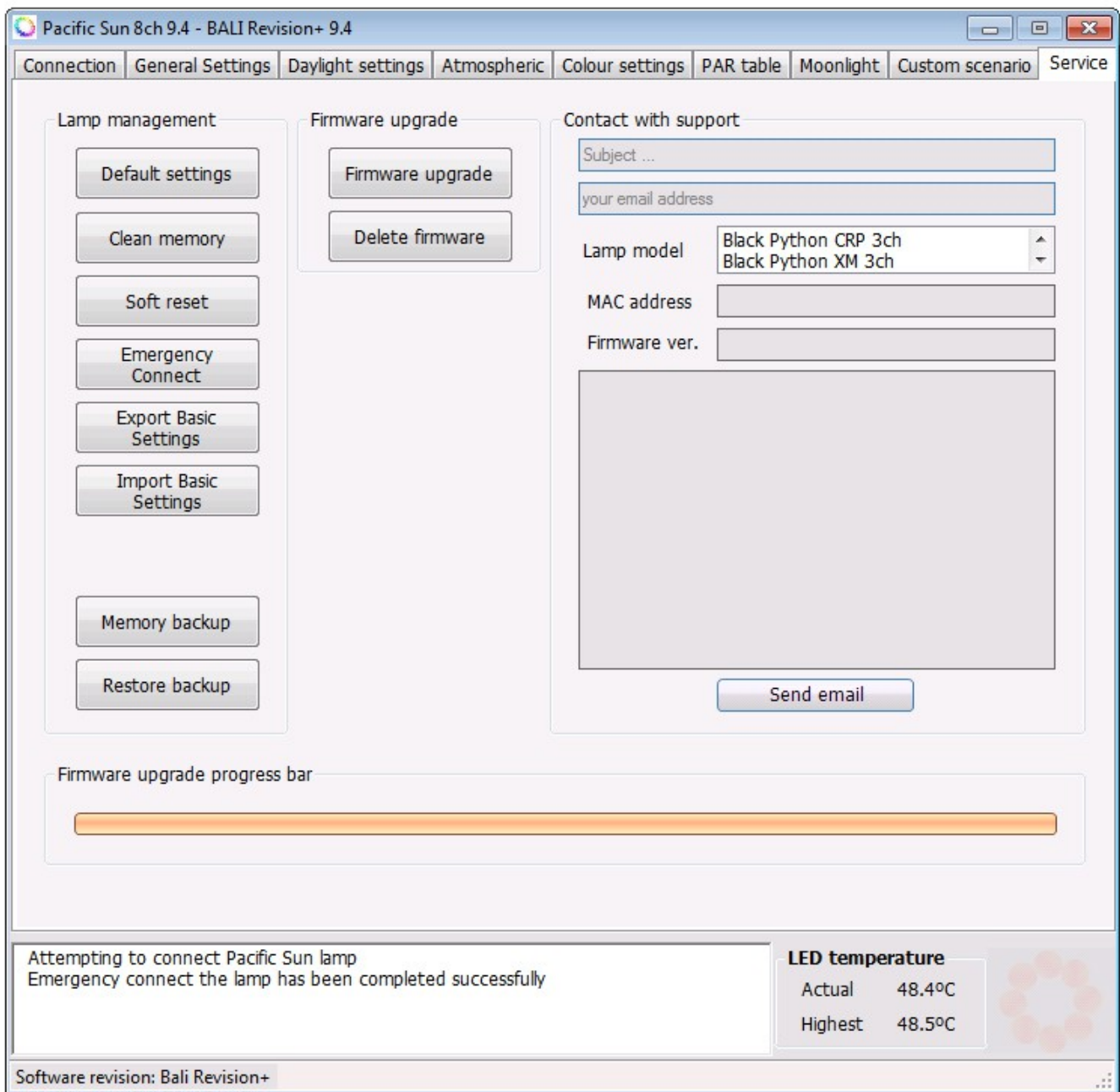
c) re-run the application, select the correct COM port (do not press on Connect to the lamp!)

d) go to the Service Tab - click Firmware upgrade - and then select the correct firmware for your lamp

At this point, the firmware update process should start - the status bar will show the current progress update.

If you need additional information - please contact our service:

