Owners manual

VERVvE

LED aquarium lighting

<u>CE Declaration of Conformity</u>
The company
Giesemann Lichttechnik & Aquaristik GmbH
Buerdestraße 14 – 41334 Nettetal – Germany
declare under our sole responsibility that the products:
VERVvE
to which this declaration relates are in conformity with the technical requirements of
the following European Community directives & standards or other normative documents
- 98/37/EC / - EEC 89/336 - EEC 73/23 AND RELATED AMENDMENTS AND ADDITIONS (B.T.)
The following technical standards and specifications have been observed:
<u>Safety:</u> EN 60335-1 / EN 60335-2- 55 AND RELATED AMENDMENTS / EN 292-1-2 / CEI 61-50
<u>EMC directive:</u> EN 50081-1 / EN 50081-2 and the following amendments / EN 5008
FCC
01.12.2015, Nettetal - Germany

Delivery and safety instructions

Honoured customer, thank you very much for your confidence in Giesemann quality products.

Our experiences in the area of the Aquatics as well as modern illumination technology guarantees the quality standard of our products. Please read this manual in its entirety in order to guarantee optimal function and operational reliability of your product over many years. Failure to observe the following points may prove dangerous or can violate existing guidelines.

All Giesemann fixtures are equipped with the CE sign. You find this sign on the type sign in the fixture or on any external power supply box.

After unpacking, please check to ensure the condition of your lamp and that all components are present. Damage must be reported immediately to your specialist supplier in order to make a valid claim. The lamps may be installed only by authorized specialist staff. These lamps may not be operated if any damage is visible, If false function appears, after submersion into water, or any other deficiency that may effect safe operation.

The lamps never may be operated without the corresponding protection glasses; broken splash-shields are to be replaced immediately in order to guarantee sufficient water protection.

The described fixture is designed exclusively for the illumination and addition of illumination of indoor aquariums only. The illumination is to be installed securely with a minimum distance of 25 cm (10") to the water surface above the aquarium and should never be operated under water. They should never be placed unsecured on the aquarium edge or have ventilation inhibited by way of surrounding equipment, panel work or covers. The fixtures and the electrical components should be protected unconditionally against direct water ingression.

Use the fixture with extreme caution if children or other people are present who do not understand the dangers of close proximity. Packaging materials may not be used for playing and should be disposed of securely: DANGER: risk of asphyxiation.
Never look directly into the light source. Bright light can lead to eye injuries!

Maintenance work on the light unit should only be carried out after removing applicable covers and ensuring the light is disconnected from the power supply at the wall. For safety reasons it is recommended that any work carried out in the aquarium, should only take place when the illumination is removed from the aquarium.
Do not attempt to open any LED light module, or power supply, as this will cause damage to the inner seal and will void the warranty.

The housing and protective glasses may become very hot during use: Avoid touching them!! When cleaning, it is particularly important to ensure that no moisture gets into the air vents inside or on top of the lights. Never cover the ventilation grilles with any item, and make sure that there can be sufficient heat exchange. DO NOT look directly at LEDs regardless of intensity!!

Improper use will invalidate any warranty claim. The transport and storage of the product must only be done using the original packaging.

The fixture is made of aluminium which is protected from seawater corrosion by a high quality powder coating. To keep the body clean and the light areas clear, clean regularly with a slightly damp cloth. Please note that salt deposits always should be removed immediately, otherwise even quality surfaces may become damaged over time. Failure to maintain effectively may lead to the loss of warranty.

Disposal: Once this appliance has expired, make the retired lights unusable by removing the plug from the socket and cut the cable. Dispose of the lamp in accordance with applicable environmental regulations in your country. Electrical waste may not be disposed of with household waste. Contact us for advice on recycling with your local authorities or dealer.

WARNING: Before using your fixture over an aquarium that may already contain sensitive fish/plants/corals or other animals that have become accustomed to an alternate light source. Please remember that your LED light is capable of delivering very high levels of light intensity within the frequency ranges that are of greatest importance to the animals. It is often impossible to judge spectral intensity by visual reference alone when comparing different lighting methods, so it is advised that a setting of no more than 50% intensity be used on any channel for the first few weeks, or until you have had time to see how the animals are adapting to the chosen spectrum and intensities that you have set. Additionally lighting durations may be reduced temporarily to reduce the chances of stress or shock.

1 Installation

To assemble your VERVVE there are different mounting options (not included) which are available from your Giesemann dealer.

