theben
energy saving comfort

MANUAL

Astronomical time switches with weekly program
SELEKTA top2/SELEKTA top3

Contents

1. Time switch overview

1.1. Type SELEKTA top2 overview:

SELEKTA 170 top2 SELEKTA 171 top2 RC SELEKTA 172 top2

Differences in the range of functions:

Functions	SELEKTA 170 top2	SELEKTA 171 top2 RC	SELEKTA 172 top2
Number of channels	1	1	2
Astro times	Yes	Yes	Yes
Switching time	Yes	Yes	Yes
Special programs	No	Yes	Yes
External input (number)	No	Yes (1)	Yes (2)
Timer	Yes	Yes	Yes
RC antenna connection	No	Yes	No
Number of memory locations	56	84	84

1.2. Type SELEKTA top3 overview:

SELEKTA 170 top3 SELEKTA 174 top3 RC

Functions	SELEKTA 170 top3	SELEKTA 174 top3
Number of channels	1	2
Switching time	Yes	Yes
Impulse	No	No
Cycle	No	No
Random	No	No
External input (number)	No	No
Timer	No	No
RC antenna connection	No	No
Number of memory locations	56	56

Definitions

Switching time	Switching default for the time switch comprised of the time (hours + minutes), the week day (Monday to Sunday) and the channel status (ON or OFF). As of the programmed time and week day, the channel status is valid up until the next switching time.
Impulse	Switching default with a limited time period for the time switch comprised of the time (hours + minutes), the week day (Monday to Sunday), the channel status (ON or OFF) and the duration (minutes + seconds). As of the time and week day, the channel status is valid for the set time period.

Cycle	A continuously repetitive sequence of channel ON and channel OFF. Start time and end can be adjusted (hour + minute + week day). The time period for ON (pulse duration) and for OFF (pause duration) can also be set (hours + minutes + seconds).
Switch command	Generic term for astro times, standard program, special programs 1-3
Astro times	The switching times for sunrise and sunset, calculated according to location and time zone.

OBELISK top2/ OBELISK top3	Memory card which can be inserted in the time switch. The program can be copied onto the memory card and transferred from the memory card to the time switch; it is also possible to read an additional language into the time switch from the memory card.
BLE OBELISK top3	The BLE OBELISK top3 function is now available for new devices from the SELEKTA top3 range. Devices can be programmed, generated and set really easily via BLE (Bluetooth Low Energy). (This function is not available for the top2 range of devices.)
Crossing	Normally an OBELISK which, for example, was programmed for a SELEKTA 170 top3, can also only be used in a SELEKTA 170 top3. The transfer, e.g. of the switching times of a SELEKTA 170 top3 to the second channel in a SELEKTA 172 top3 (crossing) can be performed using a diversion via the OBELISK top2 PC software. In this case, the OBELISK top2 can be programmed accordingly, see OBELISK menu item.
Auto mode	The time switch is in the standby automatic mode and performs the programmed switch commands at the respective times.
Manual switching	By pressing buttons ◄ and ► at the same time, manual switching can be activated in auto mode. This is helpful if the time switch has to be switched on unexpectedly without much warning. Manual switching represents a switching preselection, i.e. the current switching status is overridden up to the next programmed switchover time period. By pressing both buttons again, manual switching is released again.
Permanent switching	By pressing buttons ◄ and ► at the same time for longer (> 3 seconds), permanent switching can be switched on. This is helpful if the time switch has to be switched on quickly and unexpectedly. Permanent switching overrides all stored switching times permanently until it is released by pressing both buttons again.

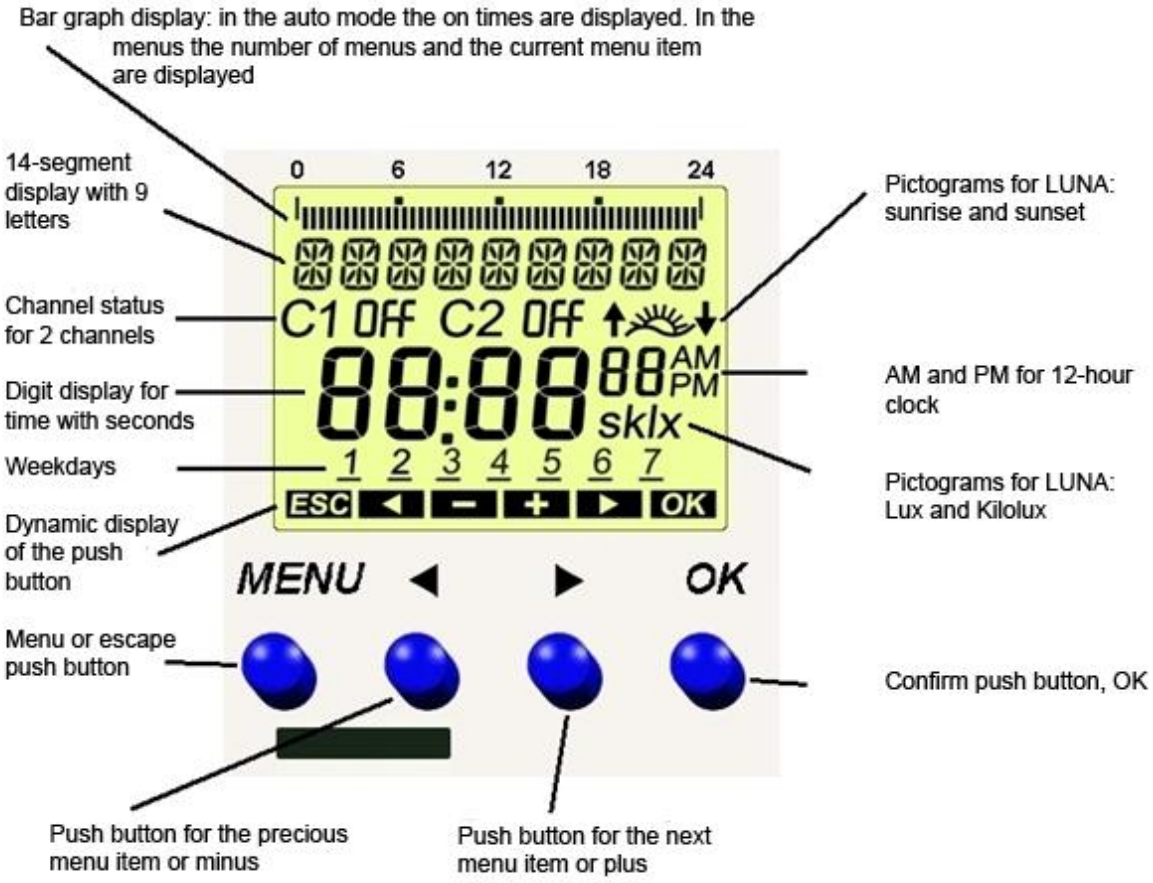
In the case of a multi-channel timer, the respective buttons are pressed for manual switching or permanent switching respectively in the desired channel.

