

AQUARIUM CONTROLLER

Instruction Manual



Aquatronica

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Read this manual carefully before using the “AQUARIUM CONTROLLER” system.

DISPOSAL OF ELECTRIC AND ELECTRONIC PARTS

Pursuant to Directive 2002/96/CE issued by the European Parliament regarding the reduction in use of dangerous substances in electrical and electronic equipment, as well as waste disposal.

Products bearing the barred dustbin symbol must be disposed of separately from other waste. Therefore, the user must dispose of the product in question at suitable recycling centres for electronic and electro-technical waste, or he/she must consign the used product to the retailer when buying a new equivalent product, on a one-by-one basis. Separate waste collection allows used equipment to be recycled, treated and disposed of without negative consequences for the environment and health, and it allows the materials in the equipment to be recycled.



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Safety information



Use the control unit only for the use for which it was designed, any other application not mentioned in this manual may cause irreparable damage to the controller.



Do not attempt to dismantle the control unit, due to the fact, that it does not contain parts that can be repaired by the user. Repairs must be carried out exclusively at assistance centres by qualified personnel. We decline any responsibility for damage to objects and persons resulting from tampering with the control unit.



The control unit is equipped with a rechargeable buffer battery that maintains date and time for up to a maximum of 15 hours if power is lacking. The configurations will, in any case, be maintained even if this limit is exceeded. The battery has a life of roughly 10 years. If it is necessary to change it, contact an authorized centre. The use of non-approved batteries may cause explosions and also irreparable damage to the control unit.



Connect only original **AQUATRONICA** accessories, or those approved by it, to the control unit. The use of non-approved accessories may provoke damage, fire, electric shocks or lesions to people. Position control units out of the reach of children to avoid the danger of electrical shocks. The guarantee does not cover faults provoked by the use of non-approved materials.



The control unit **is not waterproof**. Therefore, do not expose it to direct contact with liquids. Do not use outdoor.



Do not use inflammable cleaning liquids that may come into contact with electric parts and provoke fire.

S.O.S.

If the control unit should malfunction, it is possible to activate an emergency function. See the relevant paragraph "**Connection diagrams**" for its activation.

General description

The **"AQUARIUM CONTROLLER"** is an easy to use electronic system that can manage all the electric elements utilized in an aquarium. It can be used for both fresh water and saltwater aquariums. The system consists of two parts, an electronic control unit for setting and displaying all the parameters, and a power unit (power bar) for connecting all the various elements.

Moreover, other accessories are available for increasing the performance of the system (e.g. chemical value readers, electrodes, level sensors, etc.).

For a complete list of the available accessories visit our website at www.aquatronica.com.

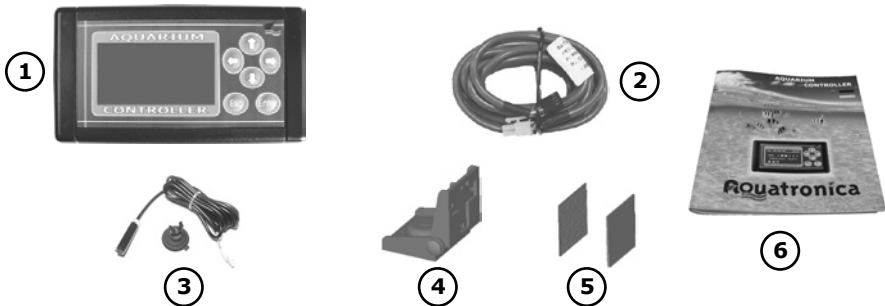
The **"AQUARIUM CONTROLLER"** features the following main functions:

- Visually displays data on the blue graphic screen.
- The **"password"** menu allows you to enable a PIN security code to prevent unauthorised persons from involuntarily modifying any settings.
- The **"multitimer"** function commands in an ON/OFF mode (using the power unit) and can activate and deactivate movement pumps, neon and incandescent lights, heaters, coolers, skimmers, and other elements.
- The **"electronic agenda"** function allows the user to write and save reminders and, if desired, program repeatable reminders. These notices are displayed at the desired moment, accompanied by an acoustic signal.
- The **"temperature reading"** function measures and displays (with the proper sensor) the temperature of the water. It is possible, on the basis of the data shown, to modify the temperature by adjusting the heaters and coolers connected to the system.
- The **"tide effect"** alternately activates two movement pumps with fixed cycles of 6 hours 15 minutes each (tide time).
- The **"wave effect"** function allows the alternate activation of two or three movement pumps with cycles that can be chosen by the user, from a minimum of 1 second to a maximum of about 5 minutes.
- The **"summer"** function activates the heating cable underneath the gravel for fixed intervals of 5 minutes/hour even in the summer when it is normally not used.
- The **"power cut"** function, in the case in which power supply is lacking, displays the duration of the interruption. If the interruption continues for more than an hour, the outputs selected in the menu remain disabled when the power returns.
- The **"software reprogramming"** function is the feature that places this product above all others in its category. With a serial interface and a PC it is possible to update the control unit with functions which were not present at the moment of purchase, without having to change it.

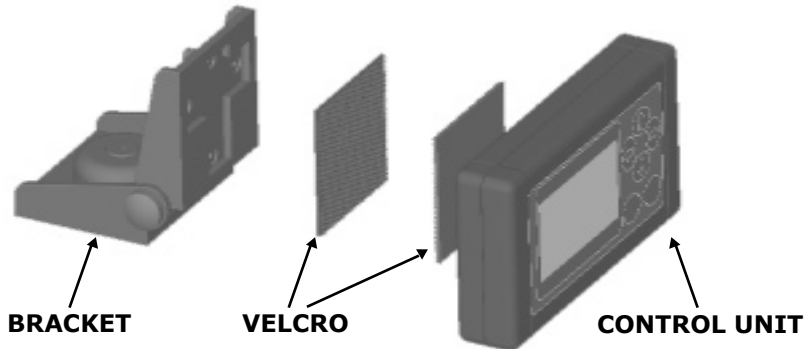
Contents of the package

The package contains:

- 1) N° 1 control unit.
- 2) N° 1 connection cable.
- 3) N° 1 temperature sensor.
- 4) N° 1 fixing bracket.
- 5) N° 2 velcro.
- 6) N° 1 manual of instructions

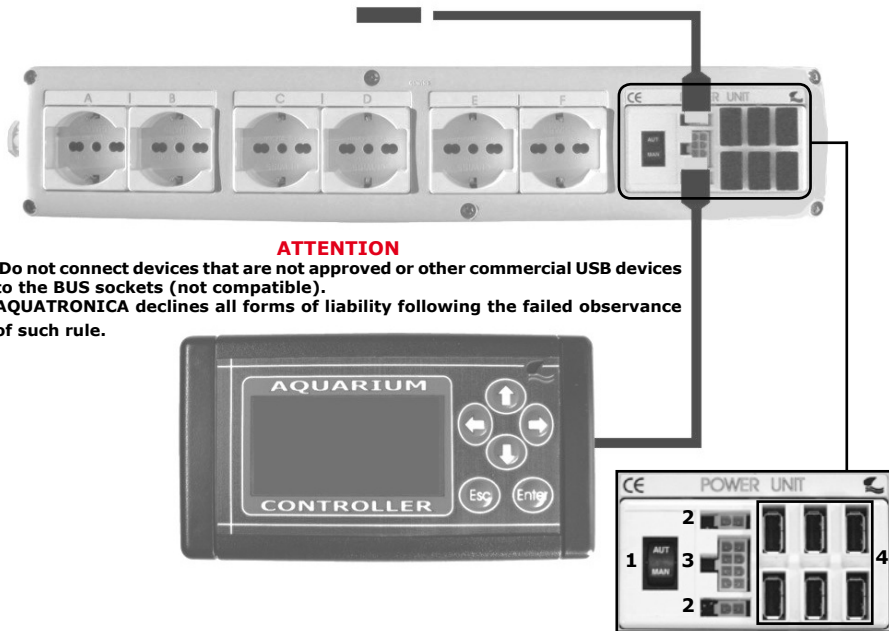


FIXING THE CONTROL UNIT TO THE BRACKET



Connection diagrams

CONNECTION TO A SINGLE POWER UNIT



ATTENTION

Do not connect devices that are not approved or other commercial USB devices to the BUS sockets (not compatible).

AQUATRONICA declines all forms of liability following the failed observance of such rule.

1) Emergency procedure switch:

AUT: functions according to the set programs.

MAN: manual emergency function, all outputs powered.