service@pacific-sun.eu

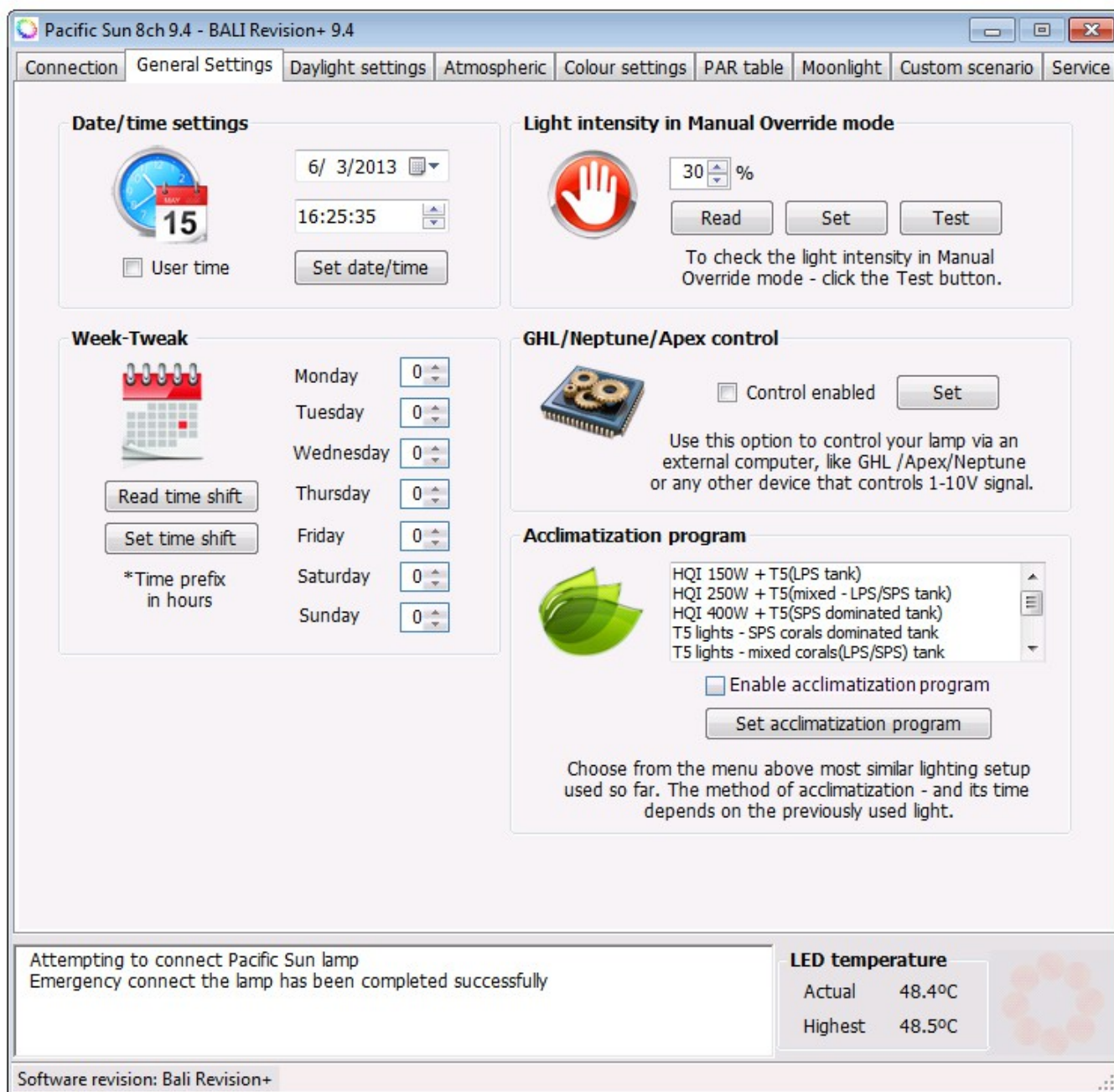


Next, select the **Service tab**

Click Firmware Upgrade – and select the firmware for your type of lamp (firmware file extension is .bin).

Your lamp's firmware is being updated. When the process is completed, you will see „Firmware updated” displayed in the status window.

1.1 Initial start



Set your local date and time in the **Date/time settings** fields.

Select your lamp model in the Software initialization field and confirm your selection clicking Save Settings button.

Light Intensity in Manual Override mode – here you can check and select the intensity of light your lamp will emit while operating in the Manual Override mode.

GH/Neptune/Apex control – if you set this option, your lamp switches to a passive mode, ready for external signals controlling the power of individual channels. The fans are controlled by an independent systems, and their speed depends on the current temperature of the LED panels (the fans do not work in the night cycle).

Tunze Control Panel – external Tunze pumps controller – you can coordinate the work of up to 4 Tunze pumps (with adjustable rotational speed) and control the pumps via your lamp’s built-in computer. This feature allows parallel simulation of tides, storms and variable circulation with other phenomena simulated by your lamp.

Acclimatization program

Specifically implemented acclimatization program - used to acclimate corals to LED lighting. Based on user-defined

existing lighting computer automatically selects the initial power output and color of light from the lamp, and the interval, which is changed every day lamp power, allowing corals in a gradual get used to new sources of light (as amended by the spectrum of light) and to its intensity. The computer controls the power and change the color of light in the range from 15 to almost 90 days (range automatic - depending on the acclimation). This option eliminates the situation of "overexposure" aquarium and coral bleaching, which is a very common symptom in the transition from other type of lighting(t5/hqi) to LEDs . At the end of the acclimation program automatically switches off and the lamp goes to the mode previously set, such as Basic Mode or Par Table.

Week-Tweak

Very often it happens that at the weekend we have the ability (and willingness) longer sit watching our aquarium .. However, it also often happens that in the late evening, when social life in our house is just beginning, the light in the aquarium "fades" and the only view we can enjoy the moonlight. To enable the "extension" - or "offset" the time of the lamp at the weekend for a few hours ahead - it was written-Tweak Week program. How does it work?