Installation of the VERVVE by wire suspension kit: Attach the two wires on the top of your fixture by screwing the screws into the nuts on the top rail. Check the tightness of the cable holder. Install the ceiling mounting with suitable screws and wall plugs, making sure that the brickwork/ceiling on site can offer sufficient support. If necessary, special fastening systems, such as Hollow wall anchors, screws, etc may be necessary. If uncertain, please consult with a specialist company. Now run the steel cord through the bore of screw. Screw into the ceiling mount Insert the loose end of the steel cable into the top opening of the cable holder hole and push through until the end exits through the side hole. Since your light is equipped with continuously variable height adjustment, it can be raised or lowered easily by applying pressure to the nozzle of the spring lock mechanism. For safety reasons, always support the lamp when it is being adjusted. When the light unit is gently lowered again with the nozzle released the cable will automatically lock in place. Always aim to set your light unit level with the aquarium.

Installation of the VERVVE with aquarium mounting arm*: Install the mounting plate on top of your VERVVE by using the nuts in the top rail of your fixture. Fix the mounting plate on the mounting arm. Install the mounting arm on the glass of your aquarium. Tighten the retaining screws to secure the mount to the aquarium. * Mounting arm is available February 2016

2 PSU (power supply unit)

Each VERVvE is equipped with one power supply (PSU) with electronic controls that deliver a constant output. The input voltage is either 95- 130 Volt or 220-245 Volt 50/60 Hz. Use only the original power adaptor. The use of alternate types may result in irreparable damage to the light unit and will invalidate the warranty.

Follow the specific instructions of the PSU – printed on these devices. Do not use the PSU in humid areas and in location without proper ventilation. Maximum ambient temperate is 30°C / 85°F

First, connect the power supply to the socket of the fixtures cord. Between the fixture and the power adapter ensure there is a drip loop formed so that dripping water can not get into the power adapter or the electrical outlet. Plug the power cord in after plugging in the external power supply into the wall outlet. The DC connection between the power supply and the lamp should not be modified in any way. Attempts to modify this connection with controllers or similar intervention will lead to immediate loss of warranty.

The power supply unit (PSU) can be mounted to your tank base or to a wall using the mounting holes. Mount your PSU where it won´t get wet. Do not install it in any area with high humidity, low air circulation or next to your aquarium or sump.

Close supervision is necessary when an appliance is used by or near children. Keep out of reach of young children

- Always unplug fixture and PSU from outlet when not in use, before putting on or taking off parts and before cleaning.

- Never yank cord to pull plug from outlet. Grasp the plug and pull to disconnect.

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

- Do not install or store the appliance where it will be exposed to weather or to temperatures below freezing or above 85°F.

- Make sure appliance is securely installed before operating it. Read and observe all the important notices on the appliance.

- If an extension cord is necessary, a cord with a proper rating should be used. 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 will not be tripped over or pulled.

- Do not operate the fixture and the PSU in an enclosure that does not allow for proper air circulation.

- Do not attempt to dismantle or modify fixture or PSU, as this may result in injury and will void the warranty.

- The VERVvE and the PSU are NOT WATERPROOF; water can permanently damage it. This damage IS NOT covered under warranty. Protect these components from splashes, drips or other contact with water.

- DO NOT immerse in water. If the appliance falls into the water, DON'T reach for it! First unplug it and then retrieve it. If electrical components of the appliance get wet, unplug the appliance immediately (non-immersible equipment only).

- Carefully examine the appliance after installation. It should not be plugged in if there is water on parts not intended to be wet.

- This product carries an ingress protection rating of IPX0 and must not be immersed in water.

- Danger: To avoid possible electrical shock, special care should be taken since water is employed in the use of aquarium equipment.

- DO NOT attempt repairs yourself; return the appliance to the manufacturer for service or discard.

- 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. The power cord of this appliance cannot be replaced: If the cord is damaged, the appliance should be discarded. Never cut the cord. Damage from dropping your fixture or PSU IS NOT covered under warranty.

3 Temperature management

The VERVvE fixtures are equipped with a large heat sink surface, a powerful fan and a smart temperature management system. Dependent upon the internally measured temperature on each LED board and in the fixture itself, the fan is engaged automatically and will vary speed accordingly. In the event of overheating, inbuilt protection will automatically dim down the unit and switch off the LED cluster. The fan will continue to run until the correct temperature has been attained at which point, the fixture will automatically re-engage. Repeated overheating may damage the electronics and should be notified to your specialist dealer immediately.

