

User manual

for

Powerbar5.1-PAB

The logo for Profilux features the word "Profilux" in a black, cursive script. A blue arc is positioned above the letters "i" and "l", starting from the top of the "i" and ending at the top of the "l". The letter "x" is also blue, with its top and bottom strokes forming a continuous loop.

Valid from firmware version 1.00

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1 Preface

1.1 Concerning this manual

This manual is valid for the switchable powerbar *Powerbar5.1-PAB*.

1.2 Characteristics

We thank you for your trust in our ProfiLux products!

You have herewith acquired a powerbar for your aquarium controller of the *ProfiLux 3* series with PAB-connection. With this powerbar, you are able to switch on or off electrical loads with ProfiLux.

Overview of the characteristics:

- 5 independent switching sockets, one of these can also be dimmed
- 1 additional socket with permanent power (e.g. for *ProfiLux*, pumps or lamps)
- Loads with up to 15 Ampere can be switched (depending on the country version)
- Built-in overvoltage protection
- Illuminated switch with circuit breaker function (UK-model without circuit breaker function)
- Freely programmable initial state of the sockets after 30 seconds without communication

In order to be able to use our products optimally, you should take your time to read through this manual. Please pay especially attention to the operating and warranty instructions.

1.3 Included in delivery

Before you start, you should check if the delivery is complete.

The following articles belong to the shipment:

- *Powerbar5.1-PAB*
- This manual

PAB connection cables, as well as all other devices are not part of the shipment of the powerbar and have to be ordered separately.

1.4 Important operating instructions

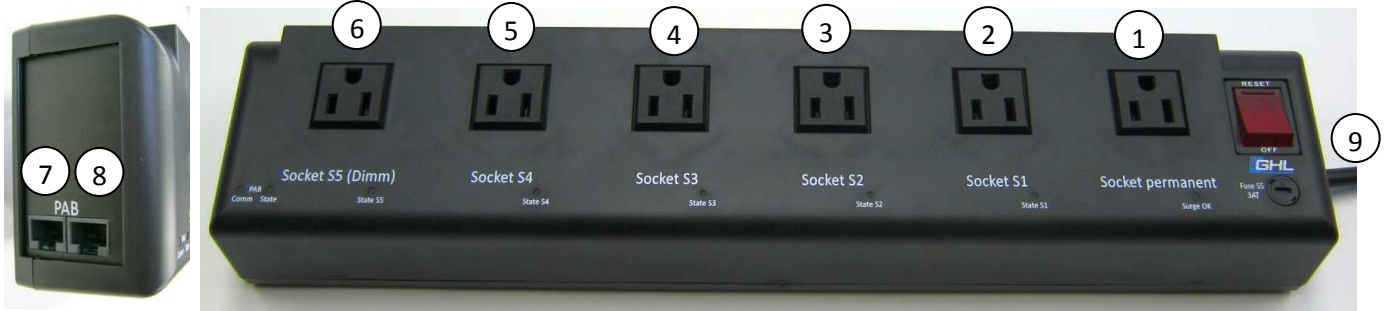
To guarantee a safe and riskless operation, the mentioned instructions in the ProfiLux manual have to be absolutely followed! If they are ignored, the warranty expires resp. the manufacturer rejects any responsibility resp. liability for damages!

Also please take notice of the safety instructions in the ProfiLux manual and of these of the respective manufacturer.

For cleaning the *Powerbar5.1-PAB* use only a moist cloth. Don't use an acrid cleaner!

1.5 Connections

On the picture below you can see the *Powerbar5.1-PAB* and its connections.



- | | | |
|-----------|---------|---|
| (1) | | Permanently supplied socket |
| (2) – (5) | S1 – S4 | Switching sockets 1 – 4 |
| (6) | S5 | Switching socket 5 with dimming function |
| (7),(8) | PAB | Connections for <i>Profilux Aquatic Bus</i> (PAB) |
| (9) | | Power cable |

1.6 Fuse



All sockets are connected to an illuminated switch (10) with circuit breaker function (UK-model without circuit breaker function). In case of an overload of the *Powerbar5.1-PAB*, this circuit breaker switches off. If the circuit breaker switch has been triggered, the switch can be switched on again after the overload has been eliminated. For the UK model, the overload protection is given by the fuse of the socket.

The dimmable socket is additionally fused with its own micro-fuse (11).



A defective fuse can be replaced by the user through a suitable replacement fuse with identical values (can be ordered as spare part). Other fuses are not permitted and lead to a loss of warranty. When changing the fuse, the powerbar has to be switched volt-free. You can replace the fuse by releasing the fuse element with a suited tool (e.g. slotted screw driver) with slight pressure inwards and a turn of ca. 45° counter-clockwise at the same time.



The fuse element then springs outside. The defective fuse in the fuse socket (12) has then to be replaced by a new fuse. After that insert the fuse element again (pay attention to the guide lugs and lock it again with slight pressure inwards and a turn of ca. 45° clockwise at the same time.



