

Info messages

- day of the week
- product ID code and serial number
- battery status (only if run down)
- NO SUPPLY*

* Only if the product isn't powered from the mains. In this case, the backlighting isn't active and the relay is OFF.

NOTE: The Bluetooth interface is only active when the device is showing the homepage (main page), and only if it's powered from the mains. These conditions must therefore be respected when you want to transfer programs to and from the clock.

• Press the

- button key to access the device menus
- C1 and C2 to change the status of channel 1 and channel 2 (only on GWD6789)
- to view the calculated sunrise and sunset times**

** The times shown take into account any correction values entered. If the display shows **---**, this means the calculated sunrise time is later than the sunset time. If the display shows **---**, this means the calculated sunrise time is before 00:00, or the calculated sunset time is later than 23:59.

Access the store of your device and install and launch the free TimerOn - Gear app.



1) When launched, the app will show the list of associated devices. To associate a new device, press the "+".

2) All the Bluetooth devices detected in the vicinity will be shown; choose the required device from the list.

NOTE: each device is identified by the product code (e.g. GWD6788) and serial number (e.g. 000000020). This information can be seen on the homepage of the product.

ATTENTION: make sure the product is powered from the mains and that the display shows the main page (homepage). Otherwise, the Bluetooth interface won't be active and the device won't be visible.

3) Enter the password to link the product with your device (unless it has been modified, the password is 123456).

4) The product will be added to the list of associated devices. Scroll the list of associated devices and select the required product.

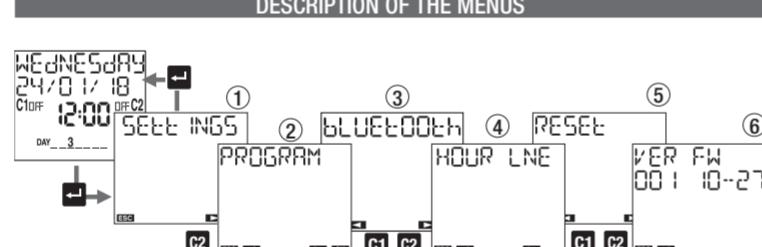
NOTE: communication between the app and the time switch is device-device. This means that, if there are several products, the app can only communicate with one at a time. The product connected to the app in that moment will show the * symbol on the display, immediately after the serial number.



5) The app shows the homepage of the selected product. From this page, you can:

- Create new programs which will then be copied in the product
- Modify the product settings
- View the parameters and associate an alias (a name identifying the clock, such as "Timer Belluno") with the product.
- Manually command the relay output(s) and activate the random switching function

DESCRIPTION OF THE MENUS

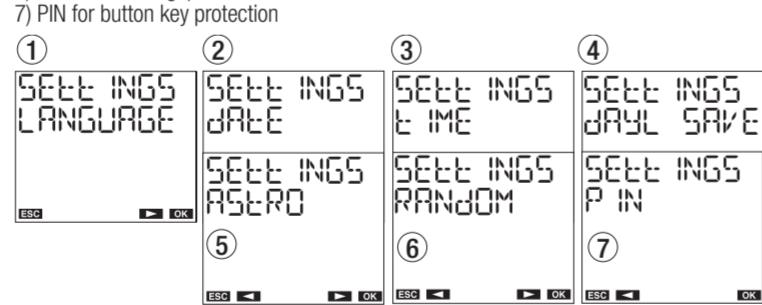


- The "Settings" menu is used to modify: the language, date, time, daylight-saving time, astronomical coordinates, minimum and maximum duration of the gap between two random switchovers, the keypad locking PIN.
- The "Programming" menu is used to set a new program or check, copy, modify or delete an existing program.
- The "Bluetooth" menu is used to configure the Bluetooth communication interface.
- The "Hour-counter" menu is used to check the operating times (relay ON) of the loads connected to the relays.
- The "Reset" menu is used to reset settings, programming sequences and the operating hour-counter.
- The "Ver FW" menu is used to check the firmware version installed on the device.