4 Turning On

After supplying power, the VERVvE will start automatically. A status LED inside the power supply will light up which displays the operation status. The display shows the "GIESEMANN" logo for a few seconds and proceeds an internal hardware and software check. The fixture is ready now for use.

5 Programming the VERVvE

The functional elements and operation of the VERVvE plus and VERVvE one are basically the same. The "jogdial" next to the display has the following functions: left/right to go back and forth thru the menu. Push – to confirm a selection. By keep pushing the jogdial for a few seconds, you start entering the programming mode.

The connection by Bluetooth is only supported by the VERVvE plus (master), only these lights may be controlled directly by an external app, free available at www.giesemann.de or at www.appstore.com or play.google.com.

6 Status display

The status display appears automaticly after the system start of the light.

VERVvE plus (master) are able to control several VERVvE one (slave) modules. Therefore the display of the VERVvE master and the VERVvE slave show different information on the display.

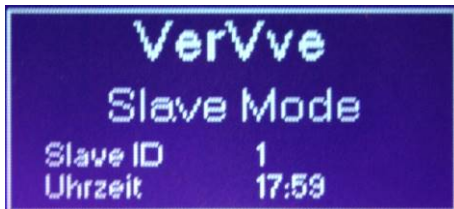### 6.1. LCD status display VERVvE plus (Master)

If installed in a network, the VERVvE´s can be operated and controlled all together. In that case a VERVvE plus will act as a MASTER and control the connected SLAVE´s. The display of a VERVvE plus indicates that the fixture is working in **„Master Mode"**.

For more than 1 VERVvE *plus* in a network it is required that each MASTER has an individuall ID. Therefore each MASTER has already an individual **„PAN-ID"** (a numerical code) given in the factory setup. The fixture can run as well in a "stand alone mode" being not connected with other fixtures.

6.2. LCD status display VERVvE one (Slave)

The VERVvE *one* can be identified with **„Slave Mode"** in the display. The fixture can run as well in a "stand alone mode" being not connected with other fixtures.

To connect the slacve with other fixtures, all lights working together in the same network must have an identical PAN-ID. This PAN-ID is shown on the master and must be set at all slaves as well. Additionally needs each slave it's own individual **„slave-ID"**, which is shown in the status menu (chapter 9.1: **„setting up a network"**).

Last but not least there is the current time shown in the status display.

☞   By connecting (pairing) the SLAVE fixture with a MASTER fixture the SLAVE is blocked for individual settings and programming.

7 Programming via Bluetooth (VERVvE *plus* only)

For programming of the inbuilt light control, a PC, tablet computer, or a smartphone with Bluetooth/USB Bluetooth interface is required (not included). The device corresponding to the respective software is available for free under the download section at http://www.giesemann.de. The software (app) for mobile devices can be directly downloaded to your smartphone or tablet computer via www.appstore.com or http://play.google.com. The App is available under the name "GIESEMANN VERVVE" for free download. Install the software after the download according to the relevant instructions for your device.
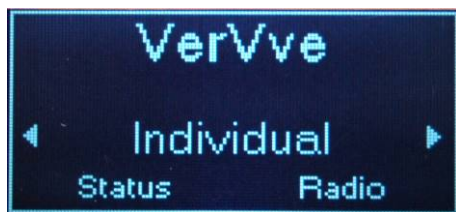
Please note the following minimum system requirements:

Apple Smartphone or Tablet   IOS 9.2, Bluetooth

Apple Computer   Mac OS X, Bluetooth

Smartphone or TabletPC   ANDROID OS, Bluetooth

8 Programming via LC display

Push the jogdial for a few seconds to enter the programming mode.

8.1. Individuell

This mode can be selected for demonstration purposes. Within approximately 60 seconds, all of the functions of the luminaire are simulated (this is a factory determined mode which cannot be adjusted) If you select the function <LOOP> the demo mode will repeat constantly.
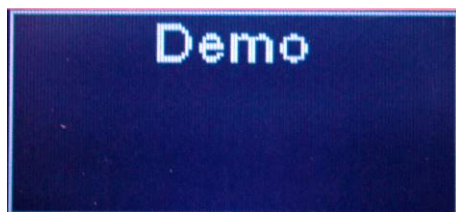
8.2. Demo

This mode can be selected for demonstration purposes. Within approximately 60 seconds, all of the functions of the luminaire are simulated (this is a factory determined mode which cannot be adjusted) If you select the function <LOOP> the demo mode will repeat constantly.