Do **not** open the housing of *Powerbar5.1-PAB* – the device doesn't contain any parts that can be maintained by the user.

Attention

If you open the housing or if the warranty label is broken, the warranty expires!

2 Installation

2.1 Installation of the powerbar

The powerbar is not protected against water must never get in touch with it. Avoid sprinkling water and a too high humidity, select a safe mounting place. The powerbar can be fixed vertically or horizontally with the help of the suspension mounts at the rear side.

Each mounting position is generally allowed but you should pay attention that the connections can be reached easily and that the display LEDs can be seen.

Selecting the mounting place please keep also in mind the maximum cable lengths of the PAB connection cables and the cable lengths of the devices to be connected.

Don't use the powerbar outdoors!

2.2 Connection of the powerbar

The connection cable of the *Powerbar5.1-PAB* is connected to a socket that is permanently supplied with voltage.

2.2.1 USA/CD, D and F/B models

You can connect consumer loads up to 15 A per socket (for the dimmable socket only up to 2.2 A permanent current). In total, the sum of all consumers (all sockets in total) may be up to 15 A.

2.2.2 CH and AUS models

You can connect consumer loads up to 10 A per socket (for the dimmable socket only up to 2.2 A permanent current). In total, the sum of all consumers (all sockets in total) may be up to 10 A.

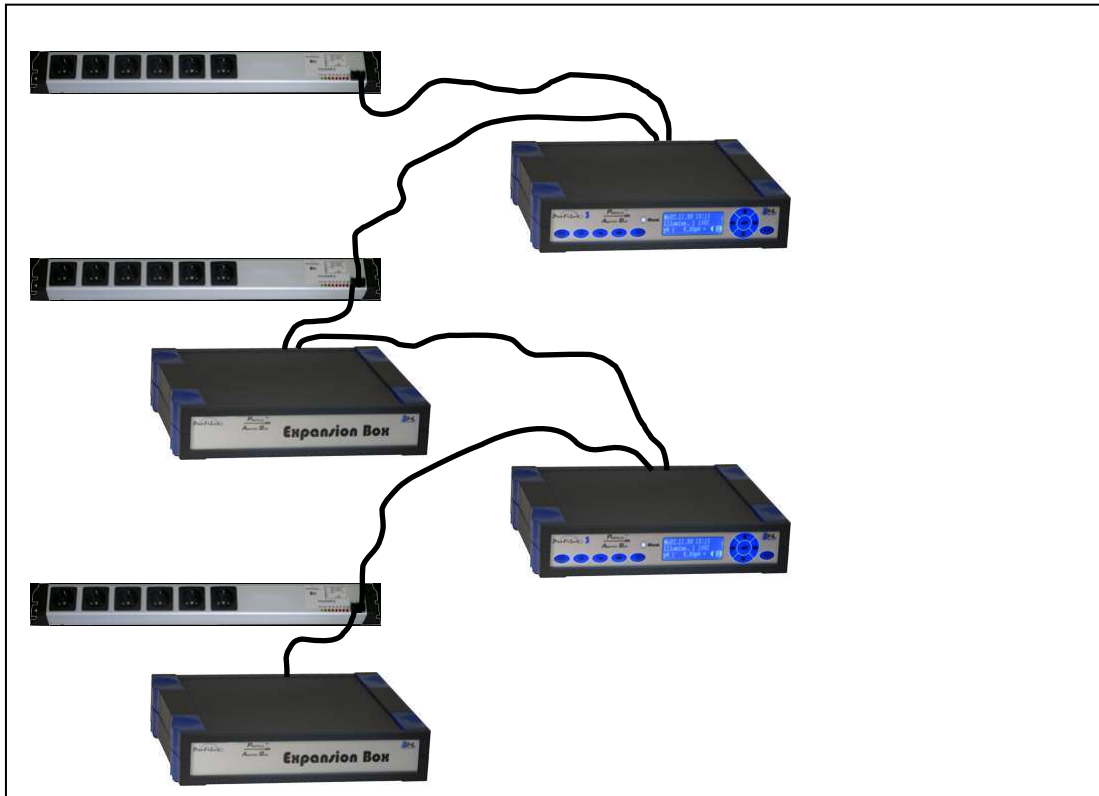
2.2.3 UK model

The socket, to which the connection cable of *Powerbar5.1-PAB* is connected, may only be fused with max. 13 A. You can connect consumer loads up to 13 A per socket (for the dimmable socket only up to 2.2 A permanent current), but the sum of all loads (all sockets in total) may not exceed 13 A.

2.3 Connection of the PAB

Devices with *ProfiLux Aquatic Bus* – in short PAB – are connected to the corresponding RJ45 sockets (7), (8). Several PAB devices are so to say daisy-chained. This means that the first PAB device is connected via a PAB connection cable with one of the PAB ports of the *ProfiLux*. The next PAB device is connected to the free PAB port at the preceding PAB device and so on. Also several *ProfiLux* controllers can be connected to this bus. The last PAB devices therefore have always one free PAB port. Through this, the PAB-bus represents a line connection via the single participants from one end to the other.