SETTINGS MENU

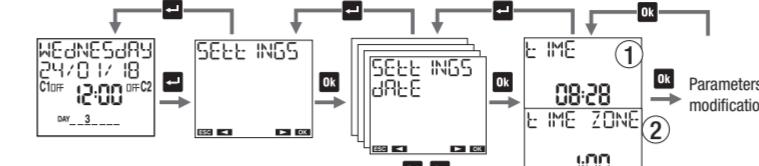
The "Settings" menu is used to view - and modify if necessary - the general product operating settings:

- language
- date
- time
- automatic daylight-saving time change
- position (astronomical coordinates)
- duration of the gap between two random switchovers
- PIN for button key protection



- Choose which, by convention, is the first day of the week. For instance, the first day of the week in Italy is intended as Monday, whereas in the UK it's Sunday.
- Enter the date: day, month, year.

TIME SETTING MENU



Changing parameters

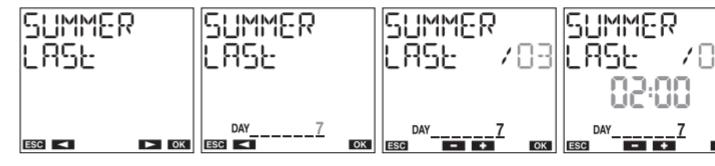
- Set the time: hours, minutes.
- Set the time zone. Possible values: -14:00 to +14:00, in steps of 15 minutes. For Italy, set +1:00.

MENU FOR SETTING DAYLIGHT-SAVING TIME/WINTER TIME CHANGE

The change from daylight-saving time to winter time and vice versa can be made automatically. In this case, the product:

- increases the time by one hour when changing from winter time to daylight-saving time
- decreases the time by one hour when changing from daylight-saving time to winter time

For every change, you must specify:



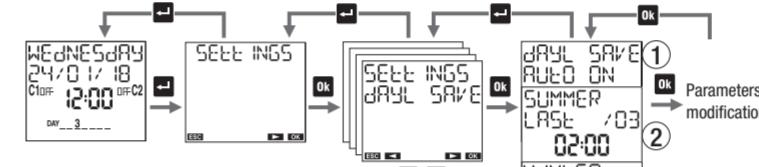
the week of the month when the change occurs (first, second, third, last)

the day of the week (Monday: 1, Tuesday: 2, ...)

the month

hours and minutes

For instance, daylight-saving time begins in Italy on the last (LAST) Sunday (7) in March (3) at 02:00 and ends on the last (LAST) Sunday (7) of October (10) at 03:00.



Changing parameters

- Choose whether to activate (REL C ON) or deactivate (REL C OFF) the automatic time change.
- Set the date and time of the change from winter to daylight-saving time.
- Set the date and time of the change from daylight-saving to winter time.

MENU FOR SETTING THE ASTRONOMICAL COORDINATES

If you set the geographical coordinates of the place of installation, the product can calculate the sunrise and sunset times for each day of the year. To simplify this procedure, the coordinates of the places listed below are already stored in the product; if your location is one of these, you can select it from menu 1. Otherwise, enter the latitude and longitude coordinates (menus 2 and 3).

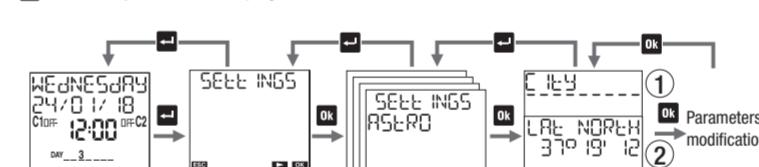
NOTE: the display will show "----" at point 1 if the coordinates have been entered.

Places memorised in the product:

- Italy: all the provinces
- United Kingdom: Cardiff, Belfast, Edinburgh, London
- Spain: Barcelona, Madrid, Seville, Valencia
- France: Lyons, Marseille, Paris, Toulouse
- Germany: Berlin, Hamburg, Cologne, Munich

The correction of the sunrise and sunset times is handy in the case of applications where lights are switched on in certain areas. There is the possibility, in fact, that the presence of elements such as mountains may affect the real sunrise/sunset times, making it necessary to move the calculated times forwards or backwards by a few minutes.

Twilight is the period just before sunrise or just after sunset, when the atmosphere diffuses the sunlight and thereby produces a faint light. In these conditions, objects can clearly be distinguished and outdoor tasks can be performed without the need for additional lighting. For this reason, in certain applications it may be more useful to take (civil) twilight as the reference for switch-on/switch-off times, rather than sunrise and sunset. You can choose whether to activate and deactivate loads on the basis of sunrise/sunset times or civil twilight time. The correction of the calculated times can be applied to the twilight times as well. To view the calculated switch-on (sunset) and switch-off (sunrise) time, press the ■ button key on the homepage.