The Demo starts with the sunrise, then the lightning is activated, followed by the cloud simulation which is dimming the LED channels for a while. Finally the moon simulation dimms all chanels to 0%, only the LED of the moon-channel are working with their adjusted intensity.

During the demo „Demo" appears in the display; the demo mode will be finished by pushing on the jogdial and you will come back to the „Individual" (chapter 8).

8.3. day cycles (set points)

Here, light colors, durations, and intensities are set for each day.

The six different color channels can be programmed individually. Each color channel can be programmed with max 144 switch points (one point for every 10 minutes during 24 hours).

8.3.1. Preset

To make the programming more comfortable, your VERVvE has already 6 different predefined light curves. After choosing a default you can adjust the curves of each channel to suite your individual requirements by moving, adding, or subtracting set points as you go.

Choose the default curve that you prefer:

- **Reef 1** (daylight cycle for reef tanks)

- **Reef 2** (daylight cycle for reef tanks)

- **Acclimatisation** (for changing your existing light source to LED)

- **Lagoon** (shallow tank)
- **Deep blue** (deep blue scenario)
- **Fish** (optimized for fish tanks without corals)

With „OK" you confirm the desired default scenario.

8.3.2.   editing the presettings

From here you can adjust the curves of each channel to suite your individual requirements by moving, adding, or subtracting set points as you go.

Each daylight cycle offers six different light curves for each LED channel.

Choose the light channel that you would like to edit by pushing and scrolling and confirm by pushing the jogdial again. The six LED channels colors) are:

- DeepBlue
- LagoonBlue
- CoolWhite
- UV
- DeepRed
- RoyalBlue

Each LED channel requires min. 2 switch-points and can have max. 144 switch-points.

The number of switch points can be chosen by turning the jogdial left or right. By pushing the jogdial your leaving this point. A simple daylight cycle can be realized already with a few switch points only.

The display indicates the chosen LED (color) channel – DeepBlue and next to it switchpoint 001. Underneath the time for this switch point (10:00) and the intensity 000%.

A simple curve could be like this:

10:00 o´clock – 0 %   sunrise

11:00 o´clock – 88 %   reaching maximum of 88%

17:30 o´clock – 88 %   starting to dimm down (sunset)

19:45 o´clock - 0 %   switching off

8.3.3.   Exit

By choosing „Exit" you will be forwarded to the menu „individual" (chapter 8.1).

8.4.   Regler

Here, the intensity of each colour channel can be tested by moving its respective slider from 0-100%

The different intensities and colour channel mixes can be tested in real time over your aquarium to achieve an infinite number of lighting conditions. Preferred mixes or ratios can then be recorded for reference later when programming the daytime profiles.

The display indicates the chosen colour channel, and a status bar with the light intensity.

Select the desired colour channel by pushing the jogdial. Confirm again your choice and change to the status bar below, which is set to 0%. Activate this status bar by pushing the jogdial, now you may set the intensity by moving the jogdial horizontally, saving the settings by pushing again the jogdial. Follow the same steps for setting the others colors.
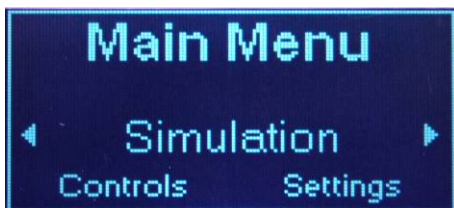
Choosing „Exit" the test mode will be finished without storing your settings, and the light will go back to the automatic daycycle state.

> ☞ Moving the LIVE-controls on the display only changes the settings of the concerning light. For connected slave lights the live controls may be only set by Bluetooth!
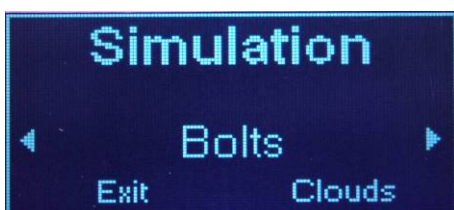
8.5.   Simulation (the weather menu)

In this section, weather scenarios can be initiated.

> ☞ Settings made by the jogdial at the light display only take effect for the concerning light. All settings may be sent later to all connected lights by the menu "radio" (chapter 9.1.5). Alternatively all settings may be made by Bluetooth.