Zero-cross switching	Background: Switch-on peak flows put a strain on the relays in the time switches and the connected users. Corrective measure: The alternating voltage is monitored during zero-cross switching and the relay switch-on delay is measured. The switch-on moment is accurately calculated by software to ensure that the relay is connected exactly at the voltage zero-crossing state. No inrush current peaks occur. ➔ There is no overheating, no contact welding and hardly any contact wear.
Reset	Reset is achieved by pressing all four buttons at the same time. By resetting, all configuration settings (time format, 24 hours or AM/PM, etc.) are maintained. However, date and time are deleted. The selection "Retain programs" or "Delete program" is available. "Delete program" must be confirmed separately. With "Delete program", all switch commands and the holiday program are deleted.
Priorities	The following priorities are valid for the programmed switch commands, i.e. if different switch commands were programmed in the same time period, the switch commands with higher priority will be performed: Cycle has the highest priority, followed by impulses; switching times have the lowest priority

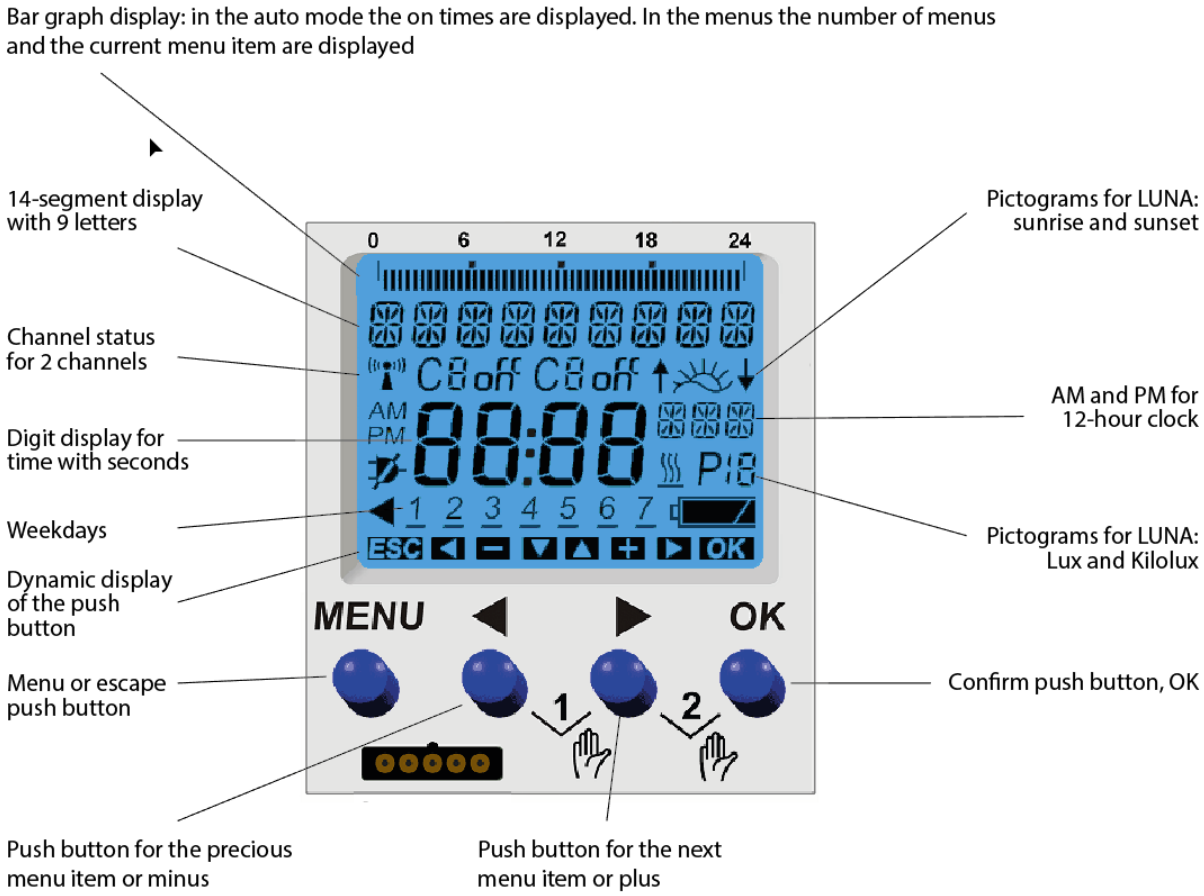
2. Display and operation

2.1. General

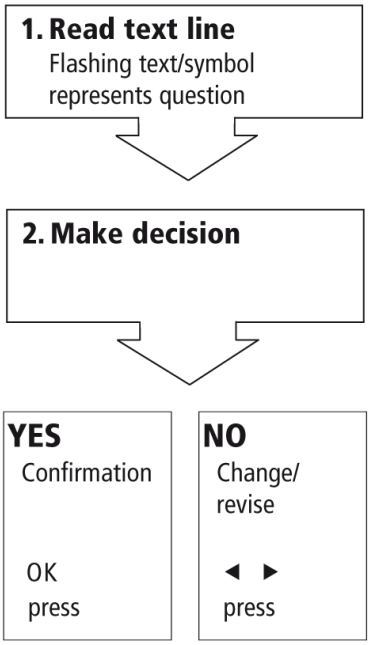
SELEKTA top2



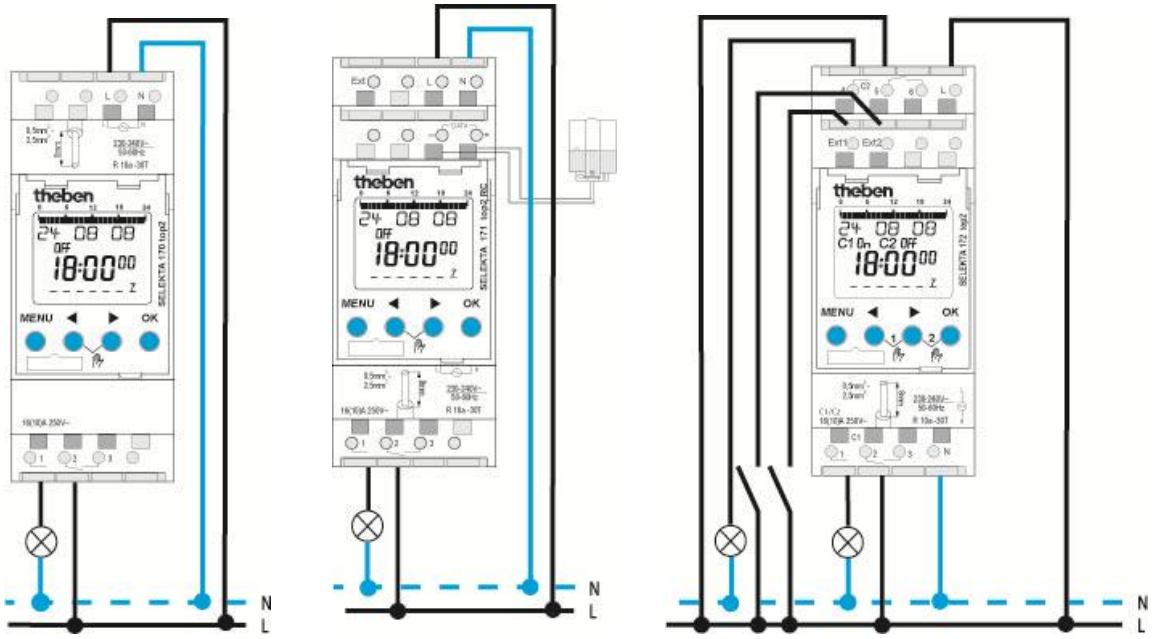
SELEKTA top3



2.2. Operation



3. Installation information

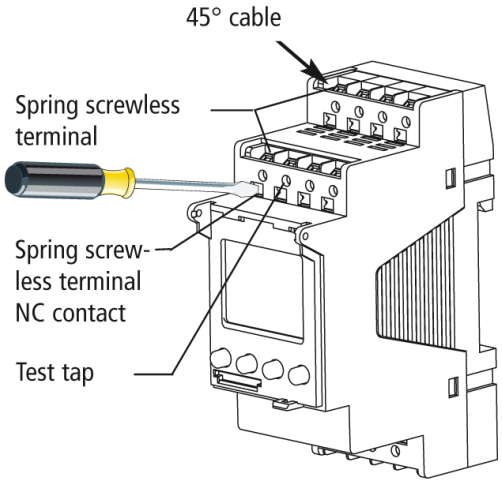


SELEKTA 170 top2 SELEKTA 171 top2 RC * SELEKTA 172 top2

* With DCF or GPS antenna (optional)
When the top2 RC **GPS** antenna is connected, the top2 GPS power unit is required if only one device is connected to the GPS antenna. Another connection example would be this: 2x SELEKTA 171 top2 RC, each with 50 mA infeed (power unit no longer required).

3.1. Information on the spring terminals

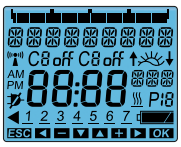
- In the case of a cable, the release lever for inserting the wire must be pressed downwards.
- If the release does not work: bring the release lever all the way down (with force).
  If the wire can still not be pulled out → turn the wire by 90°.



4. Information on initial start-up

The following operating instructions apply to the SELEKTA top2 and SELEKTA top3 ranges. The only aspects in which SELEKTA top3 devices differ from SELEKTA top2 devices are the display colour and, to a minimal extent, the display layout:

top2



top3

When the time switch is removed from the packaging, all important settings have already been made. Press any button to start up the display. Individual settings can be performed by selecting and confirming.

The language can be set in step 1.

German flashes. Press OK to confirm.

If another language needs to be set, press the arrow buttons ◄ and ► until the language in question is shown on the display.

Press OK to confirm the desired language.

Note: *By pressing the ESC button, i.e. the Menu button, it is possible to return to the previous setting menu. If you have, for example, pressed the OK button too quickly by mistake, thus setting an incorrect language, you can return to the previous selection item by pressing the Menu button.*