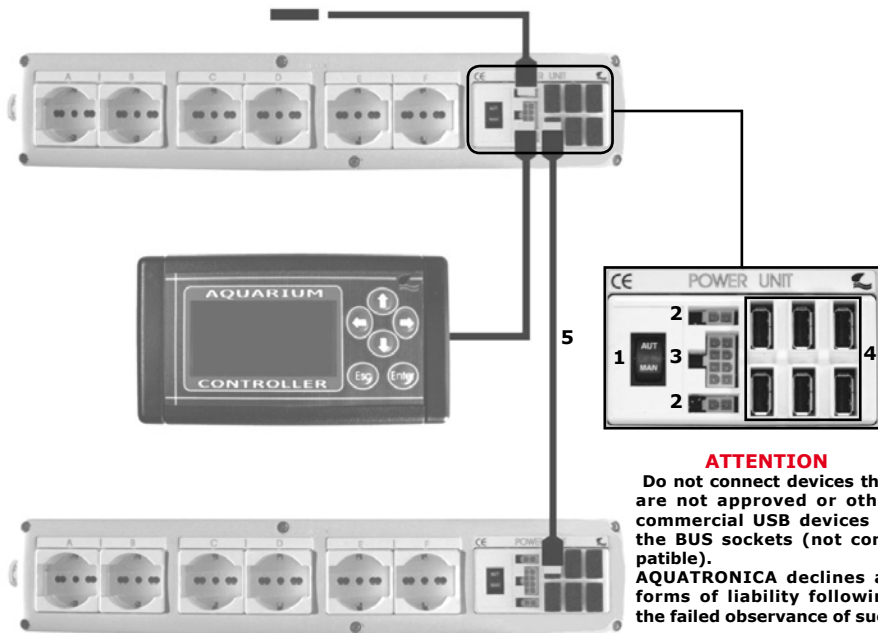
ATTENTION: if the switch is positioned on "MAN", the user must manually activate or deactivate the devices connected to the outputs.

2) Connectors for connecting the temperature or level sensors (if there are several power units connected together, the sensor can be connected to any one of them).

3) Connector for connecting the electronic control unit.

4) BUS plugs for connecting original AQUATRONICA accessories and additional power units.

CONNECTION TO SEVERAL POWER UNITS



ATTENTION

Do not connect devices that are not approved or other commercial USB devices to the BUS sockets (not compatible).

AQUATRONICA declines all forms of liability following the failed observance of such rule.

- 1) Emergency procedure switch:

AUT: functions according to the set programs.

MAN: manual emergency function, all outputs powered.

ATTENTION: if the switch is positioned on "MAN", the user must manually activate or deactivate the devices connected to the outputs.

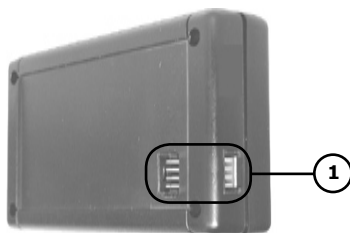
- 2) Connectors for connecting the temperature or level sensors (if there are several power units connected together, the sensor can be connected to any one of them).

- 3) Connector for connecting the electronic control unit.

- 4) BUS plugs for connecting original AQUATRONICA accessories and additional power units.

- 5) Connection cable for additional power units.

Controller connections



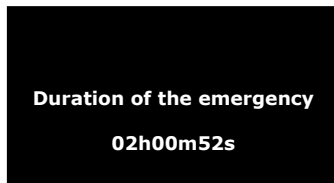
1) Connectors used for connecting the control unit to the power unit with the supplied cable. The user may connect the cable indifferently to either one of the connectors depending on how the system is installed.

ATTENTION: do not remove the label positioned on the control unit.

Power interruption



(Fig. 1)



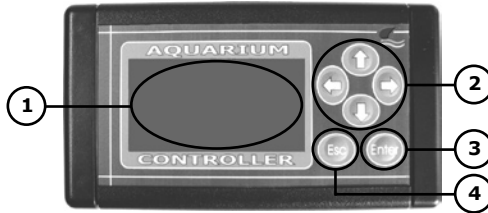
(Fig. 2)

In the case in which, during normal operation, there is an interruption in the power supply, the control unit continues to be supplied thanks to the rechargeable battery inside it, maintaining date and time for a maximum of 15 hours. When the power returns, the control unit will restore all outputs to the previously set configurations without intervention of any kind, and will also display a message on the screen (Fig. 1). This message notifies that a power interruption has occurred. By pressing any key successively, the message shown in figure 2 will be displayed.



This function may help assess whether the absence of power lasted long enough to jeopardize the balance of the aquarium's ecosystem. If the interruption of the power exceeds the maximum duration of the battery, it will only be necessary to reset the date and the time.



NOTE: if the Power Cut function has been activated and the power interruption has exceeded the time limit, the user must reset the blocked outputs in the power cut menu (see relevant paragraph).


Keypad functions




1) The rear-illuminated **BLUE LCD DISPLAY** shows the various parameters.

2) **DIRECTIONAL KEYS**   allows:
- moving up/down inside the setting pages;
- increasing/decreasing the value being set;
- changing the state of the variables being set.

DIRECTIONAL KEYS   allows:
- moving right/left inside the setting pages.
All four directional arrows can be used to activate/deactivate one or more plugs simultaneously.
(See the function key menu for settings)

3) **KEY**  allow:
- entering the highlighted menu;
- saving the settings carried out;
- passing to the successive line of the text string.

4) **KEY**  allow:
- exiting from the present menu without saving;
- displaying the outputs from the main screen.

Map of characters

In the menu where it is possible to insert a text, the words will be composed using keys $\leftarrow \rightarrow$ to move within the word itself and keys $\uparrow \downarrow$ to choose the desired character from the following map of characters:

[space] A B C D E F G H I J K L M N O P Q R S T U V W X Y Z [space] a
b c d e f g h i j k l m n o p q r s t u v w x y z [space] 0 1 2 3 4 5 6 7 8 9
[space] ! " # & () * + / - , . : ; < > = ? @ _ A È Ì Ò Ü ä ë ï ö ü Ä È Ì Ò
U à è ì ò ù

Getting started

Language

English

(Fig. 3)

Language (Fig. 3)

Select the language which will be used to interact with the "AQUARIUM CONTROLLER".

To change the language, proceed as follows:

- Select with keys $\uparrow\downarrow$ the desired language and press "Enter".

Date/Time

Time: 09:30

Date: 01/03/05

(Fig. 4)

Date/Time (Fig. 4)

Set the time and the date with which the multitimer will use to manage all the outputs and programs.

To modify these parameters, proceed as follows:

- Select the digit to modify with keys $\leftarrow\rightarrow$ while with keys $\uparrow\downarrow$ choose the correct one.
- Press "Enter" when finished.

New device connected

PU01

(Fig. 5)

Power Unit (Fig. 5)

Insert the desired name for the connected Power Unit.

To modify the name, proceed as follows:

- Select the letter to insert with keys $\uparrow\downarrow$ while using keys $\leftarrow\rightarrow$ to move within the word.
- Press "Enter" when finished.

NOTE: this screen will appear every time an additional Power Unit is connected.

New device connected

S01

Temperature

(Fig. 6)

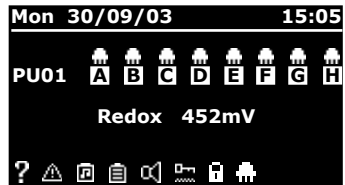
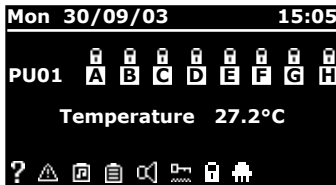
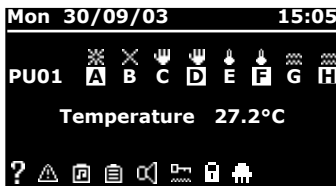
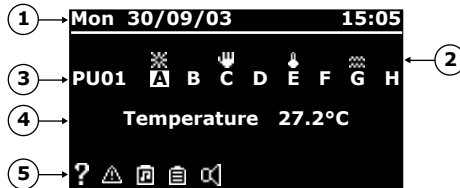
Temperature Sensor (Fig. 6)

Insert a name for the connected temperature sensor.

To modify the name, proceed as follows:

- Select the letter to insert with keys $\uparrow\downarrow$ while using keys $\leftarrow\rightarrow$ to move within the word.
- Press "Enter" when finished.

NOTE: this screen will appear every time an additional temperature sensor is connected.



- 1) DAY / DATE (Day - Month - Year) / TIME data window.
- 2) Icons data window.
- 3) Power Unit data window (**PU** = Power Unit, **01** = Number of the connected unit) and relative outputs.
- 4) Connected accessories data window.
- 5) Icons data window.

Icons Glossary

Icons that can be displayed on the screen.