8.5.1.   lightning

Your VERVvE fixture is equipped with a built-in thunderstorm / lightning simulation.

This allows you to specify if the VERVvE should simulate lightning YES or NOT

If YES - The individual setting for lightning can be programmed in the menu „**Einstellungen**" Here you can define the number of lightnings (max. 180 lightnings per hour). In addition you select the time period for the lightning scenario – above example shows between 0.00 until 23:59 o´clock (the entire day).

By choosing „**Exit**" your are saving these settings and leaving the menu lightning.

8.5.2.   Clouds

Same as you did in the lightning menu, you can choose wether you use that mode or not by selecting clouds „**ON**" or „**OFF**"

Select in the menu „**Einstellungen**" the details regarding the „cloud simulation" as number of clouds (max. 3000 per day) or the intensity of the clouds (remaining brightness in %). Select as well the duration in seconds of each cloud.

8.5.3.   Moon

This section allows setting of the moonlight simulation. If desired, choose that function by YES or NO.

The following options for the moon settings are available:

Mond-Tag: The lunar cycle has 28 days starting at new moon until full moon at day 14 and with decreasing moon intensity on day 28.

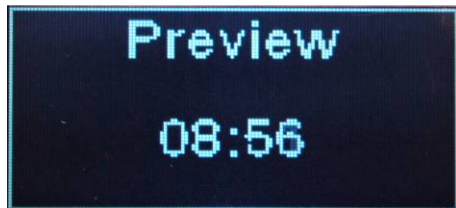**ON/OFF:** Here you may select the times for moonrise and moonset.

Intensity: Assign the "**Moon Intensity**", to adjust the maximum brightness of the moon. This value determines the maximum intensity of the **full** moon at day 14. All other values of the ascending and descending lunar phase intensity will be calculated automatically across the 28 day cycle.

Selecting the "**Zurück**" item you are confirming the settings, and have the choice to select one of the six LED channels simulating the moon – in other words, which colour the moon over your tank should be.

8.5.4. Preview

Clicking this button will send the adjusted profile temporarily to the light unit where it will run through the full 24hour cycle in condensed time. This allows you to see the results of any changes before using the new settings. (**NOTE:** whilst in Preview mode, any active weather or moon simulations will run as well, possibly showing as rapid flashing of the light simulation. It should also be noted that in situations where a late day cycle is chosen, after 9.00am for example, it may take several minutes before any activity in shown in preview mode whilst the software runs through the non-light period 00.00-09.00. The preview mode will continue to run until the end of the simulation.

You can interrupt the preview by pushing the jogdial.

8.5.5. Exit

By selecting „Exit" you will get back to the menu „Simulation " (chapter 8.5).

8.6. custom settings (pincode)

Using this function will allow to programm the general parameter of your VERVvE. This function is protected via pincode – **This pincode is „1234".**

8.6.1. Date

Adjust the date – DD / MM / YY.
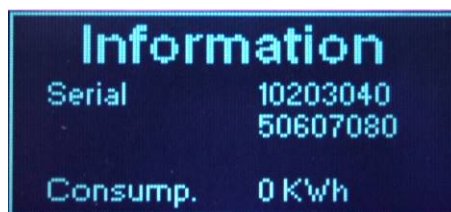

8.6.2. Time

Adjust your local time (24h)

8.6.3. Information

Indication of the current hardware version („**HW-Version**"), the software version („**SW-Version**") and date of the last software upload (date of last software version).

By pushing the jogdial the system is indicating further technical details of your VERVvE. Serialnumber of your fixture and energy consumption (KW/h)

By pushing the jogdial again, you´ll be back in the settings menu (chapter 8.6).

8.6.4. Display

In this area, the display settings of the fixture can be adjusted, ie if the illumination of the LC display should be on or off.
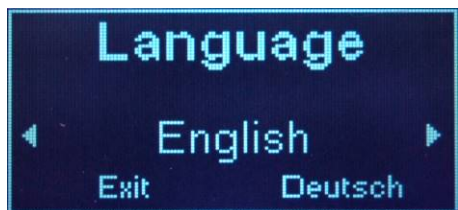
This section allows as well to program the „delay" of the display illumination i.e. after how many seconds the illumination switches off (30- 120 seconds after last keypress)

Once the illumination is switched off, a simple keypress will switch the illumination of the display on again.
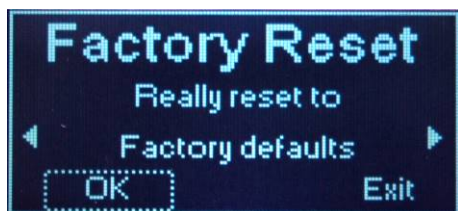
8.6.5. language

In this section you can choose the language.