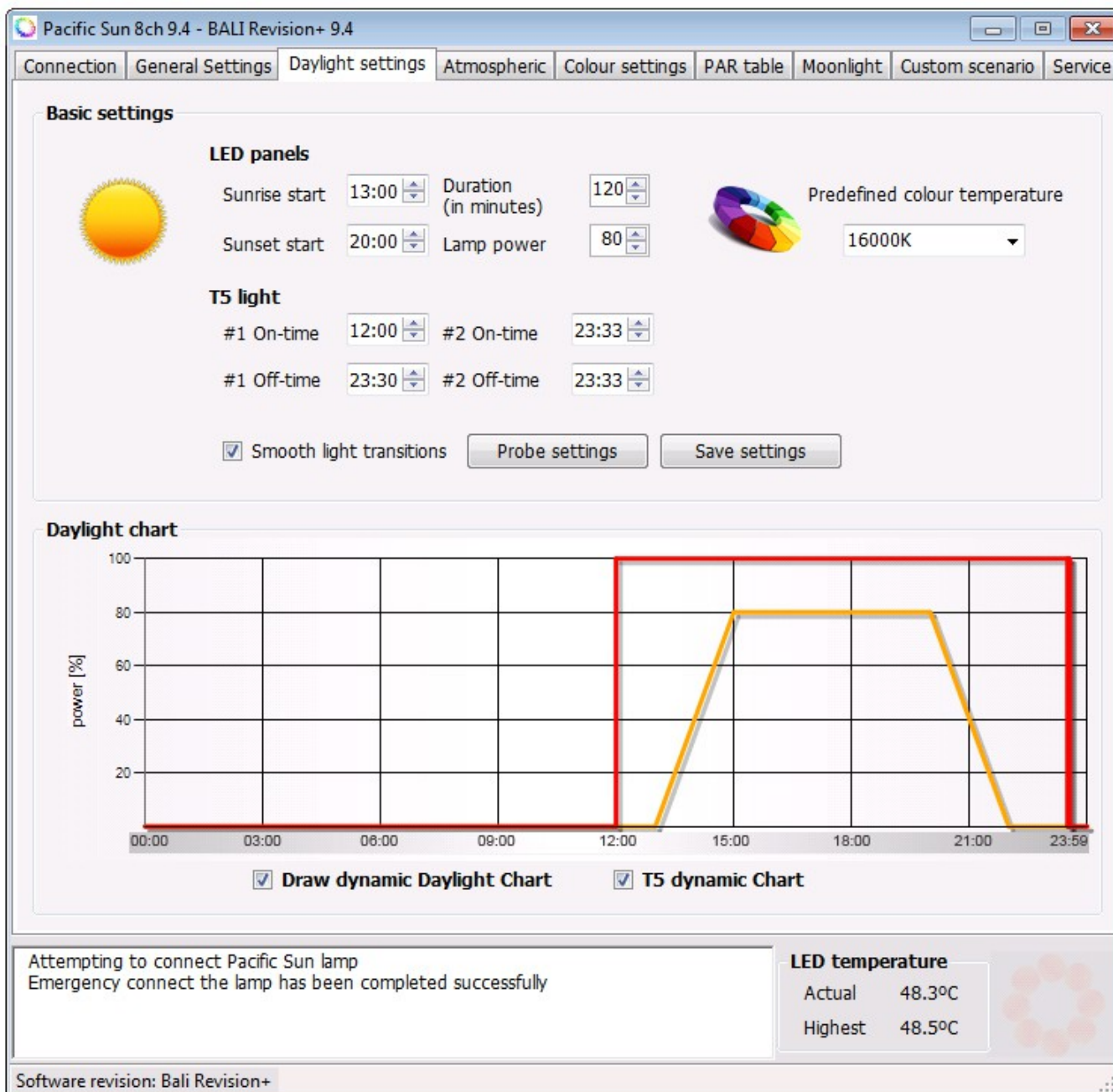
Let's take an example: "standard" we have set the lamp on the east side at 10 am and the west (the start time of sunset) at 18:00.

Time of sunrise / sunset set to 2 hours. So - at 20.00 ends in "day". If you want to watch the Saturday and Sunday, not expanded our aquarium of light - is set for those days Time Shift for example, (-3).

This means that for a tube that, in those days, the time is "withdrawn" for 3 hours. So - if you've east began at 10 - so now the light "thinks" that it is 7 am and the actual east starts at 13:00 (real time) and sunset at 21:00 and runs until 23:00 ...

Next so the "day" lasts the same - but "slightly" later it started .. Monday everything is back to "normal" - and we have the opportunity to enjoy a weekend in our aquarium simply "more" ...

1.2 Daylight settings



Here you can configure basic settings for your lamp.