Press the arrow buttons ◄ and ► to define your own location by selecting a town/city **or** entering coordinates (latitude and longitude, time zone).

Note: *If an external GPS antenna is connected (only possible with SELEKTA 171 top2 RC), both location* ***and*** *time synchronisation are performed. The location for the Astro program is set in the time switch automatically. Therefore, the following settings relating to your own location do not have to be made if a top2 RC GPS antenna is connected correctly.*

Select the required setting option and press OK to confirm.

COUNTRY setting option:

Select the country with the arrow buttons and press OK to confirm.

Select the town/city with the arrow buttons and press OK to confirm.

Or select the COORDINATES setting option:

Modify the longitude (flashing) with the arrow buttons and press OK to confirm.

Modify the latitude (flashing) with the arrow buttons and press OK to confirm.

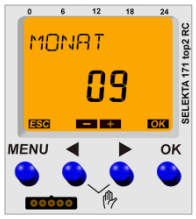
Modify the time zone (flashing) with the arrow buttons and press OK to confirm.

Press OK to confirm.

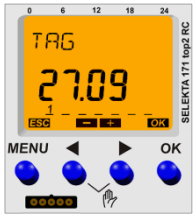
The date format currently displayed (in this case, European format) is shown using the example date 31.12.2000. The date format can be changed with the buttons ◄ and ► if required. Then confirm the desired setting with OK.

Note: *If an external DCF or GPS antenna is connected (only possible with SELEKTA 171 top2 RC), time synchronisation is performed. The exact local time is calculated in the time switch automatically according to the set time zone. Therefore, the following settings relating to time and date do not have to be made if a top2 RC DCF or GPS antenna is connected correctly.*

Either confirm with OK or modify the year (flashing) with the arrow buttons and then confirm by pressing OK.

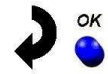


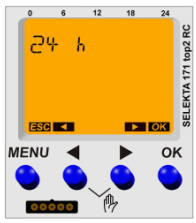
Either confirm with OK or modify the month (flashing) with the arrow buttons and then confirm by pressing OK.



Either confirm with OK or modify the day (flashing) with the arrow buttons and then confirm by pressing OK.

Press OK to confirm.





Either confirm with OK or modify the time format with the arrow buttons and then confirm by pressing OK.

Either confirm with OK or modify the hours (flashing) with the arrow buttons and then confirm by pressing OK.

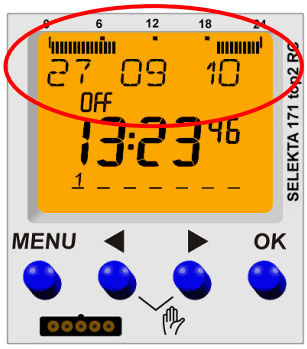
Either confirm with OK or modify the minutes (flashing) with the arrow buttons and then confirm by pressing OK.

Either confirm with OK or modify the changeover rule for the automatic summer/winter time switchover with the arrow buttons and then confirm by pressing OK.

→ The time switch is now in auto mode (automatic mode).

5. Auto mode display

5.1. Explanation of the changing displays in the text line



Changing displays, **1-channel time switch:**

Default state: The text line displays the date and the bar graph shows the switching times for the current day.

If there is no mains voltage after 6 seconds, NO MAINS is shown for 3 seconds.

If manual switching or permanent switching has been activated, the relevant special fade-in appears in the text line.