Choosing the installation place. If not present, move on to points 2 and 3.

2) Set the latitude of the installation place.

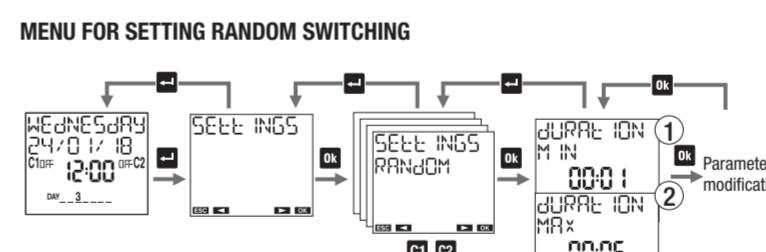
3) Set the longitude of the installation place.

4) Set the correction of the calculated sunrise time if necessary (positive values to delay, negative values to bring forward).

5) Set the correction of the calculated sunset time if necessary (positive values to delay, negative values to bring forward).

6) Choose civil twilight (C 12 IL 12) as the switchover time, in place of the sunrise/sunset times (C 12 IL N).

MENU FOR SETTING RANDOM SWITCHING



The "random switching" function (activated using the combination of button keys described in "Description of the display and keypad") allows the relative channel to switch over automatically and at random time intervals.

You can use this menu to define the minimum and maximum duration of the time gap between two random switchovers. With the factory setting, the minimum is 1 minute, the maximum 5 minutes.

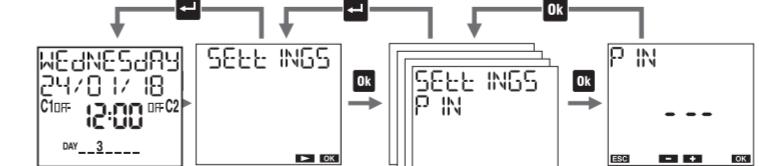
Change parameters

1) Set the minimum duration (a value between 1 minute and the maximum duration).

2) Set the maximum duration (a value between the minimum duration and 23.59 hours).

NOTE: if the minimum and maximum duration values are the same, the switchover actions will take place at fixed time intervals.

MENU FOR SETTING THE PROTECTION PIN



The protection code (PIN) allows you to lock the keypad and thereby prevent any modifications by unauthorised persons. When PIN protection is active, press any button key to enter the PIN: the keypad will be released but will lock again automatically if 3 minutes go by without any button key being pressed.

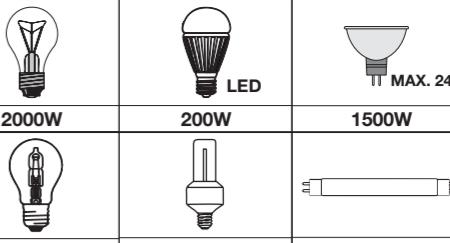
To activate protection with the PIN:

- set a value between 000 and 999

To deactivate protection with the PIN:

- set "---" (you can find it before 000 or after 999)

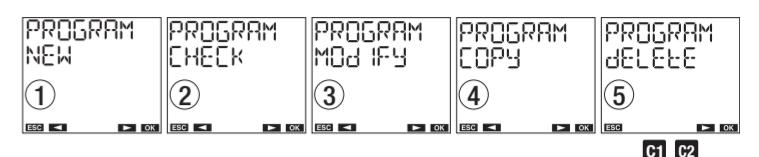
NOTE: if you forget the PIN code, a hardware reset is needed in order to release the product (see the RESET paragraph).



PROGRAM MENU

The "program" menu is used to:

- create a new program
- check the programs created
- modify or delete a program created
- copy all the programs of channel 1 onto channel 2 and vice versa (only for GWD6789)
- copy all the programs of a channel



Types of program

- ON/OFF program: consisting of a relay switchover to ON, followed by a relay switchover to OFF. This program may follow a daily pattern (the same every day), or a weekly one (the same every week).
- ON IMPULSE program: the relay switches to ON for a maximum of 59 seconds. This program may follow a daily pattern (the same every day), or a weekly one (the same every week).
- OFF IMPULSE program: the relay switches to OFF for a maximum of 59 seconds. This program may follow a daily pattern (the same every day), or a weekly one (the same every week).
- HOLIDAY program: a period of time defined by a start moment and an end moment, within which all the programmed switchovers (of that channel) are disabled. The relay remains in the OFF position (holiday OFF) or in the ON position (holiday ON).