You can choose English, German or Italian (other languages being prepared). Choosing „Exit" will save these settings and brings you back to the menu „settings" (chapter 8.6).

8.6.6. factory settings

In this section you can delete all your personal settings (non recommended).

The system is asking to confirm this step.

8.6.7. PAN ID (only for VERVvE *one* - Slave)

If installed in a network, the VERVvE´s can be operated and controlled all together. In that case a VERVvE plus will act as a MASTER and control the connected SLAVE´s. Each network has it's own individual ID.

Therefore each MASTER has already an individual „PAN-ID" (a numerical code) given in the factory setup, which is always shown in the status display of the master. All connected slaves must be set to the identicall PAN ID. The PAN-ID is built by a pair of numbers (allowed values from 1.1 to 254.254), which have to be set by the jogdial of each slave. The PAN-ID of all slaves must be identically with all lights to be connected in the same network.

8.6.8. Service (only for GIESEMANN service)

This menu can only be used by the GIESEMANN technical service and is protected by a PIN code. Our technicians can read all the operating parameters of your device. Thus, the exact life of your lamp, the maximum temperature reached, humidity conditions and any error messages encountered. In addition it can be detected whether any technical changes have been made to the device.

8.6.9. Exit

By choosing „Exit" you will forwarded back to the "settings" menu (chapter 8.6).

8.6.10. Exit

By choosing „Exit" <u>again</u> you will forwarded back to the "individal" menu (chapter 8).

9 Using multiple VERVvE in a network (radio)

Each VERVvE fixture can be used as „stand alone" device. In addition to it, you can run multiple VERVvE´s in a network and control these „SLAVES" individually or all together.

To set up a network with multiple VERVvE´s you need at least one VERVvE *plus* fixture – This fixture acts as a **MASTER** and controls all other VERVvE *one* fixtures as **SLAVES**.

9.1. setting up a network

You do not require additional devices as router, controller etc. You need at least 1 VERVvE *plus* fixture and 1 or more VERVvE *one* fixtures.

The network address has to be on all fixtures identical in this network. Thus each VERVvE plus (MASTER) has already a unique „PAN-ID", from the factory settings. The numerical code is displayed in the LC display of the fixture (chapter 6.1)
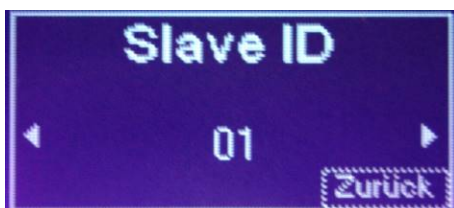
To setup a network make the following steps:

- **Setting PAN-ID :** To link SLAVE fixtures with a MASTER they have to have the identical PAN ID as the MASTER.

- Check the PAN ID of your MASTER (displayed)

- Programm this PAN ID into your SLAVE (chapter 8.6.7)

- **Showing available slaves:** The MASTER displays all available SLAVES. Please make sure all your SLAVES are available (chapter 9.1.3).

- **Enable desired SLAVE:** Enable the desired SLAVE´s on the MASTER (chapter 9.1.4).

- **Transfering settings:** all individual settings of the MASTER will be transfered to the SLAVES (chapter 9.1.5).

9.1.1. Radio (on/off remote control, SLAVE only)

If you want to disconnect a SLAVE unit from the network and run it as "stand alone" you can disconnect the fixture in the section RADIO. By pressing the jogdial you can either choose ON or OFF.

9.1.2. SLAVE - ID (SLAVE only)

To run in a network the SLAVE requires a individual SLAVE ID to be identified by the controlling MASTER. Choose an individual SLAVE ID for each SLAVE in your network by using the jogdial (right or left press). Start with 01 up to 99.

9.1.3.   Online (MASTER only)

A list of available SLAVES in this network can be found in the menu „online"

All SLAVES that have an individual SLAVE ID and that are linked with the MASTER are highlighted with a white dot.