Changing displays, **2-channel time switch:**

Default state: The channel number (CHANNEL 1) is shown for 12 seconds and the bar graph shows the switching times for the current day. The date is then faded in for 3 seconds and the bar graph is deleted. After this there is a change to the next channel (CHANNEL 2).

If there is no mains voltage, NO MAINS is faded in for 3 seconds after both channels have been shown.

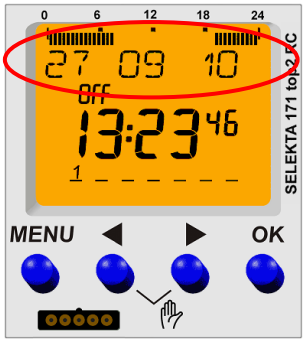
Press the buttons - or + to change the display to the other channel.

If manual switching or permanent switching has been activated on one of the channels, the relevant special fade-in appears in the text line.

Example for changing displays:

- No special fade-in
  - Channel 1 → date → no mains → channel 2 → date → no mains → channel 1
- With special fade-in (channel 2 permanent switching activated)
  - Channel 1 → date → no mains → C2 duration → date → no mains → channel 1

5.2. Segmented bar graph



- Horizontal, at top
- Help lines for 24 hours at 0 and 24 hours
- Help points at 6, 12 and 18 hours
- 48 segment bars, one line = 30 minutes

Each bar shows the programming for a specific time segment:

- Bar 1: From 12:00:00 AM to 12:29:59 AM
- Bar 2: From 12:30:00 AM to 12:59:59 AM
- ….
- Bar 47: From 11:00:00 PM to 11:29:59 PM
- Bar 48: From 11:30:00 PM to 11:59:59 PM

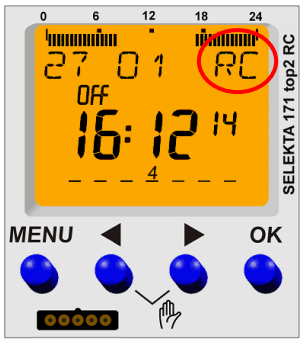
- For astro times, standard and special programs:
  - Bar ON means that the channel is on for at least 1 second within the time period.
  - Bar OFF means that the channel is off for the entire period.

- The same priorities apply to the bar graph too: cycle has the highest priority, followed by switching times (switching times have the lowest priority).

5.3. top2 RC antenna

Displays for SELEKTA 171 top2 RC

The following displays only appear in the SELEKTA 171 top2 RC, as this is the only type of time switch to feature an RC antenna port.



RC display:

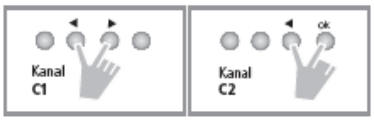
Antenna is connected and time signal is being received.

"Antenna" display:

Antenna is connected, but **no** time signal is being received.
→ Check antenna position!

5.4. Auto mode and manual/permanent switching

- Briefly press buttons ◄ and ► at the same time to activate manual switching (keep both buttons pressed for longer → permanent switching)



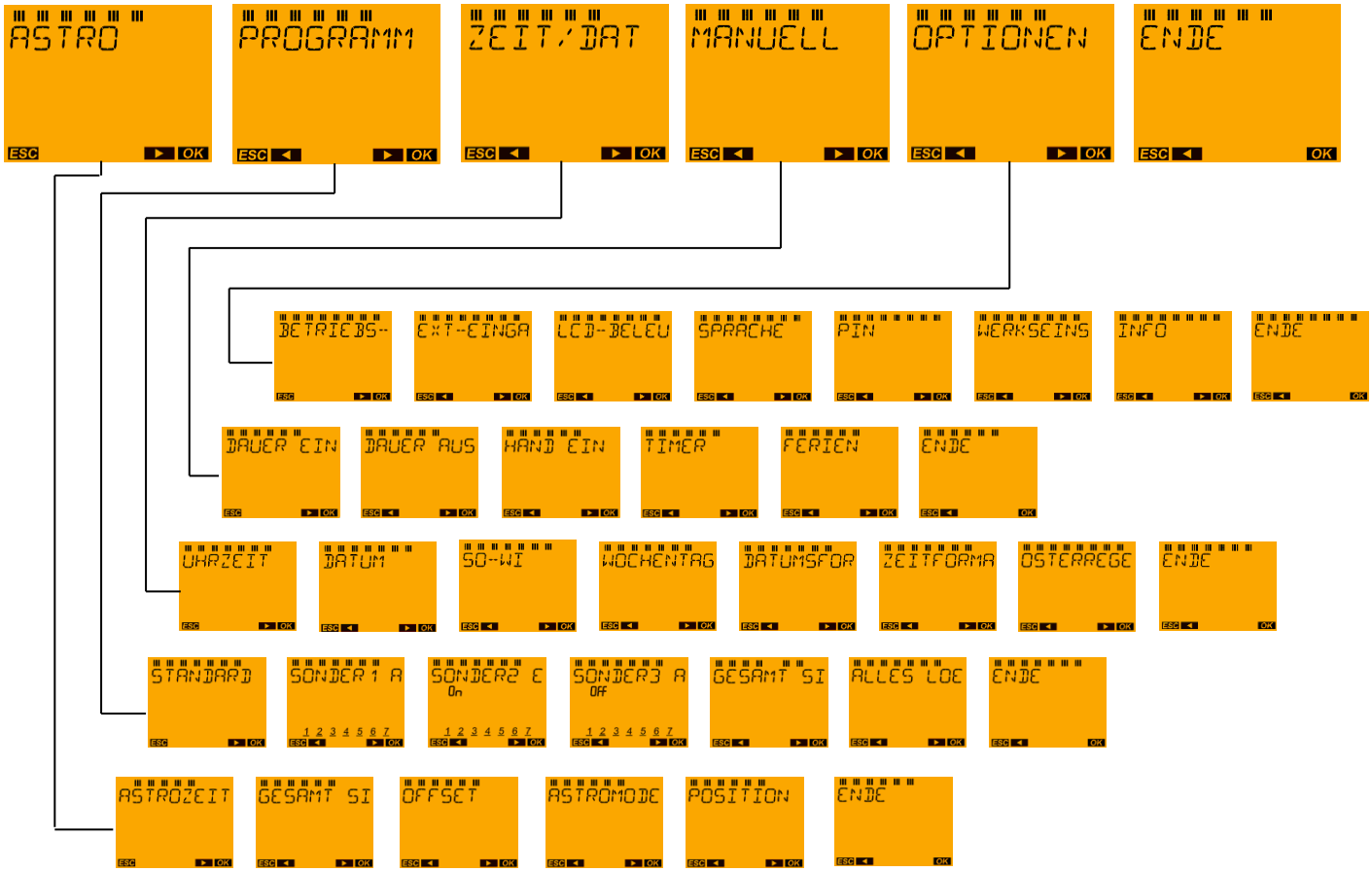
- Example:
  Program: OFF

  → Press buttons briefly: → manual ON
  → Press buttons longer: → permanent ON
  → Press buttons longer: → permanent OFF

  Press these two buttons again to cancel manual/permanent switching again.