Sunrise start time – the beginning of sunrise simulation

Sunset start time – the beginning of sunset simulation

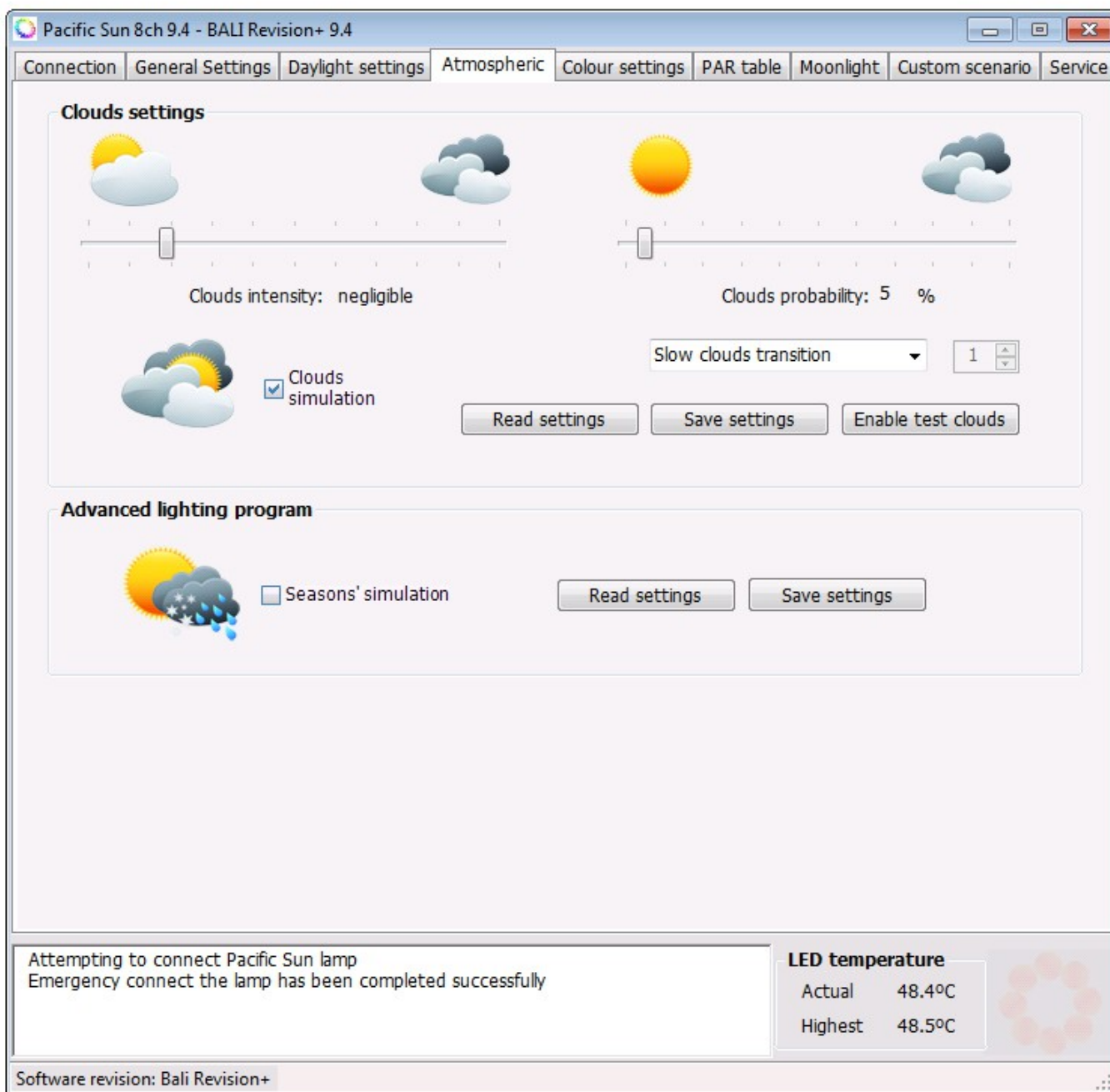
Duration – duration of sunrise/sunset

Max. lamp power – maximum power (between the end of sunrise simulation and the beginning of sunset simulation)

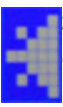
Smooth light transitions – defines how fast changes occur in the color of light in the performance of individual lines PAR table. Enabling this option will result in a smooth transition between colors without sudden jumps.

 **T5 lighting** - This option is available only for lamps with T5 lighting(Pandora Hyperion R2) . You can select the T5 lighting switch on/off time as well as their brightness (if your lamp supports option „dimmable”).

1.2a Atmospheric



Atmospheric phenomena

 **Seasons simulation** – simulation of seasonal changes in light intensity. You can adjust your lamp's brightness and colour temperature according to the chosen season. The lamp reaches its maximum brightness in dry season's months. During wet season lamp's brightness and colour temperature are gradually lowered.

Clouds settings:

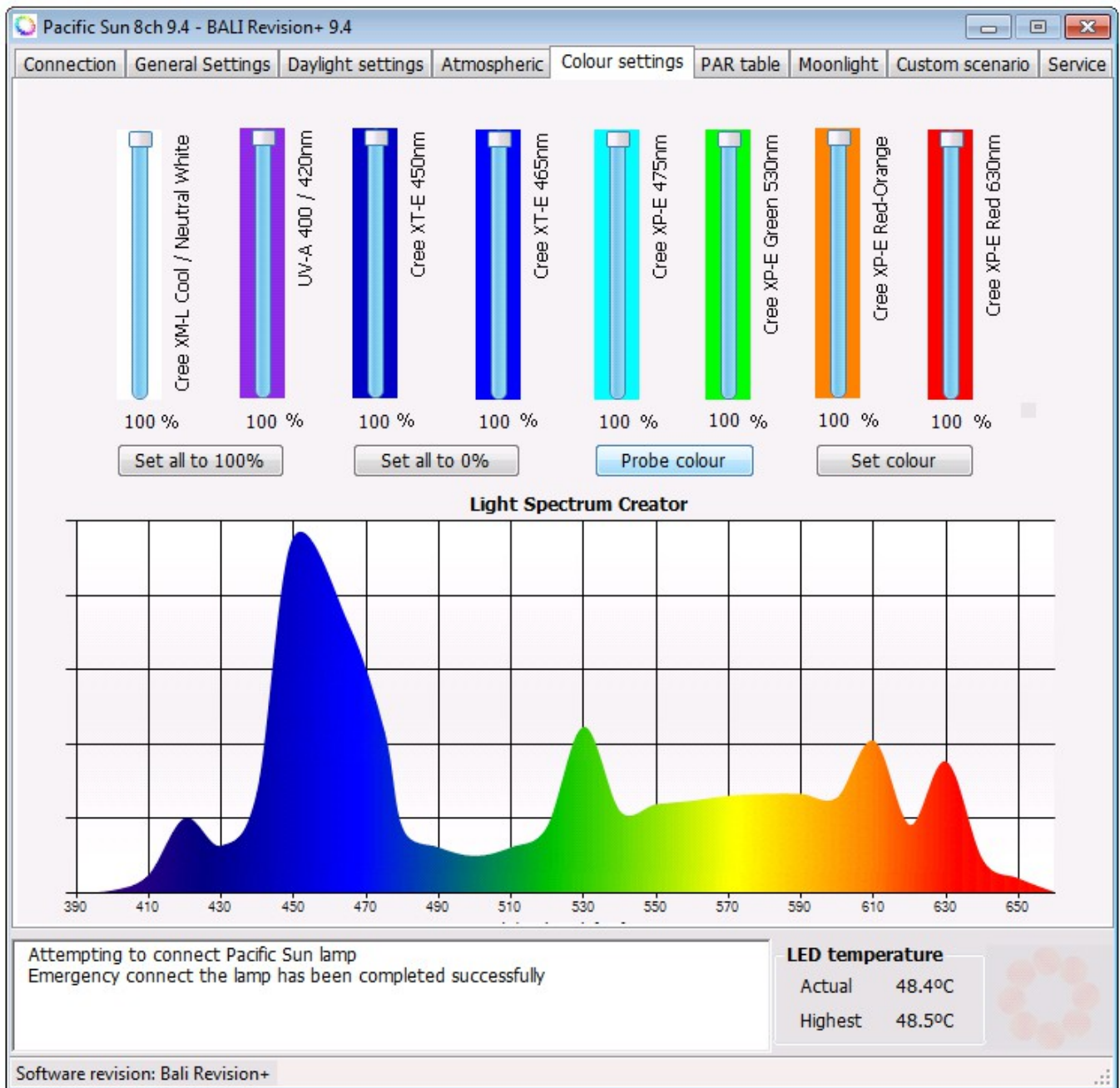
For clouds simulation you need to check Clouds settings button and save settings.

Clouds intensity – define maximum „strenght” of clouds(how dim they will be) at maximum point. Suggested value – weak or moderate.

Clouds probability – 0% set – clouds will not come, 100% - cloudy weather for all day. Suggested settings – 25-30%.

Slow clouds transition – clouds will come slowly without quick brightnest changes. Can be set manually from 0 to 9(0 quick – 9 very slow transition)

1.3 Colour settings



The latest firmware version has been refined to draw of the current system of dynamic spectrum of light emitted by the lamp. By making multiple measurements with a spectrometer, we managed to save the drawing algorithm is closest to the actual wave spectrum chart of light (accident) emitted by the lamp. In this way we know what a light emitting lamp - and gives us further opportunities to experiment - it's as if each had its own spectrometer. A setting powers of each channel can attempt to recreate such as the spectrum of light emitted by fluorescent T5 favorite sets. Or HQI + T5? You can also see how a change in the specified range of wavelengths, increases / color of corals in your tank.