Icons

Description



"Power Cut Function" output blocked



"Summer Function" output activated



"Tide Effect Function" output activated/deactivated



"Wave Effect Function" output activated/deactivated



Temperature program output activated/deactivated



Level sensor program output activated/deactivated



Manually set program output activated/deactivated



"Program Timer" output activated/deactivated



Conduction or density program sensor output activated/deactivated



PH sensor program output activated/deactivated



Redox program sensor output activated/deactivated



Power unit with outputs blocked manually (key in position: MAN)



Power unit not connected to power supply



Icon Level Sensor blocked



Reminders memorized without sound



Reminders memorized with sound



Sound alarm sensors activated

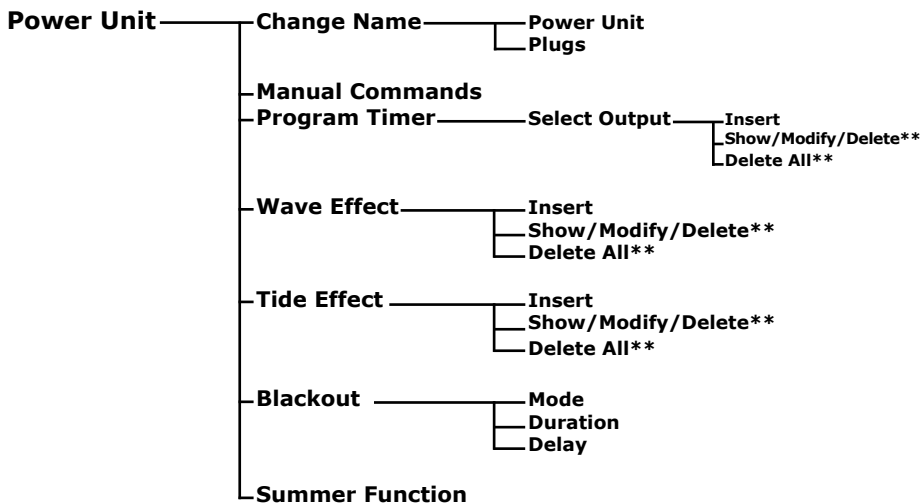
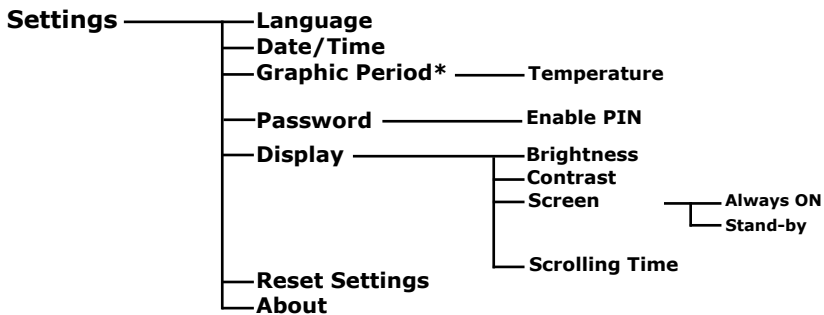


State of the outputs not recognized or accessories disconnected



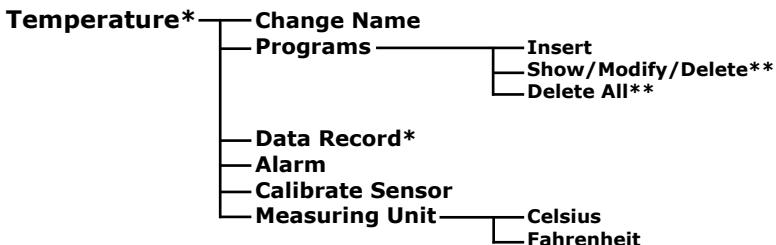
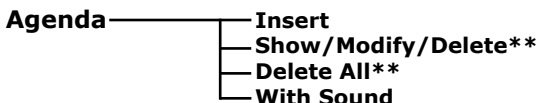
Sensor in alarm (flashing)

Panorama of the menus



Panorama of the menus

Function keys



*** Appears if the appropriate sensor has been connected.**

**** Appears if a program has been memorized.**

Settings

Language
Date/Time
Graphic Period
Display
Reset Settings

(Fig. 7)

Language

English

(Fig. 8)

Date/Time

Time: 09:30

Date: 01/03/05

(Fig. 9)

Graphic Period

Days: 01

(Fig. 10)

Settings (Fig. 7)

This option is used to modify (selected in the submenus) the functional settings of the control unit.

To select this option, proceed as follows:

Main screen ⇒ **Main Menu** ⇒ **Settings**.

Language (Fig. 8)

Sets the language used for interacting with the "AQUARIUM CONTROLLER".

To modify the language, proceed as follows:

Main screen ⇒ **Main Menu** ⇒ **Settings** ⇒ **Language**.

- Select the desired language with keys $\uparrow\downarrow$ and press "Enter". The control unit will momentarily turn the display off and then return with the language selected.

Date/Time (Fig. 9)

Used for adjusting the time and the date with which the multimer will manage the outputs and programs.

To adjust this parameter, proceed as follows:

Main screen ⇒ **Main Menu** ⇒ **Settings** ⇒ **Date/Time**.

- Select the digit to modify with keys $\leftarrow\rightarrow$, while choosing the correct one with keys $\uparrow\downarrow$.

When finished, press "Enter".

Graphic Period (Fig. 10)

This option allows selecting the period (1 - 7 - 30 days) in which a graph's progress is displayed. These graphs display how all measuring devices connected to the control unit progress over a given period of time.

NOTE: this option is available only if the sensor that has been connected to the system has the requirements to memorize data.

To modify the graphic period, proceed as follows:

Main screen ⇒ **Main Menu** ⇒ **Settings** ⇒ **Graphic Period**.

- Select the measuring instrument (if more than one is present), whose display period is to be modified, with keys $\uparrow\downarrow$ and press "Enter".
- Select the display period with keys $\uparrow\downarrow$ and press "Enter".

Password Menu

Password

Enable PIN

(Fig. 11)

Enable PIN
OFF

01 minute delay

(Fig. 12)

0
↑
3 ← → 1
↓
2
Enter PIN
* * * * *

(Fig. 13)

Mon 09/30/03 15:05

UP01 A B C D E F

PIN

(Fig. 14)

This menu allows you to enable a PIN security code to prevent unauthorised persons from involuntarily modifying any settings (Fig. 11).

To select this menu, proceed as follows:

Main display g Main menu g Settings g Password

- Set the **ON/OFF** values to enable/disable the PIN security code (Fig.12).
- Set a delay time (from 1 to 60 minutes) to establish after how many minutes the security locking system should be enabled.

A numerical value corresponds to every arrow key (0-1-2-3). Digit the PIN code (which must consist in at least 1 and up to a maximum of 6 numbers). When you have finished, press **"Enter"**. (Fig.13).

The controller will ask you to re-enter the PIN code as confirmation. Repeat the procedure described above and press **"Enter"**.

It is now possible to enable/disable the PIN code or modify the enablement delay time by pressing **"Enter"** on the message 'enable PIN'. Alternatively, change the PIN code by pressing 'change PIN'.

At the end of the preset time, the bottom left symbol PIN will appear in the main display indicating that the safety lock has been enabled. The controller can also be locked manually by holding the **"Esc"** key for approx. 2 seconds (Fig.14).

The safety lock does not interfere with displays regarding the various users nor with controller-user communication messages.

N.B.: if you are unable to remember the PIN code, the controller can only be unlocked via pc.

Display

Brightness
Contrast
Screen Mode
Scrolling Time

(Fig. 15)

Display (Fig. 15)

This option is used to personalize the aspects of the display, such as the Brightness, Contrast, Screen Mode, and the Scrolling Time.

To select this option, proceed as follows:

Main screen ⇨ **Main Menu** ⇨ **Settings** ⇨ **Display**.

Brightness



(Fig. 16)

Brightness (Fig. 16)

This modifies the display's brightness according to external conditions to obtain optimal visibility.

To modify this parameter, proceed as follows:

Main screen ⇨ **Main Menu** ⇨ **Settings** ⇨ **Display** ⇨ **Brightness**.

- Press key \uparrow to increase the brightness or key \downarrow to decrease it, then press "**Enter**".

Contrast



(Fig. 17)

Contrast (Fig. 17)

Modifies the contrast of the display according to external conditions to obtain optimal visibility.

To modify this parameter, proceed as follows:

Main screen ⇨ **Main Menu** ⇨ **Settings** ⇨ **Display** ⇨ **Contrast**.

- Press key \uparrow to increase the contrast or key \downarrow to decrease it, then press "**Enter**" to confirm.

Settings Menu

Screen Mode

Always ON
Stand-by

(Fig. 18)

Screen Mode (Fig. 18)

This option allows the user to turn off the display if desired ("Always ON" is the programmed default).

To modify this option, proceed as follows:

Main screen ⇨ **Main Menu** ⇨ **Settings** ⇨ **Display** ⇨ **Screen Mode**.