- Manual/permanent switching priorities
  - Permanent switching is not cancelled by other events.
  - Permanent switching is cancelled again by a program switch command.

6. Main menu

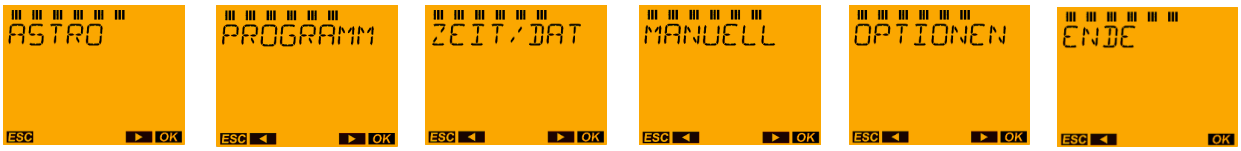


Note: Some of the steps in the sub-menus are not required, depending on the device type.

- If the END text display is confirmed with the OK button, the system always returns to auto mode.
- The inputs can be aborted using ESC (MENU button) and the system returns to the last operating level.
- If no button is pressed for 70 seconds, the system returns to auto mode.

7. Menu: ASTRO

Press the MENU button to open the main menu from auto mode:



Sub-menu: ASTRO

ASTRO TIMES – TOTAL SIMULATION – OFFSET – ASTROMODE – LOCATION – END

7.1. ASTRO menu: Astro time

Check of astro times/switching times for sunrise and sunset (including the offset = adjustment of sunrise and sunset times) for the **current day**.

Press the MENU button. ASTRO appears on the display.

Press the OK button. ASTRO TIME appears on the display.

Press the OK button.

The sunrise switching time (status: OFF) for the current day is displayed. Press the OK button.

The sunset switching time (status: ON) for the current day is displayed. Press the OK button.

The system returns to ASTRO TIME. The menu can be exited with the MENU (ESC) button.

***Note**: The MENU button can be used to scroll from all sub-menus back to auto mode again (ESC = escape function).*

7.2. ASTRO menu: Total simulation

If you want to check the switching times, you can view all of them (calculated astro times and programmed ON/OFF switching times; the holiday program is not shown) under TOTAL SIMULATION. The simulation of the switching times can begin with a **freely selectable start date**.

Press the MENU button to open the main menu from auto mode.

Press OK to confirm the ASTRO menu.

Press button ►.

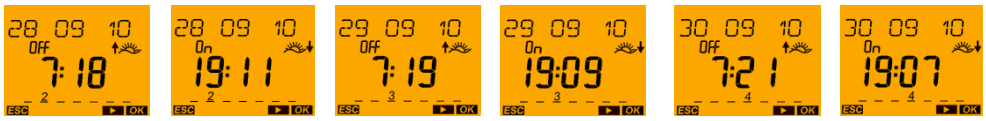
Press the OK button.

Use the arrow buttons ◄ and ► to enter the YEAR for the simulation start date and press OK to confirm.

Use the arrow buttons ◄ and ► to enter the MONTH for the simulation start date and press OK to confirm.

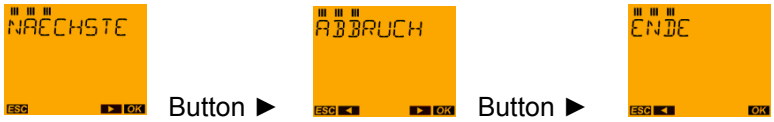
Use the arrow buttons ◄ and ► to enter the WEEK DAY for the simulation start date and press OK to confirm.

The buttons ◄ and ► can be used to scroll through the astro times and programmed switching times on the individual days, starting on the selected start date.



... and so on.

Note: *If ON/OFF switching times have been programmed, they are displayed here too.*



Button ► Button ►

Select the option required and press OK to confirm.

- NEXT → Go to the simulation of the next switching time.
- ABORT → Return to the TOTAL SIMULATION.
- END → If END is confirmed with the OK button, the system returns to auto mode.

7.3. ASTRO menu: Offset

The offset is used to adjust the sunrise and sunset times. The offset (correction value) can be used to shift the calculated astro times by +/- 2 hours. This means that the astro switch-on and switch-off times can be adapted to local conditions (e.g. mountains, high buildings) or to personal requirements.

Example:
The **sunrise time should be 15 minutes earlier** and the **sunset time 30 minutes later**.

Press the MENU button to open the main menu from auto mode.

Press OK to confirm the ASTRO menu.

Press button ► twice until OFFSET appears on the display and press OK to confirm.

Press the OK button.

Use the buttons ◄ and ► to enter the minutes for the astro time correction *(15 minutes earlier)*, then press the OK button.

Press the OK button.

Use the buttons ◄ and ► to enter the minutes for the astro time correction *(30 minutes later)*, then press the OK button.

Press OK to confirm and the system returns to auto mode.

7.4. ASTRO menu: Astromode

In Astromode, you can reverse the astro mode, i.e. evenings ON, mornings OFF or evenings OFF, mornings ON, or deactivate it completely.

Press the MENU button to open the main menu from auto mode.

Press OK to confirm the ASTRO menu.

Press button ► three times until ASTROMODE appears on the display and press OK to confirm.

Press 

button ► 

button ►.

Select the option required and press OK to confirm.

- EVENINGS **ON**, MORNINGS **OFF** → At sunset it switches on, at sunrise it switches off (example: street lighting).
- EVENINGS **OFF**, MORNINGS **ON** → At sunset it switches off, at sunrise it switches on (example: terrarium).
- ASTRO **NOT ACTIVE** → The astro times are ineffective (time switch function only).

7.5. ASTRO menu: Location

Under Location, you can set the location by selecting a town/city or via coordinates (longitude/latitude, time zone).

Note: *If a GPS antenna is connected (only possible with SELEKTA 171 top2 RC), the location cannot be changed, since automatic location synchronisation has already been performed via the antenna. The location can only be called up.*

Press the MENU button to open the main menu from auto mode.

Press OK to confirm the ASTRO menu. Then press button ► four times and press OK to confirm.

COUNTRY – COORDINATES – END

Note:
By using the OBELISK top2 memory card, up to 10 further towns/cities (= favourites) can be added.

7.5.1. LOCATION: Country

Press the MENU button to open the main menu from auto mode.

Press OK to confirm the ASTRO menu.

Press button ► three times until LOCATION appears and press OK to confirm.

Press the OK button.

Use the buttons ◄ and ► to enter the COUNTRY, then press the OK button.

Use the buttons ◄ and ► to enter the TOWN/CITY, then press the OK button.