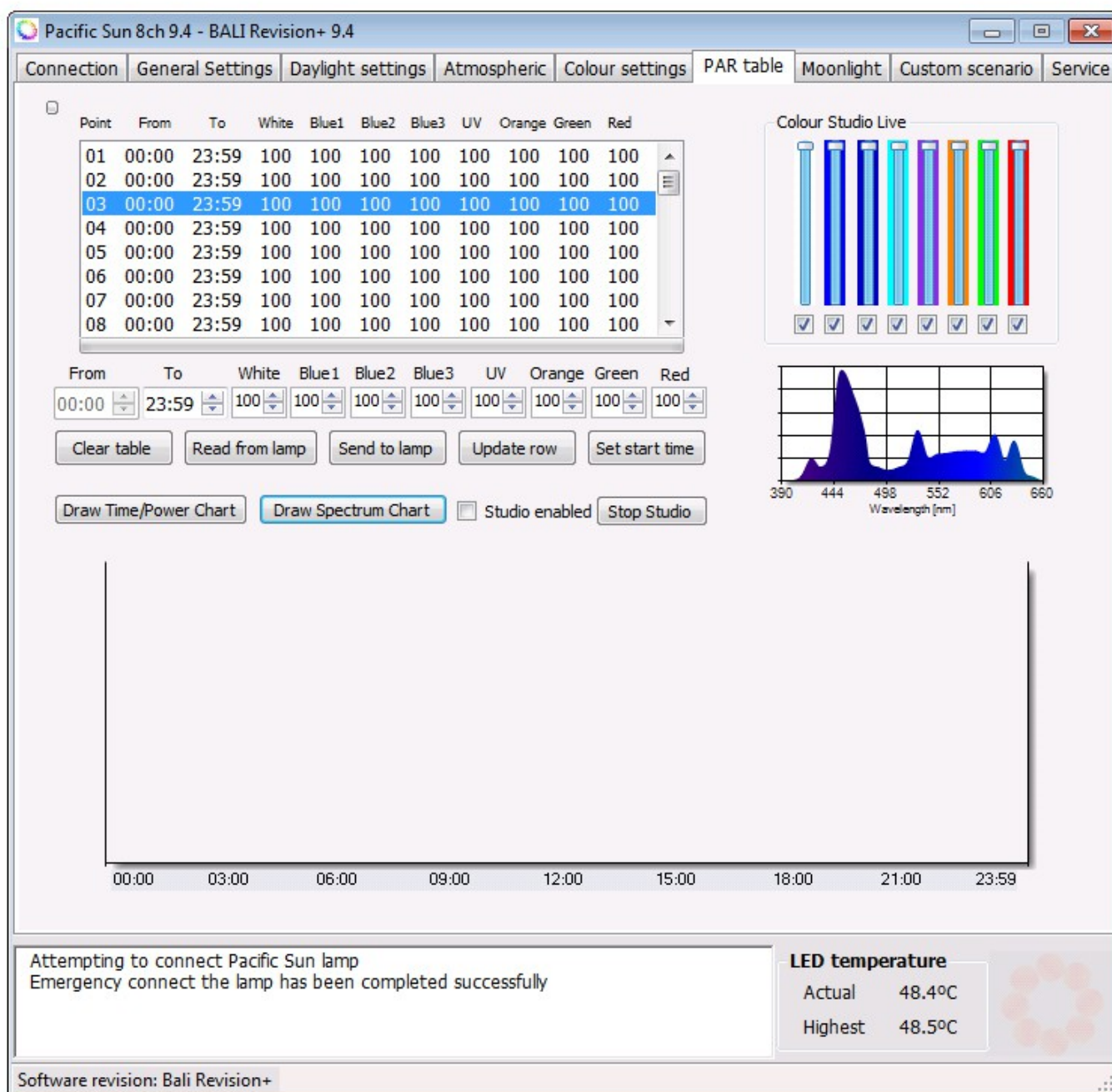
Set all to 100% - set all channel power up to 100%

Set all to 0% - decrease all channels power to 0%

Probe colour – load actual lamp settings

Set colour – save spectrum settings to lamp memory

1.4 PAR table



Advanced simulation of day light.

With **Linear PAR simulation** option switched on – your lamp will gradually switch from Basic light settings to more advanced simulations selected in the PAR table (without short flash between mode changing).

First, set the hours of sunset/sunrise in **Daylight tab**.

Adjusting the individual parameters in PAR table, you can influence the intensity and colour of light for multiple time-periods.

For example:

Select the duration of sunrise from 10.00 a.m. to 10.30 a.m. in the first row of the PAR table. Next, adjust the intensity of selected light colours e.g. White 6%, Blue 1 10%, Orange 75% etc.

Click **Update Row** button and the table settings will be updated (selected Row)

Next, select subsequent time-period in the second row of the PAR table, e.g. from 10.30 to 11.45 and adjust light intensity for this period e.g. White 10%, Blue 10% and click Update to save your settings.

This feature allows you to adjust colour temperature in various time-periods – you can simulate „warm” sunrise (adjusting only White colour and adding some reds/orange) and „cold” sunset (adjusting Blue colour with violet).

Table PAR is quite powerful tool to create your own lighting programs: you have the ability to set independent power for each channel at different times of the day (and night). In addition, you can generate a graph showing changes in

light intensity for each channel during the day. To set the color of light in a "live" - use "Colour Studio Live", by which we you able to "live" watch how it will look like a light in each time interval and modify them as needed and recognition. And then you can update the record in a table. This sounds quite complicated - but really - in fact within a few minutes you will be able to do this is automatically. Especially that the application itself fills the necessary fields in the table as the start time for the next "record" in the table, etc.

There is added also option for light spectrum preview for each row of PAR table.