● Select between the two options using the keys ⇧⇩:

Always ON = the display always remains on.

Stand-by = the display turns off automatically after a period of about 3 minutes from the last action.

When finished, press "Enter".

Scrolling Time

Seconds: 05

(Fig. 19)

Scrolling Time (Fig. 19)

Allows the user to select the interval of time with which the values of the sensors are displayed (in succession) and the state of the plugs on the main page (the programmed default is 5 seconds).

To modify this option, proceed as follows:

Main screen ⇨ **Main Menu** ⇨ **Settings** ⇨ **Display** ⇨ **Scrolling Time**.

● Select the scroll time (from 0-90 seconds) and press "Enter" to confirm.

Would you like to
reset all settings?

Enter: Confirm
Esc: Cancel

(Fig. 20)

Reset Settings (Fig. 20)

This option resets the control unit, returning it to the initial configuration (see paragraph "Getting started").

To utilize this function, proceed as follows:

Main screen ⇨ **Main Menu** ⇨ **Settings** ⇨ **Reset Settings**.

● Press "Enter" to confirm or "Esc" to cancel the operation when the message appears.

AquaTronica

FW version: x.y
HW version: Hxx

Press any key to
continue

(Fig. 21)

About (Fig. 21)

This option displays the Hardware and Firmware version of the control unit.

To utilize this function, proceed as follows:

Main screen ⇨ **Main Menu** ⇨ **Settings** ⇨ **About**.

Power Unit

Change Name
Manual Commands
Program Timer
Wave Effect
Tide Effect ▼

(Fig. 22)

Power Unit (Fig. 22)

This menu allows the user to carry out all the settings and programs desired on the power units connected to the system.

NOTE: if more than one power unit is connected, a screen will appear which allows the user to select the desired power unit by using the keys $\uparrow\downarrow$. Press "Enter" to confirm.

To select these parameters, proceed as follows:

Main screen \Rightarrow Main Menu \Rightarrow Power Unit.

Change Name

Power Unit
Plugs

(Fig. 23)

Change Name (Fig. 23)

Modifies the name of the power units and their plugs.

To modify the name of the Power Unit, proceed as follows:

Main screen \Rightarrow Main Menu \Rightarrow Power Unit \Rightarrow Change Name.

● Select the Power Unit menu with keys $\uparrow\downarrow$ and press "Enter".

● Select the letters with keys $\uparrow\downarrow$ and use keys $\leftarrow\rightarrow$ to move inside the word (E.g. Fig. 24). Press "Enter" to confirm.

To modify the name of the plugs, proceed as follows:

Main screen \Rightarrow Main Menu \Rightarrow Power Unit \Rightarrow Change Name.

● Select the "Plugs" menu with keys $\uparrow\downarrow$ and press "Enter".

● Select the plug whose name is to be modified with keys $\uparrow\downarrow$ (see Fig. 25) and press "Enter".

● Select the letters with keys $\uparrow\downarrow$ and use keys $\leftarrow\rightarrow$ to move inside the word (E.g. Fig. 24). Press "Enter" to confirm.

Skim_

(Fig. 24)

Plug Selection

A: A
B: B
C: C
D: D
E: E ▼

(Fig. 25)

Power Unit Menu

Manual Commands

Single Control



(Fig. 26)

Manual Commands (Single Control)

Allows the user to manually modify the state of the outputs being worked on independently from their set programs (E.g. Fig. 26).

When the symbol of the “hand” appears over the selected output, it indicates that it is being manually overridden and turned OFF.

When the symbol of the “hand” appears over the selected and highlighted output, it indicates that it has been manually overridden and turned ON.

To select this function, proceed as follows:

Main screen ⇨ **Main Menu** ⇨ **Power Unit** ⇨ **Manual Commands**.

- Select the desired output with keys $\leftarrow \rightarrow$ while with keys $\uparrow \downarrow$ modify its state. When finished, press “Enter”.

Manual Commands

All OFF



(Fig. 27)

Manual Commands (All OFF) (Fig. 27)

This manually deactivates all the outputs present on the power unit simultaneously.

To use this function, proceed as follows:

Main screen ⇨ **Main Menu** ⇨ **Power Unit** ⇨ **Manual Commands**.

- Select “All OFF” with the keys $\uparrow \downarrow$ and press “Enter”.

Manual Commands

All ON



(Fig. 28)

Manual Commands (All ON) (Fig. 28)

This manually activates all the outputs present on the power unit simultaneously.

To use this function, proceed as follows:

Main screen ⇨ **Main Menu** ⇨ **Power Unit** ⇨ **Manual Commands**.

- Select “All ON” with the keys $\uparrow \downarrow$ and press “Enter”.

Manual Commands

Restore All



(Fig. 29)

Manual Commands (Restore All) (Fig. 29)

This function simultaneously eliminates all the manual commands which were previously set on the power unit.

All outputs will automatically begin to function according to their set programs.

To use this function, proceed as follows:

Main screen ⇨ **Main Menu** ⇨ **Power Unit** ⇨ **Manual Commands**.

- Select “Restore All” with the keys $\uparrow \downarrow$ and press “Enter”.

Plug Selection

A: Neon
 B: Pump
 C: C
 D: D
 E: E

(Fig. 30)

A

Insert

(Fig. 31)

Neon

From 14:25	To 19:25
ON 0m	OFF 0m
Mo Tu We Th Fr Sa Su	

(Fig. 32)

Pump

From 10:30	To 18:30
ON 30m	OFF 30m
Mo Tu We Th Fr Su	

(Fig. 33)

Program Timer

In this menu it is possible to carry out all the settings necessary for using the multitimer function. It is, in fact, possible to select the starting and finishing time, as well as the day of the week in which the selected output is enabled.

By setting the ON and OFF periods, it is possible to activate/deactivate the output in intervals based on the timing previously set. To modify this option, proceed as follows:

Main screen ⇨ **Main Menu** ⇨ **Power Unit** ⇨ **Program Timer**.

- Select the output to program with keys $\uparrow\downarrow$ (Fig. 30) and press "Enter".

Insert (Fig. 31)

Allows the user to insert one or more programs inside the selected output.

To modify this option, proceed as follows:

Main screen ⇨ **Main Menu** ⇨ **Power Unit** ⇨ **Program Timer** ⇨ **Insert**.

- Set the start time ("From") and end time ("To") at which the output is enabled. Select the desired option with keys $\leftarrow\rightarrow$, while modifying the values with keys $\uparrow\downarrow$.
- Set the "ON" and "OFF" times (0-600 minutes) that will establish the activation/deactivation intervals. Select the option desired with keys $\leftarrow\rightarrow$ while with keys $\uparrow\downarrow$ to modify the value.

- Set the days of the week in which the output is enabled. Select the day with keys $\leftarrow\rightarrow$ while with keys $\uparrow\downarrow$ render it active or non-active.

When all settings are complete, press "Enter".

Example 1

In the example shown in the figure (Fig. 32) a program (Neon) has been created where the neon turns on at 14.25 and turns off at 19.25 every day of the week.

Example 2

In the example shown in the figure (Fig. 33) a program (Pump) has been created where the pump turns on at 10.30 and turns off at 18.30 every day of the week except Saturday. Setting the ON and OFF times we have, in the interval of time shown above, an ON and OFF cycle with intervals of 30 minutes.

Power Unit Menu

Skimmer

From 10:30 To 18:30
ON 0m OFF 0m
Mo Tu We Th Fr Sa Su

(Fig. 34)

Would you like to
modify or delete?

Modify
Delete Program

(Fig. 35)

Would you like to
delete this program?

Enter: Confirm
Esc: Cancel

(Fig. 36)

Would you like to
delete all programs?

Enter: Confirm
Esc: Cancel

(Fig. 37)

Show/Modify/Delete

This function can be used in several menus, as the modification and erasing mode is always the same.

In this menu it is possible to show, modify or delete the inserted programs.

To use this function, proceed as follows:

- Enter the program to be modified or deleted by pressing **"Enter"** in the **"Show/Modify/Delete"** field.
- Scroll with keys $\leftarrow \rightarrow$ until the desired program is displayed (E.g. Fig. 34).
- Press the **"Enter"** key. The following screen (Fig. 35) appears on the display.
- Select the **"Modify"** option with keys $\uparrow \downarrow$ to modify the program. To modify the program, change the desired parameters and press **"Enter"** to confirm the modification.
- Select the **"Delete Program"** option with keys $\uparrow \downarrow$ to delete the program. A screen will appear (Fig. 36). Press **"Enter"** to delete or **"Esc"** to cancel.

Delete All (Fig. 37)

This function can be used in several menus since the deleting mode is always the same.

In this menu it is possible to delete all the programs inserted at the same time in the menu currently being used.