The system returns to LOCATION. The menu can be exited with the MENU (ESC) button.

7.5.2. LOCATION: Coordinates

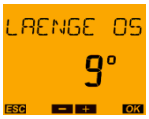
Press the MENU button to open the main menu from auto mode.

Press OK to confirm the ASTRO menu.

Press button ► three times until LOCATION appears on the display and press OK to confirm.

Press button ► until COORDINATES appears and press OK to confirm.

Use the buttons ◄ and ► to enter the latitude, then press the OK button.



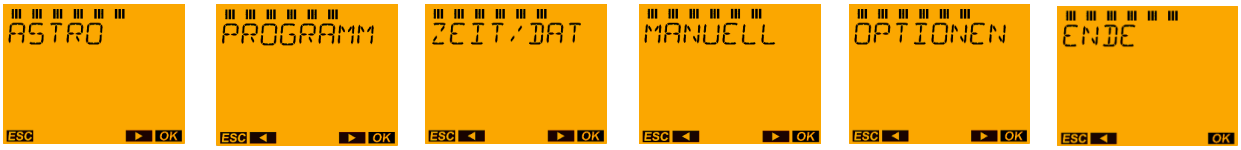
Use the buttons ◄ and ► to enter the longitude, then press the OK button.

Use the buttons ◄ and ► to enter the time zone, then press the OK button.

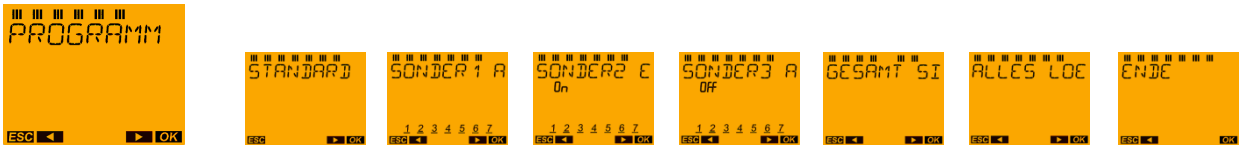
The system returns to LOCATION. The menu can be exited with the MENU (ESC) button.

8. Menu: PROGRAM

Press the MENU button to open the main menu from auto mode:



Sub-menu: PROGRAM



STANDARD – SPECIAL 1 – SPECIAL 2 – SPECIAL 3 – TOTAL – DELETE ALL – END
ASTRO PROG ON OFF SIMULATION

- On the SELEKTA 170 top2/top3 devices, only STANDARD switching times can be programmed in addition to astro times.
- In the SELEKTA 171 top2/top3 RC and SELEKTA 172 top2/top3 devices, the switch commands for the special programs are available too. After selecting PROGRAM, the selection menu for the type of switch command STANDARD, SPECIAL1 ASTRO, SPECIAL2 ON, SPECIAL3 OFF is available.

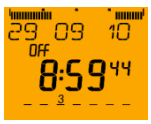
8.1. PROGRAM menu: Standard (night break/daytime switch-on)

Switching times can also be programmed outside or inside the astro times. In the standard program, this is achieved via NIGHT BREAK **or** DAYTIME SWITCH-ON.

8.1.1. STANDARD: Setting a switching time

Programming example

The lighting for a shop window featuring exhibits is switched **ON in the evening** and **OFF in the morning** according to the astro times. The time switch is to be used to program a **night break** as well, i.e. the lighting for the shop window should not be on the entire night, but should be switched off **between 11:00 PM and 5:00 AM**, Monday to Friday (this is known as a **night break**).



Press the MENU button to open the main menu from auto mode.

Press button ► once until PROGRAM appears on the display and press OK to confirm the PROGRAM menu.

Press the OK button.

Press the OK button.

Note:
A brief fade-in now shows the free memory locations still available for programming, e.g. FREE 84 (if none of the 84 memory locations is occupied yet).

This fade-in can be cut short by pressing the OK button.

Buttons ◄ and

Note:
This is where you select either NIGHT BREAK **or** DAYTIME SWITCH-ON.
►

Press OK to confirm NIGHT BREAK (example).

Use the arrow buttons ◄ and ► to enter the HOUR for the switch **OFF** *(11:00 PM)* and press OK to confirm.

Use the arrow buttons ◄ and ► to enter the MINUTE for the switch off (*00 minutes*) and press OK to confirm.

Use the arrow buttons ◄ and ► to enter the first week day for the switching time *(Monday = day 1)* and press OK to confirm.

Use the arrow buttons ◄ and ► to enter the time for the switch **ON** *(5:00 AM on the next day)* and press OK to confirm.

Tip: *Keep button ► pressed to enter a long time.*
(Time jumps in 10 second intervals after 1 minute.)

In order to copy the switching time to other week days, press the OK button to confirm the question COPY *(example: Monday to Friday).*

Note:
You can use the buttons ◄ and ► to select "Save" if you only want to perform the switching time on this week day.

The switching time is then saved as an individual instance and the system returns to NEW.

If COPY was confirmed with the OK button, the next week day is displayed: PLUS TUESDAY (in scrolling text). In order to copy the switching time entered to this week day -> press OK to confirm. Otherwise, change to another week day using the buttons ◄ and ►.

The next week day is displayed PLUS WEDNESDAY and this week day can be confirmed by pressing OK, as with the other week days.

Press the OK button.

Press the OK button.

Note:
With the button ► week days can also be ignored.

Press ► (scroll to the right) instead of the OK button, since the night break should not be performed on a Saturday.

Press ► (scroll to the right) instead of the OK button, since the night break should not be performed on a Sunday.

Press the OK button – week day selection is complete *(the night break should be performed on week days Monday to Friday, but not on Saturday or Sunday).*

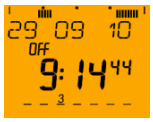
After saving, NEW appears on the display, since other switching times can now be programmed. The button ► can be used to scroll to the END, or the MENU (ESC) button to exit the menu.

The segmented bar graph now indicates that the night break is active. The time segment when the shop window lighting is on is no longer active for the whole night, but is interrupted from *11:00 PM to 5:00 AM.*

Note:
The DAYTIME SWITCH-ON is performed according to the same principle as the NIGHT BREAK described above.

8.1.2. STANDARD: Checking switching times

If you want to check whether the switching times have been correctly programmed, you can view all switching times.



Press the MENU button to open the main menu from auto mode.

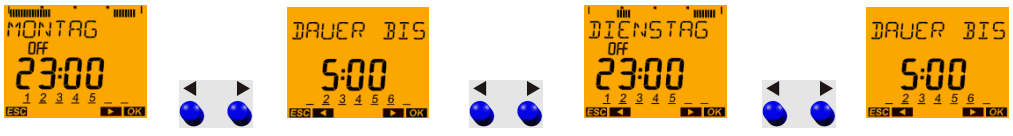
Confirm the PROGRAM menu by pressing OK.