1.5 Moonlight settings

The screenshot shows the 'Moonlight' tab in the 'Pacific Sun 8ch 9.4 - BALI Revision+ 9.4' software. The interface is divided into several sections:

- Basic settings:** Includes 'Moonlight intensity %' (set to 2), 'Date of the last full moon' (5/14/2013), and checkboxes for 'Moon cycle simulation' and 'Overcast nights (random)'. There are 'Read' and 'Save' buttons.
- Moon on/off time:** Includes a checkbox for 'Moon time program', 'Moonlight time-on' (22:00), and 'Moonlight time-off' (06:00). There are 'Read' and 'Save' buttons.
- Moonlight channel colour settings:** Includes a dropdown menu for 'XTE 450nm channel' and a 'Save' button.
- Current moon phase:** Displays a grayscale image of a crescent moon.
- Moon cycle information:** Displays 'Date of last full moon' (5/14/2013), 'Day of the moon cycle' (20), and 'Moon phase' (II quarter).
- Status bar:** Shows a message 'Attempting to connect Pacific Sun lamp. Emergency connect the lamp has been completed successfully' and 'LED temperature' (Actual: 48.4°C, Highest: 48.5°C).
- Footer:** Shows 'Software revision: Bali Revision+'.

To set night light and moonlight simulation.

Basic settings

Moonlight intensity % - to set moonlight intensity (with maximum intensity for full moon)

Date of the last full moon – to set the date of the last full moon. The preset date is 2011-09-12(date of the actual full moon)

Moon cycle simulation – to switch on/off moonlight simulation

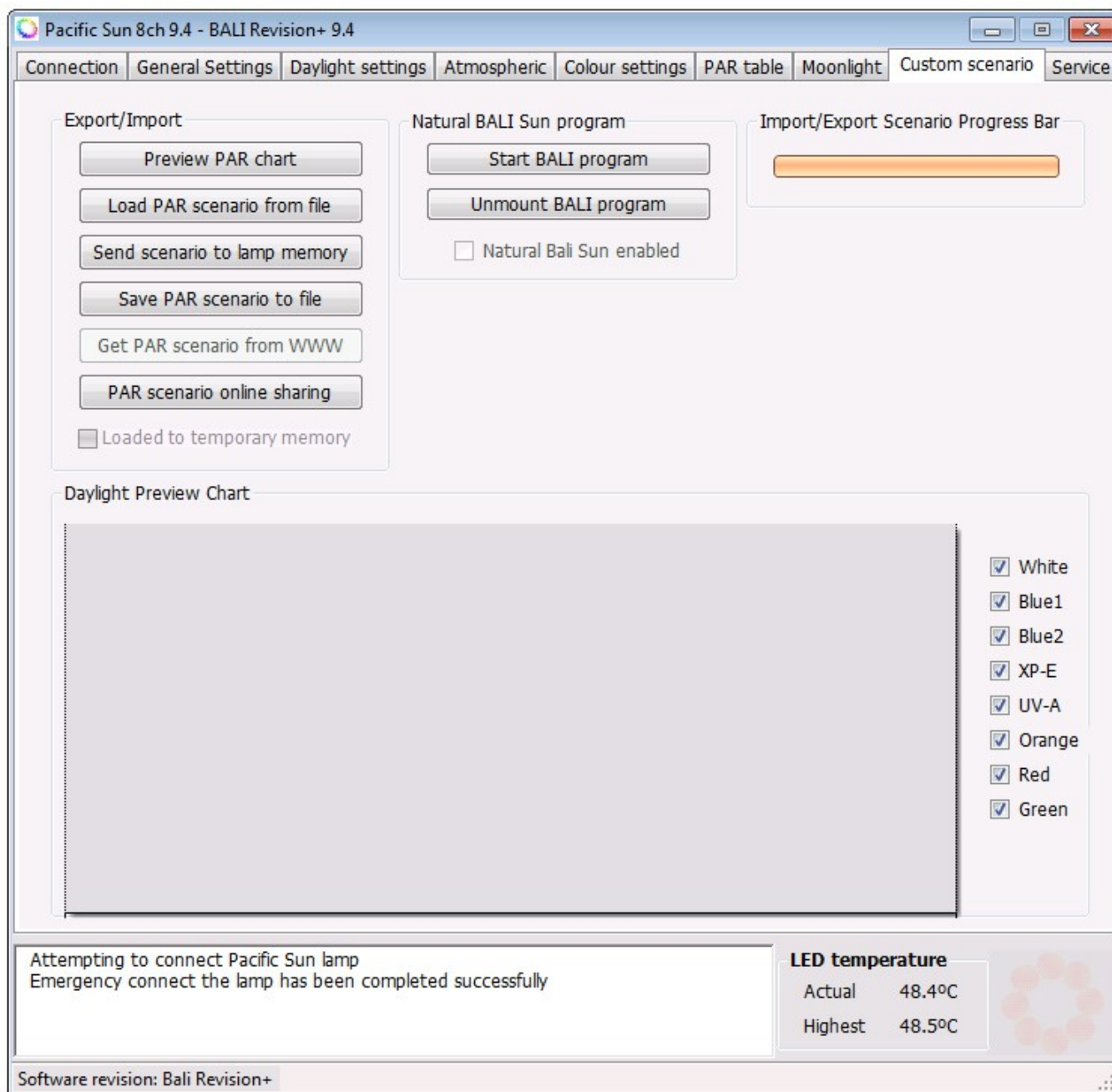
With moonlight simulation switched off – you will get constant, invariable intensity selected via Moonlight intensity option.