To use this function, proceed as follows:

- Select the **"Delete All"** option with keys $\uparrow \downarrow$ and press **"Enter"**. A screen will appear (Fig. 37). Press **"Enter"** to delete or **"Esc"** to cancel.

Wave Effect

Insert

(Fig. 38)

Wave Effect (Fig. 38)

This function can create one or more wave effects in an aquarium.

To set this function, proceed as follows:

Main screen ⇨ **Main Menu** ⇨ **Power Unit** ⇨ **Wave Effect.**

Insert

- Two-pump Wave Effect without pause:

set the time interval which the effect will be produced, selecting from the values "**From**" and "**To**".

Choose the two pumps necessary for the effect from the list of available outputs and assign an ON time for each pump (in seconds) found on the right side of the screen.

In the example shown in the figure (Fig. 39) a Wave Effect has been set from 14.15 to 17.15 every day of the week in which the pumps "Pump SX" and "Pump DX" function alternately at intervals of 10 seconds.

- Two-pump Wave Effect with pause:

set the time interval in which to produce the effect, setting the values "**From**" and "**To**".

Select the first and third fields and place in them the two pumps to be used from the list of available outputs and assign an ON time for each pump (in seconds) found on the right side of the screen.

In the second field, select the "**Pause option**" and, on the right side of the screen, set the amount of time for the pause.

In the example shown in the figure (Fig. 40) a Wave Effect has been set from 14.15 to 17.15 every day of the week, in which the pumps "Pump SX" and "Pump DX" function alternately at intervals of 10 seconds with pauses of 5 seconds after each pump turns off.

Wave Effect

From 14:15	To 17:15
Pump SX	10s
Pump DX	10s
Not Defined	0s
Mo Tu We Th Fr Sa Su	

(Fig. 39)

Wave Effect

From 14:15	To 17:15
Pump SX	10s
Pause	5s
Pump DX	10s
Mo Tu We Th Fr Sa Su	

(Fig. 40)

Power Unit Menu

Wave Effect	
From 14:15	To 17:15
Pump SX	10s
Central Pump	10s
Pump DX	10s
Mo Tu We Th Fr Sa Su	

(Fig. 41)

• Three-pump Wave Effect with pause:
set the time interval in which to produce the effect by setting the values "From" and "To".

In the three fields, select the three pumps which will be used from the list of available outputs and, on the right side of the screen, set the ON time for each pump (in seconds).

In the example shown in the figure (Fig. 41) a Wave Effect has been set from 14.15 to 17.15 every day of the week in which the pumps "Pump SX", "Pump DX" and "Central Pump" function alternately at intervals of 10 seconds.

Show/Modify/Delete

See page 24.

Delete All

See page 24.

Tide Effect

Insert

(Fig. 42)

Tide Effect (Fig. 42)

With this option it is possible to choose two outputs (pumps) that activate alternately to create a Tide Effect at a fixed time of 6h15m.

To set this function, proceed as follows:

Main screen ⇨ **Main Menu** ⇨ **Power Unit** ⇨ **Tide Effect**.

Insert

Allows the user to insert one or more Tide Effects.

To set this function, proceed as follows:

Main screen ⇨ **Main Menu** ⇨ **Power Unit** ⇨ **Tide Effect** ⇨ **Insert**.

• Set the outputs which are to be activated ("Not Defined" field). Select the desired output (Fig. 43) from those present with keys ⬆⬇. When all the settings are complete, press "Enter".

Tide Effect	
6h15m0s	
Pump 1	
Not Defined	

(Fig. 43)

Show/Modify/Delete

See page 24.

Delete All

See page 24.



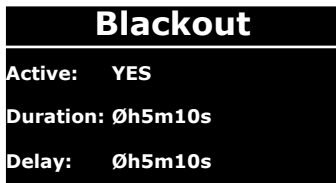
(Fig. 44)

BLACKOUT

This function allows you to select which outlets you want to stay disabled when the power supply is restored (after there has been a blackout which lasts for longer than the time set by the user) until they are automatically re-enabled after a programmable time (Fig. 44).

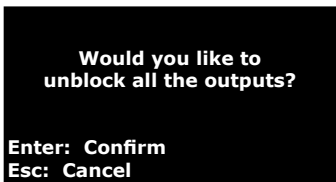
To assign a blackout function to an outlet, proceed as follows:

Main screen ⇨ **Main menu** ⇨ **Power unit** ⇨ **Select power unit** ⇨ **Blackout** ⇨ **Select outlet**



(Fig. 45)

- Set the type of program to YES. (If it is left on NO, the program will not be valid).
- Set the Blackout duration time after which the controller will automatically lock the outlet (Fig. 45).
- Set a delay time, that is a time during which the outlet stays disabled after the power supply has been restored (Fig. 45).



(Fig. 46)

Unblock All (Fig. 46)

This unblocks all the deactivated outputs simultaneously when a power outage has occurred for **over an hour**.

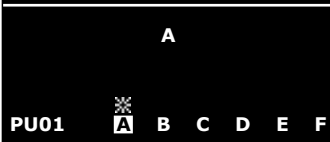
NOTE: this function is activated only if the power has been interrupted for more than an hour.

To carry out this function, proceed as follows:

Main screen ⇨ **Main Menu** ⇨ **Power Unit** ⇨ **Power Cut** ⇨ **Unblock All**.

- The unblocking screen appears (Fig. 46). Press "Enter" to unblock or "Esc" to cancel.

Summer Function



(Fig. 47)

Summer Function

It is possible to select one or more outputs that, for 5 minutes (fixed time) every hour, are activated automatically.

This function is particularly useful in freshwater aquariums to keep the bacterial cultures present in the gravel active during the summer, by periodically activating the heating cable when the outside temperature would not regularly activate it.

To set this function, proceed as follows:

Main screen ⇨ **Main Menu** ⇨ **Power Unit** ⇨ **Power Cut** ⇨ **Summer Function**.

- Select the output desired with keys <←> and with keys ↑↓ select the Summer Function. Press "**Enter**" to confirm. In the example shown in the figure (Fig. 47), the Summer Function activates output "**A**" (symbol "❄" present above the output) for 5 minutes every hour.

FUNCTION KEY MENU

Func. Keys

↑ :
→ :
↓ :
← :

(Fig. 51)

This menu allows you to assign a function to every arrow key on the controller.

Once the desired function has been programmed, press the relative arrow for two seconds to enable the function.

To assign a function to an arrow key, proceed as follows:

Main display ⇨ **Main menu** ⇨ **Func. keys** ⇨ **Select arrow key**

To program a function key, proceed as follows:

- Use the ⇧⇩ keys to position yourself on the arrow you wish to program and press "Enter" (Fig.51).

To enter the name of the function you wish to assign to the selected key, select the letters by acting on the ⇐⇒ keys and act on the vu keys to move around within the word. When you have finished, press "Enter".

- Select the type of function you wish to assign to the key using ⇧⇩.

The functions will scroll down in the following order:

Off ⇨ **Time** ⇨ **Switch** ⇨ **Hold**.


OFF FUNCTION: Function disabled.

TIME FUNCTION: Allows a function enablement time to be established. Once enabled, the function remains on for the preset time (Fig.52).

SWITCH FUNCTION: Allows the function assigned to the key to be enabled and disabled manually (Fig.53). Every time the key is pressed (for about 2 seconds), the function is enabled or disabled depending on its status.

KEY FUNCTION: Allows the function assigned to the key to be enabled only while the relative key is pressed (Fig.54).

Subsequently program the outlets on which the function is to be enabled. Select the desired outlet using the ⇐⇒ keys, whereas with the ⇧⇩ keys, change the status. When you have finished, press "Enter".

Function Keys are only enabled from the main display. The following icon  will be displayed to indicate that a program function key is enabled.

Fisch Food

Mode: Time

Max Time: 5m10s

Ascent Pump

↑

UP01 A B C D E F

(Fig. 52)

Lights Off

Mode: Switch

Light Hqi

↑

UP01 A B C D E F

(Fig. 53)

Manual top-up

Mode: Key

Top-up

↑

UP01 A B C D  F

(Fig. 54)

XY Programs Menu

In this menu one or more programs can be set to turn one or more outlets on the power units on or off (maximum of 3 per program), depending on the value assumed by two connected sensors. This type of programming is commonly used for automatic aquarium replenishing, adding soft or salt water according to the values supplied by the level sensor and density sensor. Furthermore, a program can be run that doses via dosing pumps according to the value read by one or more connected chemical sensors.



(Fig. 1)

To access the sensor programming menu (Fig.1):
Main screen ⇨ **Main menu** ⇨ **XY Programs**

When the XY Programs menu appears, a program can be inserted, viewed, edited or deleted.

When the first program is inserted, only the program's "Insert" menu will be displayed (see Fig. 2); the "View/Edit/Del" and "Delete All" menus will be shown later.