Press the OK button.

Press button ► once until CHECK appears on the display and press OK to confirm.

Now the week days and corresponding switching times are displayed in chronological order on the time bar, starting with the first week day (e.g. Monday). If no switching times are saved, EMPTY is faded in.

The buttons ◄ and ► (+/-) can be used to scroll through the saved switching times on the time bar:



… and so on.

All programmed switching times are shown individually for each day. Should the switching occur on several days at the same time, the complete week day block is displayed and the respective week day number (Monday = 1, Tuesday = 2, etc.) flashes.

If no switching time has been programmed on a week day, this day is shown with -- : --.

When all the week days have been called up, END appears on the display. Confirm with the OK button to return to auto mode.

Sub-menu during the check:

If the OK button is pressed during the check, a sub-menu is activated:

NEXT → Press the OK button: the next switching time is shown.

PREVIOUS → Press the OK button: the switching time shown is displayed again.

MODIFY → Press the OK button: the switching time shown can be changed.

DELETE → Press the OK button: the switching time shown can be deleted.

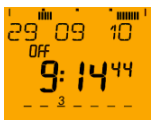
At END → Press the OK button: the switching time check ends.

Note:
If no button is pressed for more than 1 minute, the system returns to auto mode.

8.1.3. STANDARD: Modifying switching times

You can change switching times in the MODIFY sub-menu of the CHECK menu or select the PROGRAM menu MODIFY directly.

Example:
The night break time **on Friday** needs to be changed from 11:00 PM to 5:00 AM **to 11:30 PM to 6:00 AM**.



Press the MENU button to open the main menu from auto mode.

Confirm the PROGRAM menu by pressing OK.

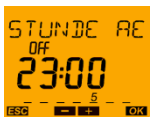
Press the OK button.

Press button ► twice until MODIFY appears and press OK to confirm.

The first switching time to be saved is displayed.

The button ► can be used to scroll through the saved switching times until the switching time to be changed is shown.

Press the OK button (to start the change).

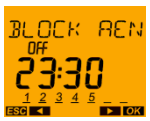


Press the OK button (since the hour displayed - 23 - is to remain unchanged).

Press button ► to adjust the minutes from 00 to 30. Then press the OK button.

Press button ► to adjust the duration from 5:00 AM to 6:00 AM. Then press the OK button.

The scrolling text MODIFY BLOCK appears.



Press button ► (not the OK button, since not the whole switching time block is to be changed, but only the night break time on Friday).

The scrolling text MODIFY FRIDAY appears.

Press the OK button.

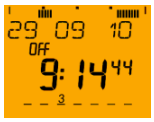
The system returns to the MODIFY menu.

Now other changes can be carried out (OK button). The button ► can be used to scroll to the END, or the MENU (ESC) button to exit the menu.

8.1.4. STANDARD: Deleting switching times

In the PROGRAM menu, you can DELETE the saved switch commands again.

Example:
The night break time **on Monday** needs to be deleted.



Press the MENU button to open the main menu from auto mode.

Confirm the PROGRAM menu by pressing OK.

Press the OK button.

Press 

button ► 

button ► button ►.

Press the OK button.

Press the OK button to confirm the INDIVIDUALLY sub-menu item.

Comment:

It is also possible to select what is to be deleted in the DELETE sub-menu. In addition to deleting the switching times INDIVIDUALLY, the DELETE ALL menu item can be selected too. Here it is possible to jointly delete all saved switch commands at once.

The first switching time saved for the first week day is displayed (*switch off Monday at 11:00 PM*).

Press the OK button.

You can delete the entire switching time block (*night break from 11:00 PM to 5:00 AM, Monday to Sunday*): DELETE BLOCK.

Press button ►.

You can remove Monday specifically from the block and delete it individually: DELETE MONDAY.

Press the OK button.

The confirmation of the delete procedure is displayed briefly, followed by an automatic return to the DELETE menu.

Now other switching times can be deleted (OK button). The button ► can be used to scroll to the END, or the MENU (ESC) button to exit the menu.

8.2. PROGRAM menu: Special programs

- The **SELEKTA 171 top2 RC** and **SELEKTA 172 top2** devices feature three special programs, which can be used for calendar-dependent switching.
- Each special program can be activated over one or several date ranges.
- There are three types of date range:
  - **Fixed date range:**
    E.g. *(see 8.2.1.* SPECIAL PROGRAMS: Programming special 1 astro prog*)*
    Start time 30.04.2010 at 12:00 PM
    End time 01.05.2010 at 12:00 PM
  - **Annually recurring date range:**
    E.g. Christmas *(see 9.2.5. SPECIAL PROGRAMS: Special 2 ON)*
    Start time 24.12. at 6:00 PM each year
    End time 26.12. at 11:00 PM each year
  - **Easter-dependent date range:**
    E.g. Whit Sunday and Monday *(see 9.2.6. SPECIAL PROGRAMS: Special 2 OFF)*
    Start time: 49 days after Easter at 12:00 AM each year
    End time: 51 days after Easter at 12:00 AM each year

Note: *12:00 PM is programmed at 12:00 AM of the following day.*

Holidays dependent on Easter in Germany

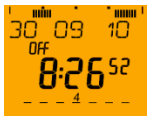
Public holiday	Days before/after Easter Sunday
Monday before Lent	- 48
Good Friday	- 2
Easter Monday	+ 1
Ascension	+ 39
Whit Monday	+ 50
Corpus Christi	+ 60

8.2.1. SPECIAL PROGRAMS: Programming special 1 astro prog

Special program 1:

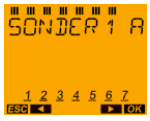
- Astro times are active
- Optional 1x night interruption
- Optional 1x daytime switch-on
- Active in the programmed date ranges

Example:
A standard program switches on the street lighting depending on the astro times. A night interruption is programmed from 11:00 PM to 4:00 AM.
Special program 1 is active in the date range **from 30 April 2010, 12:00 PM, to 1 May 2010, 12:00 PM**. Since **no night interruption** is programmed, the street lighting will remain on all night.



Press the MENU button to open the main menu from auto mode.

Confirm the PROGRAM menu by pressing OK.



Press button ► once until SPECIAL 1 ASTRO PROG appears on the display and press OK to confirm.

Press the OK button *(no night break).*

Press the OK button *(no daytime switch-on).*

***Note**:*
You can use the arrow buttons ◄ and ► here to create OFF and ON switching times for a NIGHT BREAK or DAYTIME SWITCH-ON as a special program (no night break in this example).

E.g.

Use the arrow buttons ◄ and ► to enter the OFF switching time, then press OK to confirm.

Use the arrow buttons ◄ and ► to enter the OFF switching time, then press OK to confirm.

Press the OK button.

The brief fade-in of the number of free memory locations can be cut short by pressing the OK button.