9.1.4.   Select (MASTER only)

SLAVE fixtures that should be linked with the same MASTER can be activated in this menu **SELECT**
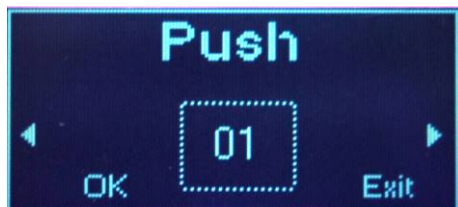

Select the desired SLAVE fixture on basis of the displayed SLAVE ID (scrolling up and down to show all SLAVES) and select your choice by pressing the jogdial. Already activated SLAVE´s are highlighted with a white dot.
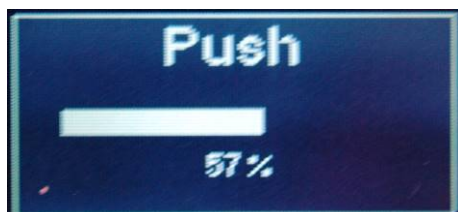
> ☞ **Important:** only highlighted SLAVE´s are connected with the MASTER!

9.1.5.   Push (MASTER only)

While the slave is connected to a master it's display is locked – during this mode the settings are only to be made by Bluetooth. Alternatively all manually made settings may send from the master to the connected slaves by the "push" menu.

Choose the desired slave and confirm the transfer by „OK". During the transmission you may see the transmission progress.

A final message informs about the status of successful transfer. Even if the transfer once could not be performed, a message is shown. Worst case the slave should be restarted and reconnected to the master. Showing a locked display the slave is successful connected - then the transfer operation may be started again.

9.1.6.   Exit

By selecting „Exit" you will be forwarded to the main menu of the fixture

9.1.7.   Trouble shooting

We have extensively developed and tested the light, the software and the associated descriptions. Despite the utmost care and technical assistance provided our products have been made by people.

Therefore, errors can occur. Constructive criticism and suggestions are always welcome. For assistance with questions or technical problems, please see the support area at http://giesemann.de/support.

PRODUCT REGISTRATION

The Registration of the GIESEMANN product must be completed within thirty (30) days from the date of purchase for the one (1) year warranty period to become effective. Otherwise, the warranty period for this GIESEMANN product is thirty (30) days.

REGISTRATION:
Your product can be registered in any of the following ways:
Website: To register online, visit **http://www.giesemann.de** to register your product.
Mail: To register by mail, complete the enclosed warranty registration card and send it to the address shown below (must be received within thirty (30) days from purchase).

Giesemann GmbH
Buerdestr. 14
41334 Nettetal – Germany
Phone: +49 2157 812990
E-Mail: service@giesemann.de

Warranty Terms

Giesemann warrants to the original purchaser only that the GIESEMANN products will be free from defects in material and workmanship under normal use for a period of thirty (30) days from the date of purchase of either one (1) year from the date of purchase – if the product is properly registered through the registration process below provided that the product is installed and used properly and consistent with the product manual. No representation or warranty by any Giesemann salesperson, dealer, agent representative, employee, or any other individual or entity acting or purporting to act on behalf of Giesemann, shall be binding upon Giesemann other than as expressly set forth herein. This limited warranty applies only to the original purchaser and is not transferable from the original consumer purchaser. In the event of a limited warranty claim, proof of purchase will be required.

 The Giesemann warranty shall not apply: (i) to any damaged Giesemann product that has been subjected to accident, misuse, neglect, alteration, acts of God, improper handling, improper transport, improper storage, improper use or application, improper installation, improper testing or unauthorized repair, operation outside recommended parameters (as described in the applicable product manual, for example, damage from saltwater spray or heat), power fluctuation or failure, subjection to abnormal physical or electrical stress, use of incompatible products, non-approved power supplies/connections, or similar circumstances (ii) to any Giesemann product where product been exposed to water or (iii) to cosmetic problems or defects that result from normal wear and tear under ordinary use, and do not affect the performance or use of the product. Giesemann's warranty applies only to a product that is manufactured by or for Giesemann and identified by the Giesemann trade name or product identification logo affixed to the product. If you notice a problem with your Giesemann Product, do not attempt to repair it yourself. Any attempts at self repair shall void this limited warranty. Giesemann shall not be held liable for damage to any aquarium, aquarium life forms, or other personal objects due to improper use of the device. If the product develops a covered defect within the one-year period, Giesemann will, at its option, either repair or replace the Giesemann product without charge, provided that the Giesemann product is returned during the warranty period.