Types of channel

- TIME channel: runs time-type programs: ON/OFF, ON impulse, OFF impulse, holiday
- ASTRONOMICAL channel: runs astronomical-type programs included in the time gap defined by sunset and sunrise*: ON/OFF, ON impulse, OFF impulse, holiday, night-time programs. ON switchovers set before sunset are performed at sunset and OFF switchovers set after sunrise are performed at sunrise (barring certain night-time programs).
- The sunrise and sunset times are calculated automatically by the product on the basis of the geographical coordinates set during installation. The civil twilight times can be used in place of the sunrise and sunset times.

Important: ON and OFF impulses can't both be present at the same time on a single channel (if there is already an ON impulse, you can't save an OFF impulse, and vice versa).

Important: holiday ON programs and holiday OFF programs can't both be present at the same time on a single channel (if there is already a holiday ON program, you can't save a holiday OFF program, and vice versa).

Important: a single channel can be either time or astronomical, but it can't simultaneously be both. You can't save astronomical-type programs on a channel that already contains time-type programs, and vice versa. The message ERROR 1 (astronomical program on time channel) or ERROR 2 (time program on astronomical channel) will be displayed. In this case, you must delete the programs saved on that channel in order to proceed.

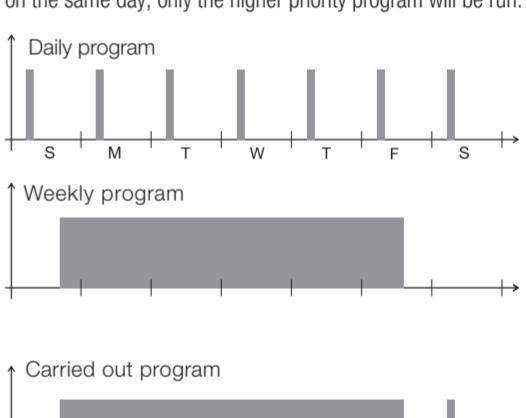
Program priority

Program priority defines how the time switch acts if programs with different periods are being run in the same moment (1 indicates higher priority).

Program	Date	Yearly	Monthly	Weekly	Daily
Holiday					1
Night-time					2
Impulse					3
On/Off					4
					5

Program priority on/off

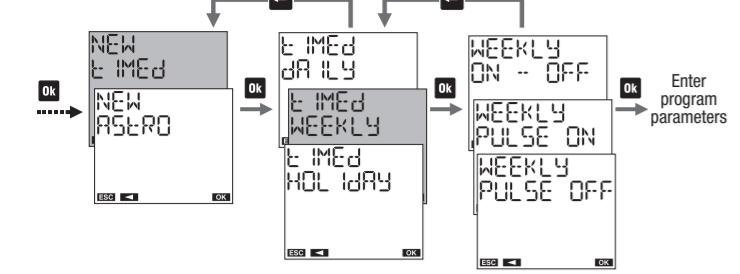
If one channel contains on/off programs with different periods (daily or weekly), to be run on the same day, only the higher priority program will be run.



The example shows that the daily event of Monday isn't run because the start of a weekly program is set for the same day (even if the daily program for Monday starts and ends before the start of the weekly program).

On the other hand, the daily program for Sunday is run because it's the only one set

Program menu: new weekly time

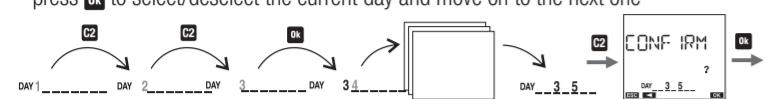


Program parameters

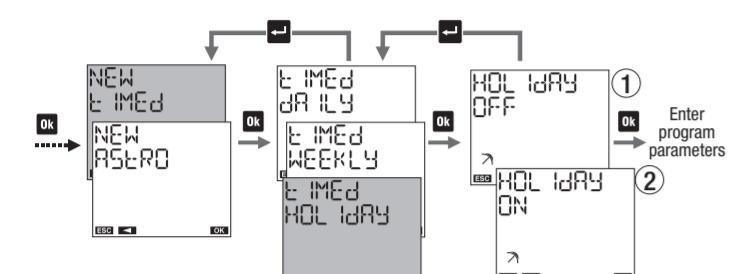
- on/off: day(s) and time for ON, day(s) and time for OFF
- ON impulse: day(s) and time of the impulse, and duration (max 59 seconds)
- OFF impulse: day(s) and time of the impulse, and duration (max 59 seconds)

How to select the days

- Scroll the days of the week, from 1 to 7:
- press **C2** to move on to the next day without selecting the current one
- press **OK** to select/deselect the current day and move on to the next one



Program menu: new holiday time



1) HOLIDAY OFF: the relay remains OFF from the start to the end of the holiday program.