After pressing "**Enter**" on the screen in Fig. 2, a screen (see Fig. 3) for defining the following will appear:



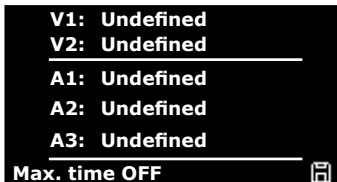
(Fig. 2)

- On the top part of the screen two variables can be set for the program (the sensors at the outlets) called V1 and V2 (variables 1 and 2 in Fig. 3).

- At the center of the screen, the functions that the program must carry out at the outlets of the connected multioutlets or dosing pumps can be set (see A1, A2, A3 in Fig. 3).

- At the bottom of the screen a maximum time (Max. Time) can be set, within which the program must finish and beyond which the program will automatically be stopped, signaling an anomaly. The amount of time and the measurement unit expressed in hours (h), minutes (m) and seconds (s) can be set using the $\uparrow\downarrow$ keys.

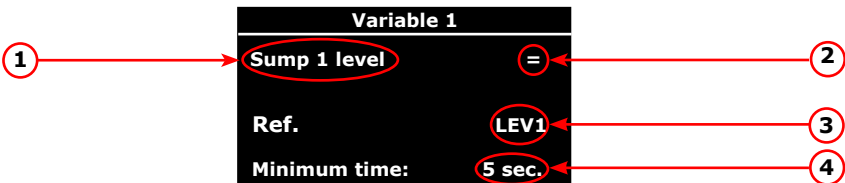
To define the program's variables, press "**Enter**" on one of the V1 and V2 variables to access the sensor programming screen (see Example 1).



(Fig. 3)

Program Link Settings

Example 1 (for level sensors only)



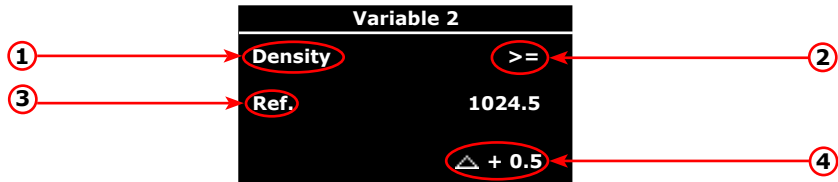
1) Indicates the sensor to define as a variable, selectable using the $\uparrow\downarrow$ keys.

2) Indicates the condition necessary for starting the program (read-only).

3) Indicates the reference value.

4) Indicates the program's minimum run time (expressed in seconds); the value entered using the $\uparrow\downarrow$ keys must be lower than the value entered in the "Max. Time" field.

Example 2 (for all other sensors)



1) Indicates the sensor to define as a variable, selectable using the $\uparrow\downarrow$ keys.

2) Indicates the condition necessary for starting the program (selectable using the $\uparrow\downarrow$ keys); the following values can be used:

- Greater than the reference value (>) or greater than or equal to the reference value (>=)
- Less than the reference value (<) or less than or equal to the reference value (<=)

3) Indicates the type of reference to use, selectable using the $\uparrow\downarrow$ keys, from two possible options:

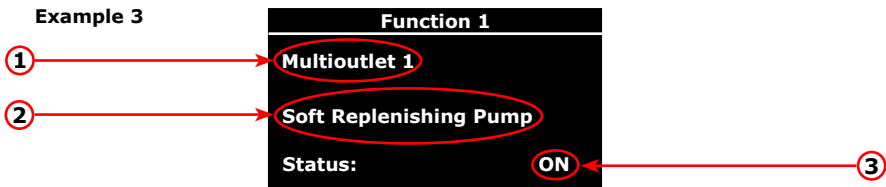
- Reference expressed as a fixed value
- Reference expressed as a modifiable curve; in this case press "Enter" on the $\wedge/\vee/\wedge/\vee$ symbol to access the curve and change it as needed.

4) Indicates the programmable hysteresis; this value will be positive or negative depending on the entered condition.

Program Functions and Accessories Settings

After defining the variables, the program's functions may be defined (from 1 to 3). To define the program's functions, press "Enter" on one of the three functions (A1, A2 and A3) to access the function programming screen (see Example 3).

Example 3



- 1) Indicates the power unit for setting the program; using the $\uparrow\downarrow$ keys, the power unit may be chosen from those connected to the Aquatronica system.
- 2) Indicates the outlet of the module to be programmed, selectable using the $\uparrow\downarrow$ keys.
- 3) Indicates the status (selectable using the $\uparrow\downarrow$ keys) that the chosen outlet must assume during program execution.

```
V1: Sump Level
V2: Density
-----
A1: Soft Replenishing
A2: Undefined
A3: Undefined
-----
Max. time 30 s
```

In the examples shown, the soft replenishing pump was programmed, which will start (Function) only if the level sensor is at LEV1 (Variable 1) and the density is greater than or equal to 1024.5 (Variable 2).

If for any reason one of the two variables does not return to the initial value within 30 seconds (Max. Time), the program automatically stops, indicating an anomaly.

This is helpful when the replenishing tank is empty (the pump stops operating, thus avoiding damages) or the replenishing water is leaking from the sump, causing flooding.

For example, we could set up another XY program that controls the salt water replenishing pump so that it starts (Function) only if the level sensor is at LEV1 (Variable 1) and the density is less than 1024.5 (Variable 2).

With two XY programs working together, soft water or salt water replenishing can be totally automatic.

The XY programs can be used for the power units as well as any dosing pumps connected to the system.

A program for the pumps is shown below.


Variable Setting

Variable 1	
pH	>
Ref.	7.9
	△ + 0.1

Function Setting

Function 1	
Dosing pumps	
pH Minus	
Milliliters:	5
Every:	24h00m

Program




V1:	pH
V2:	Undefined
<hr/>	
A1:	pH Minus
A2:	Undefined
A3:	Undefined
<hr/>	
Max. time OFF	

In this example, if the pH goes above 8.0 (7.9+0.1), 5ml of pH Minus are dosed into the water at 24h intervals. If the value goes below 7.9, dosing automatically stops.

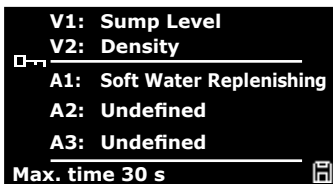
Resetting a program



If the maximum program time expires, the program is stopped; the symbol  will also appear on the main screen accompanied by an acoustic signal.

To restart the program, follow this simple procedure (see Example 4):

- From the main menu, access the XY Programs menu.
- Enter the Programs menu.
- Enter the View/Edit/Del menu.
- Scroll through the set programs using the   keys to view the stopped program ()
- Press "Enter" to open the reset window.
- Enter the "Prog. Reset" window.
- Press "Enter" to reset the program.

Example 4



V1: Sump Level
V2: Density
 A1: Soft Water Replenishing
A2: Undefined
A3: Undefined
Max. time 30 s 

Example of outlet enabled by XY program



Mon. 25/09/06 11:58
UP01 A B  D E F G H
Redox 295mV
 

Example of outlet disabled by XY program



Mon. 25/09/06 11:58
UP01 A B C D E F G H
Redox 295mV
 



Agenda Menu

Agenda

Insert
With Sound

(Fig. 48)

Agenda (Fig. 48)

In this menu it is possible to program reminders that will be displayed on the screen accompanied by an acoustic signal (optional) at the moment desired. If the acoustic signal is enabled, the icon  will appear on the main screen. If the reminder is set without the acoustic signal, the icon  will appear on the main screen. The reminder will appear on the display at the moment established during its programming, (Fig. 49).

To clear the reminder from the display, press the "Enter" key as acknowledgement of the reminder.

To access this function, proceed as follows:



Main screen ⇨ **Main Menu** ⇨ **Agenda**.

With Sound

This activates or deactivates the acoustic signal for all the reminders ("With Sound" is programmed as default "Without Sound" is optional).

To modify this function, proceed as follows:

Main screen ⇨ **Main Menu** ⇨ **Agenda**.





- Select the "With Sound" function with keys  and press "Enter" to activate or deactivate it.

Insert





Here it is possible to set the reminders along with the date, time and the repetitive cycle at which it is to be displayed.





To program reminders, proceed as follows:

Main screen ⇨ **Main Menu** ⇨ **Agenda** ⇨ **Insert**.

- Insert the reminder's text, using the keys  to select the letters, and the keys  to move within the word (Fig. 50).

Once the text is completed, press "Enter" to pass to the date.

- Set the "Date" (Day - Month - Year) and "Time" for when the message will be displayed. Select the field desired with keys  and with keys  modify its value.

- Set the "Every" field (number and period, Day - Month - Year) to indicate the repetition of the reminder. Select the desired field with keys  and with keys  modify its value.

At the end of the various settings, press "Enter".

Show/Modify/Delete

See page 24.

Delete All

See page 24.