Example:



Attention

Never connect the last two PAB devices through an additional PAB connection cable in order to get a ring connection. Such a ring connection will lead to malfunctions. The last devices at the PAB must always have one free PAB port.

2.4 Status display of the powerbar

The powerbar disposes of two light-emitting diodes for the PAB status display. The State-LED (State) is green, the communication-LED (Comm) is yellow. For the switchable sockets, five red light diodes are available. They show the corresponding switching state of each socket. The control LED for the overvoltage protection (Surge OK) is the green LED at the permanently supplied socket.

Display	Meaning
PAB State LED flashes fast	Powerbar boots, Firmware-Update
PAB State LED glows	Powerbar is ready
PAB State LED flashes in a second cycle	Powerbar receives since more than 30 seconds no PAB commands from Profilux
PAB Comm-LED flashes	Powerbar receives PAB commands
Switch illumination is off	Powerbar has no power supply or the switch at the Powerbar is switched off
S1, S2, S3, S4, S5	Shows the current switch state of the respective socket
Surge OK	Shows that that overvoltage supply is operational

3 Assign the Powerbar to the ProfiLux

3.1 Requirements

The *ProfiLux* needs firmware V6.13 or later, to recognize the powerbar. Before the powerbar can be assigned to the *ProfiLux*, all PAB connections to the *ProfiLux* have to be made and the powerbar has to be powered up.

3.2 Assign the powerbar

If all PAB connections have been made and power has been supplied to all devices at the PAB, the powerbar can be assigned. Therefore select menu item **Assign devices** in *ProfiLux* system menu **Config PAB**. The *ProfiLux* scans all devices connected at the PAB and afterwards the serial numbers of the found devices are displayed. Then select **all** the serials you want to assign to this *ProfiLux* and accept with the **Return**-key.

After this the switching outputs of the powerbar are available.

Further information can be found at *Description PAB*.

4 Warranty/ liability

You have a 2-year warranty beginning from invoice date. This applies to material and manufacturing defects.

We guarantee that the supplied products correspond to the specifications and that the products do not have material resp. manufacturing defects. For the accuracy of the programming manual we do not take over a guarantee. For damages of any type which result from an improper operation or from a not suited surrounding of the aquarium computer or accessory we are not liable. Furthermore we do not take over warranty for damages that are caused through a false connection. We assume no liability for direct damages, indirect damages, consequential damages and third party damages as far as it is legally permitted. We do not take over guarantee that our product package corresponds to the requirements of the buyer. Our warranty expires if the delivered original product is damaged or modified.

5 Further information

5.1 Help and information

You will get from your specialist retailer. If you dispose of an Internet access, you can get tips and helpful suggestions on our website www.aquariumcomputer.com. Please also note the links to several forums there.

5.2 Firmware-Update

The firmware of our powerbar and *ProfiLux* aquarium controller is continuously further developed. If you would like to use new functions or modules which are not yet supported by your current firmware, you can program your aquarium controller with the latest firmware.

For this, there are several options:

- You send your powerbar to your specialist retailer or to GHL and let it be newly programmed (at cost price).
- You do the update by yourself. Therefore you need the newest firmware and the PC program *GHL Control Center*, both can be downloaded free of charge from our website, as well as our USB cable or serial connection cable. On the website also the instruction for the firmware update can be found.

Hint

Before updating the firmware there must be made sure that only one PAB device (this powerbar) is connected directly to the ProfiLux. Other PAB devices at the ProfiLux during the update are **not** allowed!

6 Technical data

Type	USA/CD	D	F/B	UK	AUS	CH
Input voltage	110 – 130 VAC	220 – 240 VAC	220 – 240 VAC	220 – 240 VAC	220 – 240 VAC	220 – 240 VAC
Max. load of all sockets in total	15 A / 1800 VA	15 A / 3500 VA	15 A / 3500 VA	13 A / 3000 VA	10 A / 2300 VA	10 A / 2300 VA
Max. switchable load per socket (S1-S4)	15 A / 1800 VA	15 A / 3500 VA	15 A / 3500 VA	13 A / 3000 VA	10 A / 2300 VA	10 A / 2300 VA
Max. permanent load dimmable socket (S5)	2,2 A / 260 VA	2,2 A / 500 VA	2,2 A / 500 VA	2,2 A / 500 VA	2,2 A / 500 VA	2,2 A / 500 VA
Fuse dimmer	3 A / 250 V time lag	3 A / 250 V time lag	3 A / 250 V time lag	3 A / 250 V time lag	3 A / 250 V time lag	3 A / 250 V time lag
Dimensions H x W x L (without power cable)	60 mm x 90 mm x 420 mm	60 mm x 90 mm x 420 mm	65 mm x 90 mm x 420 mm	62 mm x 90 mm x 420 mm	62 mm x 90 mm x 420 mm	67 mm x 90 mm x 420 mm

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