2) HOLIDAY ON: the relay remains ON from the start to the end of the holiday program.

Program parameters

- program start
- program end

How to select the day(s) in a holiday program



1) To set the program:

- in the first, second, third, fourth or last week of the month on the day(s) (Monday, ...)
- of the week just specified
- of the month specified (MM for every month)
- of the year specified (YY for every year)

NOTE: in this case, the holiday program must begin and end on the same day.

Otherwise, **ERROR 0 10** will be displayed.

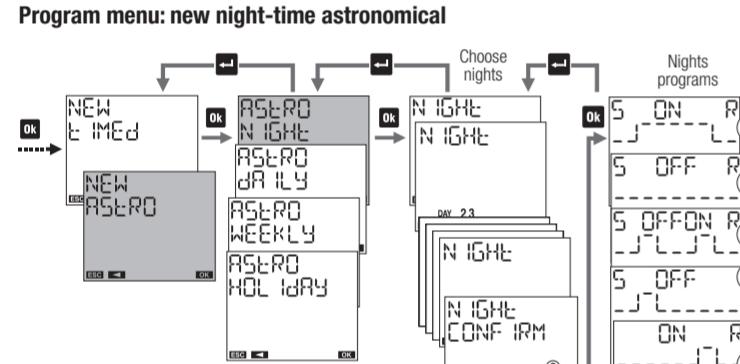
2) To set the program for the last day:

- .../MM/YY of every month of the year
- .../YY/YY of YY (the month specified), every year
- .../MM/ZZ of every month of ZZ (the year specified)
- .../YY/ZZ of YY (the month specified) of ZZ (the year specified)

3) To set the program for XXday (1,2,3...):

- xx/MM/YY of every month of the year
- xx/YY/YY of YY (the month specified), every year
- xx/MM/ZZ of every month of ZZ (the year specified)
- xx/YY/ZZ of YY (the month specified) of ZZ (the year specified)

Program menu: new night-time astronomical



How to select the nights

Scroll the nights of the week, from the first (1-2) to the last (7-1):

- press **C2** to move on to the next night without selecting the current one
- press **OK** to select/deselect the current night and move on to the next one



How to interpret the selection

If the night between days A and B is selected, day A is lit up and underlined whereas day B is lit up but not underlined.

Selection examples:

DAY 12345 Nights selected: between days 1 and 2, between days 2 and 3, between days 3 and 4, between days 4 and 5

DAY 12345 Nights selected: between days 1 and 2, between days 2 and 3, between days 4 and 5

DAY 1234 7 Nights selected: between days 1 and 2, between days 3 and 4, between days 7 and 1

Night-time programs

5 ON R Activation at sunset, deactivation at sunrise. No parameter required.

5 OFF R OFF from sunset to sunrise. No parameter required.

5 HOUR R Activation at sunset, deactivation at a set time. Activation at a set time, deactivation at sunrise. (*)

5 DELAY R Activation at sunset, deactivation after a set time period. Activation at a set time period before sunrise, deactivation at sunrise.

5 PULSE R Activation for a brief set time at sunset (impulse, max 59 seconds). Activation for a brief set time at sunrise (impulse, max 59 seconds)