NOTE: FOR THE ONE (1) YEAR WARRANTY TO BECOME EFFECTIVE, THE PRODUCT TO WHICH THIS LIMITED WARRANTY RELATES MUST BE REGISTERED WITHIN THIRTY (30) DAYS OF PURCHASE. INSTRUCTIONS FOR REGISTRATION ARE INCLUDED BELOW.

OBTAINING WARRANTY SERVICE: If this product proves defective during the Warranty Period, contact Giesemann (at the address listed below) for instructions on how to obtain warranty service.
Giesemann GmbH
Buerdestr. 14
41334 Nettetal – Germany
Phone: +49 2157 812990
E-Mail: service@giesemann.de

Please be prepared with your product model and serial number, as well a proof of purchase. DATED PROOF OF ORIGINAL PURCHASE IS REQUIRED TO PROCESS WARRANTY CLAIMS. REGISTRATION OF YOUR PRODUCT SATISFIES THE PROOF OF PURCHASE REQUIREMENT.

If you are requested to return your product to Giesemann, you will be given a Return Materials Authorization (RMA) number. You are responsible for properly packaging and shipping your product to Giesemann, this includes the cost of shipping and any applicable insurance (both to and from Giesemann's factory). Giesemann is not responsible for, and this limited warranty does not cover, damage to products incurred in shipping. Please take efforts to package your product properly. You must include the RMA number and, if the product is not registered a copy of your dated proof of original purchase when returning your product. Products received without an RMA number and, if applicable, dated proof of original purchase will be rejected. Do not include any other items with the product that you are returning to Giesemann.

Repairs or replacements not covered under this limited warranty will be subject to charge at Giesemann's then-current rates.

GIESEMANN DISCLAIMS ALL OTHER WARRANTIES WHETHER ORAL OR WRITTEN, EXPRESS OR IMPLIED, TO THE FULLEST EXTENT ALLOWED BY APPLICABLE LAW. NO IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE OR MERCHANTABILITY SHALL APPLY EXCEPT AS REQUIRED BY APPLICABLE LAW. GIESEMANN DOES NOT AUTHORIZE ANY PERSON OR BUSINESS ENTITY, INCLUDING ITS AUTHORIZED DEALERS, TO CREATE FOR IT ANY OBLIGATIONS, LIABILITIES, OR OTHER WARRANTIES IN CONNECTION WITH THIS PRODUCT.

ALL WARRANTIES ARE VOID IF THERE IS DAMAGE TO THE GIESEMANN PRODUCT THAT IS NOT A RESULT OF A DEFECT IN THE MATERIALS OR WORKMANSHIP. THE SOLE AND EXCLUSIVE REMEDY FOR ALL CLAIMS THAT YOU MAY HAVE ARISING OUT OF OR IN CONNECTION WITH YOUR USE OF THIS PRODUCT, WHETHER MADE OR SUFFERED BY YOU OR ANOTHER PERSON AND WHETHER BASED IN CONTRACT OR TORT, SHALL BE REPAIR OR REPLACEMENT OF THE PRODUCT. IN NO EVENT WILL GIESEMANN BE LIABLE TO YOU OR ANY OTHER PARTY FOR ANY DIRECT, INDIRECT, GENERAL, SPECIAL, INCIDENTAL, CONSEQUENTIAL, EXEMPLARY OR OTHER DAMAGES ARISING OUT OF THE USE OR INABILITY OF TO USE THE PRODUCT (INCLUDING, WITHOUT LIMITATION, DAMAGES FOR LOSS OF BUSINESS PROFITS, BUSINESS INTERRUPTION, LOSS OF INFORMATION OR ANY OTHER PECUNIARY LOSS, DAMAGE TO YOUR AQUARIUM OR ANY AQUARIUM INHABITANTS), OR FROM ANY BREACH OF WARRANTY, EVEN IF GIESEMANN HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. IN NO CASE SHALL GIESEMANN'S LIABILITY EXCEED THE AMOUNT YOU PAID FOR THE PRODUCT. IF YOU DISAGREE WITH THESE TERMS AND CONDITIONS DO NOT USE THE GIESEMANN PRODUCT.

Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above exclusions may not apply to you. Giesemann's warranty is governed by the laws of the European Community (EC), excluding its conflict of laws principles and excluding the provisions of the United Nations Convention on Contracts for the International Sale of Goods. This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.

TECHNICAL SUPPORT:
This limited warranty is neither a service nor a support contract.