With moonlight simulation switch on – light intensity will be gradually changing following the natural moon cycle (Current moon phase displays the current moon phase simulated by the lamp).

Moonlight channel colour settings – customer can choose which LED channel will be used to moonlight simulation.

Moon on/off time – there can be set time for moonlight sunrise and sunset.

1.6 Custom scenario



It is used for upload / grabbing lighting programs sent by the other users or shared at the library on-line scenarios. At the moment there is program Hawaii, which is characterized by beautiful, natural-looking sunset and the changing light during the day (reflecting the passing of the day the clouds in the sky), etc.

BALI Natural Sun program

It's basically the essence of this firmware update. Last year we had the opportunity (and a pleasure) to be in Bali, near the town of Candidasa, where the main objective was to measure the physicochemical parameters of water and light around the coral farms, which are imported from our friendly suppliers. During our stay we made a series of measurements of light (spectrum and intensity) during the day, so we were able to sketch the curve of the spectrum and intensity changes of light - from sunrise until sunset. These measurements were performed both on the surface and under water. Thus lighting up a program called BALI Natural Sun. With sewn in firmware procedures, as well as by the fact that the lamps Hyperion / Triton have at least eight independent LED channels we have a very large extent reflect these changes during the day. And thus, our lamp is lit in a "similar" to the sun around the the island of Bali.

Of course - should be emphasized that the graphs are compared to light (spectrum) measured by us (natural sunlight) and those reflected by the light emitted by the lamp. Through the technical limitations of the LED technology can not

be 100% commitment to the natural conditions but I can proudly say that this has been over 90%! It is a unique solution so far adopted by the professional manufacturer of LED lamps.

Installation procedure is very simple: just one button "Start Bali Program" and can be uninstalled through the Unmount button.

Export/Import

Load scenario from file – uploads a chosen lighting scenario file on your lamp's temporary memory, e.g a scenario sent by other user.

Before uploading new lighting scenario to your lamp's temporary memory, we recommend saving the previous scenario, using Save Scenario to file (in case you would like to return to the previous settings).

Send scenario to lamp memory – configures your lamp with the settings of your chosen scenario uploaded in your lamp's temporary memory.

Save PARscenario to file – saves a chosen PAR scenario as a backup copy or to share it with other users.

Get PAR scenario from WWW – used to browse PAR scenarios database available on the Pacific Sun server.

PAR scenario online sharing – sending PAR scenarios from lamp's memory to the Pacific Sun server.

1.7 Service tab

The screenshot shows the 'Service' tab of the Pacific Sun 8ch 9.4 - BALI Revision+ 9.4 software. The interface is divided into several sections:

- Connection:** General Settings, Daylight settings, Atmospheric, Colour settings, PAR table, Moonlight, Custom scenario, Service.
- Lamp management:** Default settings, Clean memory, Soft reset, Emergency Connect, Export Basic Settings, Import Basic Settings, Memory backup, Restore backup.
- Firmware upgrade:** Firmware upgrade, Delete firmware.
- Contact with support:** Subject ..., your email address, Lamp model (Black Python CRP 3ch, Black Python XM 3ch), MAC address, Firmware ver., Send email.
- Firmware upgrade progress bar:** A horizontal progress bar.
- Status bar:** Attempting to connect Pacific Sun lamp, Emergency connect the lamp has been completed successfully.
- LED temperature:** Actual 48.4°C, Highest 48.5°C.
- Software revision:** Bali Revision+.

Buttons description:

Clean memory – deletes the content of your lamp's memory including firmware – without the firmware your lamp will not work properly and you will have to upload the appropriate firmware. Dont use it without Pacific Sun Service confirmation!.

Default settings – restores preset default settings (power, sunrise/sunset time etc.)

Firmware upgrade – to update firmware

Delete firmware – erase firmware from lamp memory(dont do it without service request!)

Soft reset – to safely reset firmware

Memory backup – export and save lamp settings to .mbf file

Restore backup – import and load into lamp memory file with lamp settings

1.8 Technical specification

Metis Hyperion R2 850mm

Size:	850mmx135mmx60mm
Weight:	6kg
LED channels:	8 channels
Wireless computer:	Yes
Bluetooth/Wifi	Bluetooth
Hanging kits:	Yes
Spider mountings:	Optionaly
Power supply:	2pcs
Average LED panel consumption:	140W – maximum 150W
Maximum lamp power:	300W

Metis Hyperion R2 1250mm

Size:	1250mmx135mmx60mm
Weight:	10kg
LED channels:	8 channels
Wireless computer:	Yes
Bluetooth/Wifi	Bluetooth
Hanging kits:	Yes
Spider mountings:	Optionaly
Power supply:	3pcs
Average LED panel consumption:	140W – maximum 150W
Maximum lamp power:	450W

Metis Hyperion R2 1650mm

Size:	1650mmx135mmx60mm
Weight:	14 kg
LED channels:	8 channels
Wireless computer:	Yes
Bluetooth/Wifi	Bluetooth
Hanging kits:	Yes
Spider mountings:	Optionaly
Power supply:	4pcs
Average LED panel consumption:	140W – maximum 150W
Maximum lamp power:	600W