5 OFF 4 Activation at sunset, deactivation during the night. Choose one of the following 3 cases:

5 HOUR R Activation at sunset, deactivation at a set time. (*)

5 DELAY R Activation during the night, deactivation at sunrise. Choose one of the following 3 cases:

5 PULSE R Activation at sunset, deactivation after a set time period. (*)

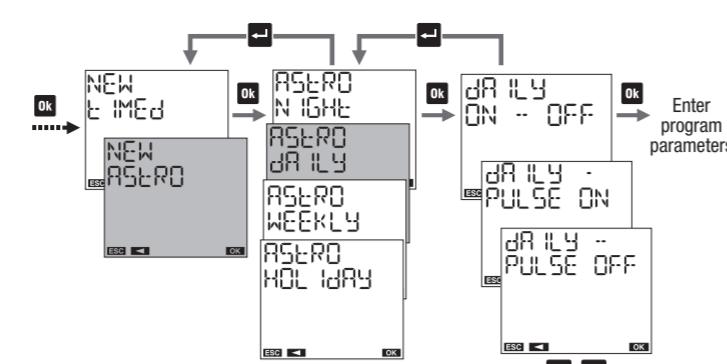
5 PULSE Activation for a brief set time at sunset (impulse, max 59 seconds).

* If the switch-off time is before sunset, the switchover isn't made. If the switch-on time is later than sunrise, the switchover isn't made.

** The ON time lasts for the entire period set (even if the switch-off time is later than sunrise).

*** Switch-on is before the start of the entire period set (even if the switch-on time is before sunset).

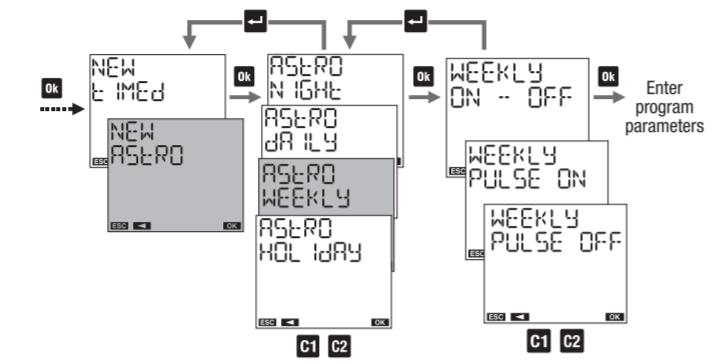
Program menu: new daily astronomical



Program parameters

- on/off: on time and off time for ON, day(s) and time for OFF
- ON impulse: day(s) and time of the impulse, and duration (max 59 seconds)
- OFF impulse: day(s) and time of the impulse, and duration (max 59 seconds)

Program menu: new weekly astronomical



Program parameters

- on/off: day(s) and time for ON, day(s) and time for OFF
- ON impulse: time and duration of the impulse (max 59 seconds)
- OFF impulse: time and duration of the impulse (max 59 seconds)

How to select the days

Scroll the days of the week, from 1 to 7:

- press **C2** to move on to the next day without selecting the current one
- press **OK** to select/deselect the current day and move on to the next one



How to modify or delete a program

- 1) Select the channel (only for GWD6789)
- 2) Select the period: daily, weekly, holiday or night-time (only in the case of a astronomical-type channel)
- 3) Select the type: on/off, ON impulse, OFF impulse, night-time program (only in the case of a astronomical-type channel)

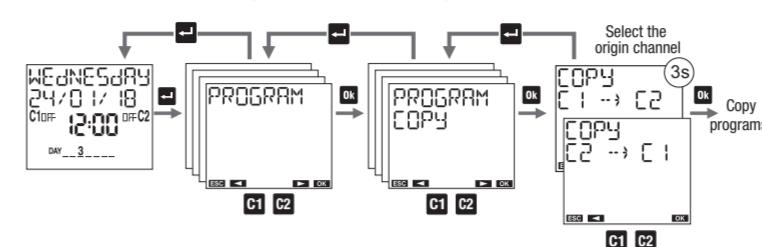
NOTE: a program requires several screens in order to be visualised:

- press **OK** to move from the first to the second part of the same program
- press **C1** and **C2** to move from one program to another

To modify: press and hold the **OK** button key for at least 3 seconds

To delete: press and hold the **OK** and **CONFIRM** button keys simultaneously for at least 3 seconds

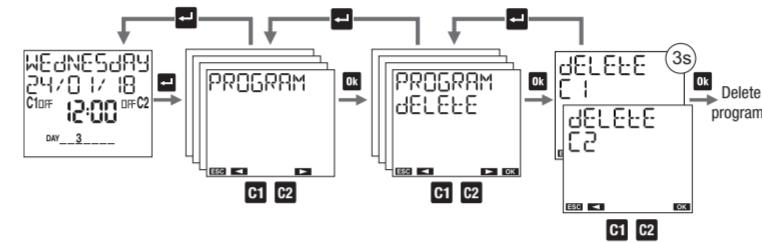
PROGRAM MENU: COPY (ONLY FOR GWD6789)



The "copy" menu is used to copy the programs of one channel (the origin channel) onto the other channel (the destination channel).