**Give one calcium
vial**

(Fig. 49)

Reminder

Give one cal_

Date: 16/03/05 20:30

Every 7 Days

(Fig. 50)

New device connected

S01

Temperature

(Fig. 55)

Temperature

Change Name

Programs

Data Record

Alarm

Calibrate Sensor

(Fig. 56)

Temperature

(Fig. 57)

Temperature

Insert

(Fig. 58)

Temperature (Fig. 56)

In this menu it is possible to carry out all the settings relevant to the temperature of the water.

All the menus relevant to this measurement are enabled only when the temperature sensor is connected to the system.

When the temperature sensor is connected, the control unit will display a plug-in screen where it is possible, if wanted, to change the name of the connected sensor (Fig. 55).

Press **"Enter"** to accept. The control unit is already equipped to read and display the temperature (with the supplied sensor). Moreover, it is possible:

- to modify the state of the plugs depending on the temperature readings;
- to set the desired value;
- to display the progress over the last 24 hours;
- to set acoustic alarms;
- to calibrate the sensor in relation to the position in which it is placed or align it with another traditional sensor already present in the aquarium;
- to set the unit of measurement of the temperature.

To set these functions, proceed as follows:

Main screen ⇨ **Main Menu** ⇨ **Temperature**.

ATTENTION: To read the temperature values correctly, when you install the sensor you are recommended to calibrate it by aligning it with the values read by other devices already installed in the aquarium.

Change Name (Fig. 57)

Modifies the name given to the sensor.

To modify the name, proceed as follows:

Main screen ⇨ **Main Menu** ⇨ **Temperature** ⇨ **Change Name**.

- Select the letters by using the keys \uparrow \downarrow while using keys \leftarrow \rightarrow to move within the word. When finished, press **"Enter"**.

Programs (Fig. 58)

Allows the user to make programs in relation to the temperature.

To insert a program, proceed as follows:



Main screen ⇨ **Main Menu** ⇨ **Temperature** ⇨ **Programs**.

- Select the **"Insert"** option with keys \uparrow \downarrow and press **"Enter"**.

Temperature Menu

Programs	
Ref.	27.0°C
ΔMIN: 0.0°C	ΔMAX: 0.0°C
Plugs	Confirm

(Fig. 59)

Cooler						
PU01	A		C	D	E	F
PU01	A	B	C	D		F

(Fig. 60)

Insert

In this section it is possible to choose a desired temperature and set a minimum and maximum tolerance for temperature variation.

To adjust the temperature, proceed as follows:

Main screen ⇨ **Main Menu** ⇨ **Temperature** ⇨ **Programs** ⇨ **Insert**.

- Select a reference temperature with keys ⇐⇨ and set the value desired with keys ↑↓.

- Set the "ΔMIN" and "ΔMAX" tolerance values, selecting the desired field with keys ⇐⇨ and modifying its value with keys ↑↓.

- Select "Plugs" with keys ⇐⇨ to choose which outputs will operate when the temperature is higher or lower than the set values and then press "Enter".

- Select the output to be utilized with keys ⇐⇨; the selected output will flash on both lines. By operating on the upper line of the outputs, it is possible to program the devices that will be activated/deactivated when the temperature rises above the maximum value established (Ref. + ΔMAX). The outputs of the upper line are set with key ↑.

The example indicated in the figure (Fig. 60) shows the activation of the cooler on outlet "B". By pressing the key ↑ once, the outlet is highlighted and above it the thermometer symbol appears. In order to deactivate an outlet (lights, heater, etc.) the key ↑ must be pressed a second time.

In this case, only the symbol of the thermometer appears over the selected outlet.

Operating on the lower line outputs, the user can program the devices that will be activated/deactivated when the temperature falls below the minimum value established (Ref. - ΔMIN).

The outputs of the lower line are set with key ↓.

The example indicated in the figure (Fig. 60) shows the activation of the heater on outlet "E". The outlet is highlighted and the thermometer symbol appears above it.

Temperature Menu

Programs	
Curve	/VVV\
ΔMIN: 0.0°C	ΔMAX: 0.0°C
Plugs	Confirm

(Fig. 61)

Once the desired plugs have been set, press “Enter” to return to the previous menu (Fig. 59).

The “Confirm” option is automatically selected. Pressing “Enter” saves the inserted program.

It is also possible to alter the temperature depending on the time of day. The user can do this by setting the graph.

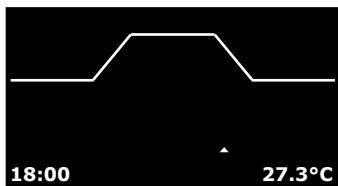
To set this function, proceed as follows:

Main screen ⇨ **Main Menu** ⇨ **Temperature** ⇨ **Programs** ⇨ **Insert**.

- Select the temperature reference parameter (**Ref.**) with keys ⇐⇒, and with keys ⇕⇕ select the “Curve” option (Fig. 61).

Afterwards, move to the /VVV\ symbol and press “Enter”. A screen opens where it is possible to graphically model the desired temperature level in a span of 24 hours (Fig. 62).

- Select the various hours of the day (in 2 hour intervals, lower left corner) with keys ⇐⇒ and with keys ⇕⇕ vary the temperature (lower right corner) for the selected hour. Press the “Enter” key, when completed.



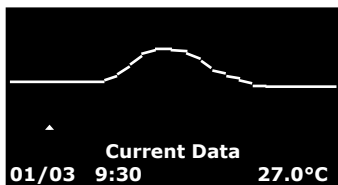
(Fig. 62)

Show/Modify/Delete

See page 24.

Delete All

See page 24.



(Fig. 63)

Data Record

Displays, in a graph, the variations in the temperature of the previous 24 hours with a minimum interval of 30 minutes.

To display the record, proceed as follows:

Main screen ⇨ **Main Menu** ⇨ **Temperature** ⇨ **Current Data**.

- Select the maximum (MAX), minimum (MIN) or current recorded temperature with keys ⇕⇕, and with keys ⇐⇒ to move inside the graph and see the temperature at the desired time (Fig. 63). When finished, press “Enter”.

Temperature Menu

Alarm


OFF

Greater than: 27.0°C
Less than: 27.0°C

(Fig. 64)

Alarm (Fig. 64)

It is also possible to set an alarm on the control unit, both visual and acoustic, that will activate in the event that the temperature exceeds the “**Greater than**” or “**Less than**” values set.

In the case in which the temperature goes over these limits, by setting the “**Without Sound**” alarm, the temperature symbol on the main screen will flash. Instead, by setting the “**With Sound**” alarm, the flashing temperature symbol is also accompanied by an acoustic alarm and the icon  appears on the main screen.

To set this function, proceed as follows:

Main screen ⇨ **Main Menu** ⇨ **Temperature** ⇨ **Alarm**.

● Select the option desired with keys $\uparrow\downarrow$ from:

OFF = alarm deactivated.

With Sound = alarm and acoustic signal activated.

Without Sound = alarm activated without the acoustic signal.

● Select the “**Less than**” parameter and afterwards “**Greater than**” with keys $\leftarrow\rightarrow$ and with keys $\uparrow\downarrow$ set the temperature that the alarm activates.

When all settings are complete, press the “**Enter**” key.

Set reference and
wait for adjustment

Read value 27.0°C

Calib. value 27.0°C

1/1

(Fig. 65)

Calibrate Sensor (Fig. 65)

This function allows the user to finely calibrate the supplied sensor in the event that the temperature it reads does not correspond to the other instruments present in the aquarium.

To calibrate the sensor, proceed as follows:

Main screen ⇨ **Main Menu** ⇨ **Temperature** ⇨ **Calibrate Sensor**.

● Set the desired temperature (**Ref.**) with keys $\uparrow\downarrow$ and when completed press “**Enter**”.

Measuring Unit

Celsius
Fahrenheit

(Fig. 66)

Measuring Unit (Fig. 66)

This allows the user to modify the system of measurement the control unit will utilize for reading the temperature.

To modify this parameter, proceed as follows:

Main screen ⇨ **Main Menu** ⇨ **Temperature** ⇨ **Measuring Unit**.

● Select the measurement unit desired with keys $\uparrow\downarrow$ and press the “**Enter**” key.

Device Disconnected

S01: Temperature

(Fig. 67)

Mon 30/09/03 15:05

PU01 A B C D E F

Temperature ?.?°C

?

(Fig. 68)

Temperature

Change Name

Programs

Alarm

Measuring Unit

Disconnect

(Fig. 69)

Disconnect

Temperature

Enter: Confirm

Esc: Cancel

(Fig. 70)

Disconnect

In the case in which the temperature sensor is disconnected, a message (Fig. 67) will appear on the display that indicates the disconnection. Press the **"Enter"** key to acknowledge.