NOTE: programs already stored on the destination channel will be deleted.

PROGRAM MENU: DELETE



The "delete" menu is used to delete all the programs stored on the channel specified.

Press and hold the **OK** button key for at least 3 seconds.

NOTE: to delete just one program, refer to the "modify" menu.

BLUETOOTH MENU

The Bluetooth menu is used to enable or disable the Bluetooth interface and change the password used to associate your device (smartphone or tablet) with the time/astrophysical switch.

To enable the Bluetooth interface:

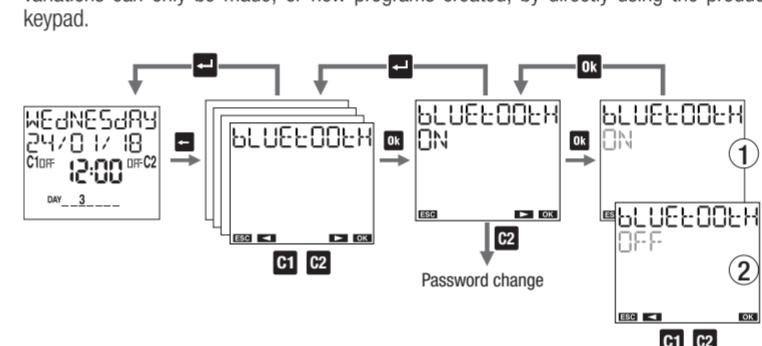
- 1) Set Bluetooth ON

ATTENTION: for the Bluetooth interface to be active, the product must be powered from the mains and be showing the homepage. This means the Bluetooth interface isn't active while you are navigating the menus.

To disable the Bluetooth interface:

- 2) Set Bluetooth OFF

When Bluetooth is disabled, communication between your device and the product is impossible. The time switch works with the settings and programming already defined; variations can only be made, or new programs created, by directly using the product keypad.



Modifying the password

The password is the 6-figure code requested by the app for the first association between the product and your smartphone.

The pre-set password is 123456, but it can be changed.

- 1A) Press and hold the **OK** button key for at least 3 seconds, until the first figure of the password begins to flash.

- 1B) Set the first figure using the **C1** and **C2** button keys, then press **OK** to confirm and move on to the next figure.

- 1C) Repeat point 1B to set all 6 figures. Once you have confirmed the last figure, the display will show the new password. Press **OK** to quit the menu.



HOUR COUNTER MENU

The "hour counter" menu is used to view the operating hours (relay ON) of the connected loads.

The maximum value of the hour-counter is 99999 hours (approx. 11 years); once this limit has been reached, the hour-counter automatically resets itself.

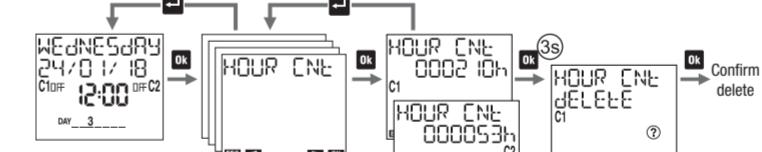
To reset an hour-counter:

1. Select the required channel (only for GWD6789)

2. Press and hold the **OK** button key for 3 seconds, until the display shows "HOUR CNT: DELETE" (2).

3. Confirm by pressing **OK** or press **CONFIRM** to quit without resetting

NOTE: you can reset all the hour-counters simultaneously from the "Reset" menu.



RESET MENU

The "reset" menu is used to restore the initial status of the product.

Reset actions available:

- 1) Reset settings: deletes all the settings made (apart from the language and PIN)

- 2) Reset time programs: deletes all the time programs saved

- 3) Reset holiday programs: deletes all the holiday programs saved

- 4) Reset astronomical programs: deletes all the astronomical programs saved

- 5) Reset hour-counters: resets the hour-counters of all the channels

- 6) Reset everything: performs all the reset actions listed above, and deletes the language and protection PIN

There is also another reset action, of the hardware type, used to reset the product if it reacts in an incorrect manner to the pressing of the button keys. In this case, the programming and settings are not lost (only the date and time).