The **"?"** icon will appear on the main screen beside the word **"Temperature"** in the bottom left corner (Fig. 68).

When the temperature sensor that was previously disconnected is reconnected, the control unit will automatically resume reading and displaying the temperature.

To eliminate the temperature sensor definitively from the system, proceed as follows:

Main screen ⇨ Main Menu ⇨ Temperature ⇨ Disconnect.

The **"Data Record"** and **"Calibrate Sensor"** functions disappear from the **"Temperature"** menu (Fig. 69) and the **"Disconnect"** function appears.

- Select this function with keys \uparrow \downarrow and press **"Enter"**.
- The disconnection screen appears (Fig. 70). Press **"Enter"** to disconnect or **"Esc"** to cancel.

Level Menu



(Fig. 71)

Level (Fig. 71)

All the menus relevant to this measurement are enabled only when the level sensor is connected to the system.

When the level sensor is connected, the control unit will display a plug-in screen where it is possible, if desired, to change the name of the connected sensor (Fig. 71); press **"Enter"** to confirm.

The control unit is already equipped to read and display the level (with the supplied sensor).

Moreover, it is possible:

- to modify the state of the plugs depending on the level readings;
- to set acoustic alarms.

To set this function, proceed as follows:

Main screen ⇨ **Main Menu** ⇨ **Level**.



(Fig. 72)

Change Name (Fig. 73)

Modifies the name given to the sensor.

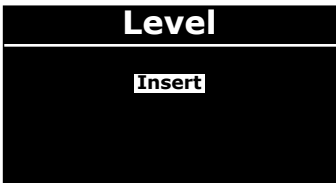
To modify the name, proceed as follows:

Main screen ⇨ **Main Menu** ⇨ **Level** ⇨ **Change Name**.

- Select the letters by using the keys \uparrow \downarrow while using keys \leftarrow \rightarrow to move within the word.
- Press **"Enter"** when finished.



(Fig. 73)



(Fig. 74)

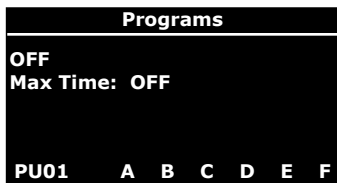
Programs (Fig. 74)

Allows the user to make programs in relation to the level.

To insert a program, proceed as follows:

Main screen ⇨ **Main Menu** ⇨ **Level** ⇨ **Programs**.

- Select the **"Insert"** option by using keys \uparrow \downarrow and press **"Enter"**.



(Fig. 75)

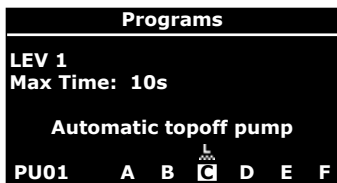
Insert (Fig. 75)

In this window it is possible to modify the state of the plugs depending on the levels read by the sensor (LEV 1 or LEV 2).

To set this program, proceed as follows:

Main screen → **Main Menu** → **Level** → **Programs** → **Insert**.

- Select the state of the sensor (OFF, LEV 1, LEV 2) by using the keys $\uparrow\downarrow$.
- Set the maximum time (in seconds) which the output, selected afterwards, must remain active; use the keys $\uparrow\downarrow$ to modify the value.
- Select with keys $\leftarrow\rightarrow$ the output which is to be utilized while using the keys $\uparrow\downarrow$ to modify its state; it is possible to choose when to activate (output highlighted with symbol above) or deactivate (only with the symbol above) the outputs in correspondence to the state of the level sensor selected above. When completed press **"Enter"** to memorize the program.



(Fig. 76)

Show/Modify/Delete

See page 24.

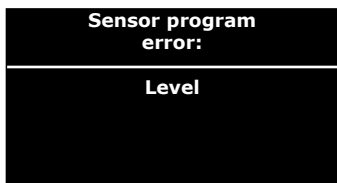
Delete All

See page 24.

The example indicated in figure (Fig. 76) shows the activation of the automatic topoff pump on plug "C": whenever the level sensor moves to the position LEV 1, output "C" is activated (which activates the automatic topoff pump).

If the level sensor's state does not change (returns to position LEV 2) inside the set time (Max Time) the program is blocked and the control unit displays an error message.

On the main screen the symbol --- will appear, accompanied by an acoustic signal; which indicates an anomaly in the automatic topoff system, such as a damaged level sensor or pump, or perhaps the absence of water in the "hopper". In the event of an anomaly, the following message will appear (Fig. 77) which will consequently block the program.



(Fig. 77)

Level Menu

Level

Change Name
Programs
Unlock Program
Alarm

(Fig. 78)

To unblock the program, proceed as follows:

- When the error message appears (Fig.70) press the "Enter" key.
- From the main screen press "Enter" and, using the keys $\uparrow\downarrow$, select the "Level" menu.
- By using the keys $\uparrow\downarrow$ select "Unlock Program" (Fig. 78) and press "Enter".
- The unblock program screen will appear (Fig. 79); press "Enter" to unblock or "Esc" to cancel.

Unlock Program

Enter: Confirm
Esc: Cancel

(Fig. 79)

NOTE: the "Unlock Program" function temporarily unblocks the program; therefore until the anomaly is resolved, the control unit will signal the error again after a few seconds.

Alarm

LEV 1: OFF
LEV 2: OFF


(Fig. 80)


Alarm (Fig. 80)

In this menu it is possible to set a visual and acoustic alarm that activates in the event that the level sensor assumes a specific position.

It is possible to set the alarm, for example, to warn if the water level exceeds a determined limit, or when the water reserve is completely empty.

By setting the alarm "Without Sound" the level text on the main screen will begin to flash the moment the level exceeds the limits.

By setting the alarm "With Sound" the flashing text will also be accompanied by an acoustic signal, and the icon  will appear on the main screen.

Along with the flashing text on the main screen, the flashing icon will indicate the activation of the alarm (.

To set the alarm, proceed as follows:

Main screen \leftrightarrow Main Menu \leftrightarrow Level \leftrightarrow Alarm.

Device Disconnected

S01: Level

(Fig. 81)

Mon 30/09/03 15:05

PU01 A B C D E F

Level ?.?C

?

(Fig. 82)

Level

Change Name

Programs

Alarm

Disconnect

(Fig. 83)

Disconnect

Level

Enter: Confirm

Esc: Cancel

(Fig. 84)

Disconnect

If for any reason the level sensor is disconnected, a message (Fig. 81) will appear on the display which indicates the disconnection. Press the **"Enter"** key to acknowledge.

The **"?"** icon will appear on the main screen beside the word **"Level"** in the bottom left corner (Fig. 82).

When the level sensor is reconnected, the control unit will automatically resume reading and displaying the level.

To eliminate the level sensor definitively from the system, proceed as follows:

Main screen → Main Menu → Level → Disconnect.

The **"Disconnect"** function will appear in the **"Level"** menu (Fig. 83).

- Select this function using the keys \uparrow / \downarrow and press **"Enter"**.
- The disconnect screen will appear (Fig. 84); press **"Enter"** to disconnect or **"Esc"** to cancel.

Declaration of Conformity

DECLARATION OF CONFORMITY



in conformity with ISO/IEC Guide 22 and EN 45014

Number of conformity: 002-2003

name of the manufacturer: **A.E.B. srl divisione Aquatronica**
address: via dell'Industria, 20
Corte Tegge
42025 Cavriago (RE)

HEREBY STATES THAT THE ELECTRONIC/ELECTRIC UNIT

name of the product: Aquarium controller
code: **ACQ001**
accessories: **ACQ002** (multipoint 6 suko 16A)
ACQ003 (multipoint 4 suko 16A + 4 type F 16A)

IS IN CONFORMITY WITH THE FOLLOWING PRODUCTS SPECIFICATIONS:

FIELD	Directive /D.L.	Description	References	Result Test
EMC	89/336/CEE	EMC regulation	Official gazette L 139 dated 23/05/1989.	applied
Low voltage	73/23/CEE	Low voltage regulation	Official gazette L 077 dated 26/03/1973	applied

THEREFORE IS IN CONFORMITY WITH THE EMC REQUIREMENTS OF CE MARKING

The device has been verified under a typical working configuration

Place of issue: **Cavriago (RE)**

Date of issue: **19/12/2003**

The legal representative of A.E.B. srl
Paterlini Ivan

Specifications

Control Unit	
Input Voltage	12VDC
Input current	150mA
ACQ001 Dimensions	125(l) x 65 (h) x 26(p) mm
Display Dimensions	56(l) x 28(h) mm

An underwater photograph showing a school of yellow and black striped fish swimming in clear, shallow turquoise water. The water surface is visible at the top, with a bright blue sky and white clouds above. The fish are scattered throughout the middle ground, some swimming towards the camera and others away. The seabed is visible at the bottom, showing some small rocks and sand.

Aquatronica

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