Press the OK button to confirm the FIXED DATE *(date range from 30 April 2010, 12:00 PM, to 1 May 2010, 12:00 PM)*.

EASTER.

***Note:** You can use the arrow buttons ◄ and ► to choose between FIXED DATE and DAYS BEFORE/AFTER*

Use the arrow buttons ◄ and ► to select a START YEAR for the special astro program (e.g. 2010).

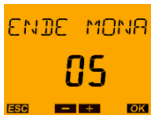
Press the OK button.

Use the arrow buttons ◄ and ► to enter the START MONTH *(April)*, then press OK to confirm.

Use the arrow buttons ◄ and ► to enter the START DAY *(30 April)*, then press OK to confirm.

Use the arrow buttons ◄ and ► to enter the START HOUR *(12:00 PM)*, then press OK to confirm.

Use the arrow buttons ◄ and ► to enter the END YEAR (*2010*), then press OK to confirm.



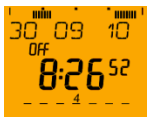
Use the arrow buttons ◄ and ► to enter the END MONTH (*May*), then press OK to confirm.

Use the arrow buttons ◄ and ► to enter the END DAY (*1 May*), then press OK to confirm.

Use the arrow buttons ◄ and ► to enter the END HOUR (*12:00 PM*), then press OK to confirm.

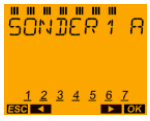
The system returns to the NEW DATE menu automatically.

8.2.2. SPECIAL PROGRAMS: Checking special 1 astro prog



Press the MENU button to open the main menu from auto mode.

Confirm the PROGRAM menu by pressing OK.



Press button ► once until SPECIAL 1 ASTRO PROG appears on the display and press OK to confirm.

Press the OK button *(no night break).*

Press the OK button *(no daytime switch-on).*

Press button ► once until CHECK appears on the display and press OK to confirm.

The buttons ◄ and ► can be used to scroll through the saved switching times (START and END):

…

Sub-menu during the check:

If the OK button is pressed during the check, a sub-menu is activated:

NEXT → Press the OK button: the next switching time is shown.

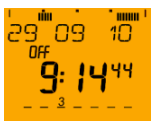
MODIFY DATE → Press the OK button: the switching time shown can be changed.

DELETE → Press the OK button: the switching time shown can be deleted.

At END → Press the OK button: the switching time check ends.

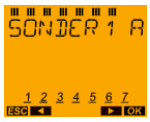
8.2.3. SPECIAL PROGRAMS: Modifying special 1 astro prog

You can change switching times in the MODIFY sub-menu of the CHECK menu or select the SPECIAL PROGRAM menu MODIFY directly.



Press the MENU button to open the main menu from auto mode.

Confirm the PROGRAM menu by pressing OK.



Press button ► once until SPECIAL 1 ASTRO PROG appears on the display and press OK to confirm.

Press the OK button *(no night break).*

Press the OK button *(no daytime switch-on).*

Press button ► twice until MODIFY appears on the display and press OK to confirm.

The first switching time to be saved is displayed.

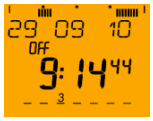
The button ► can be used to scroll through the saved switching times until the switching time to be changed is shown.

Confirm the switching time to be changed by pressing OK. Use the arrow buttons ◄ and ► to set the required time, then press OK to confirm.

The system then returns to the MODIFY menu.

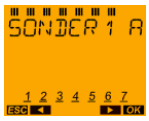
Now other changes can be carried out (OK button). The button ► can be used to scroll to the END, or the MENU (ESC) button to exit the menu.

8.2.4. SPECIAL PROGRAMS: Deleting special 1 astro prog



Press the MENU button to open the main menu from auto mode.

Confirm the PROGRAM menu by pressing OK.



Press button ► once until SPECIAL 1 ASTRO PROG appears on the display and press OK to confirm.

Press the OK button *(no night break).*

Press the OK button *(no daytime switch-on).*

Press button ► three times until DELETE appears on the display and press OK to confirm.

Sub-menu is displayed:

Note:

It is possible to select what is to be deleted in the DELETE sub-menu.

In addition to deleting the switching times INDIVIDUALLY, the DELETE ALL menu item can be selected too. Here it is possible to jointly delete all saved switch commands at once.

The first switching time saved for the first week day is displayed (*switch off Monday at 11:00 PM*).

For example, INDIVIDUALLY is confirmed with OK.

Press the OK button.

The button ► can be used to scroll through the saved switching times until the switching time to be deleted is shown. Then press OK to confirm.

Press OK to confirm DELETE OK.

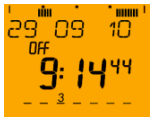
The system returns to the MODIFY menu. Now other switching times can be deleted (OK button). The button ► can be used to scroll to the END, or the MENU (ESC) button to exit the menu.

8.2.5. SPECIAL PROGRAMS: Special 2 ON

Special program 2

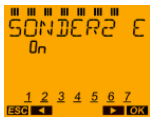
- Perm **ON**
- Always **on** during the programmed date ranges

Example:
The standard program switches on lighting of a neon advertising sign only at night. The special program switches the neon advertising sign **on permanently every year** at Christmas **from 24.12. at 6:00 PM to 26.12. at 11:00 PM**.



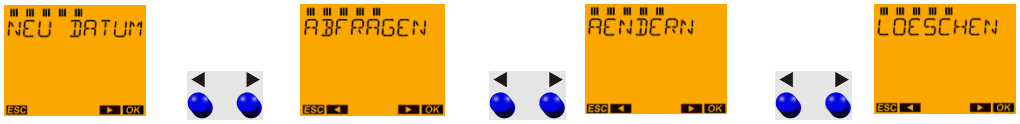
Press the MENU button to open the main menu from auto mode.

Confirm the PROGRAM menu by pressing OK.



Press button ► twice until SPECIAL 2 ASTRO PROG appears on the display and press OK to confirm.

Sub-menu is displayed:



Note:

CHECK, MODIFY and DELETE can be selected in the sub-menu as well as NEW DATE. These sub-menu items function according to the same principle as that used in special program 1 or SPECIAL 1 ASTRO PROG.

CHECK → see also 9.2.2. SPECIAL PROGRAMS: Checking special 1 astro prog

MODIFY DATE → see also 9.2.3. SPECIAL PROGRAMS: Modifying special 1 astro prog

DELETE → see also 9.2.4. SPECIAL PROGRAMS: Deleting special 1 astro prog

Press the OK button.

The brief fade-in of the number of free memory locations can be cut short by pressing the OK button.

Note: *You can use the arrow buttons ◄ and ► to choose between FIXED DATE and DAYS BEFORE/AFTER EASTER.*

Press OK to confirm FIXED DATE.

EVERY YEAR appears in scrolling text; press OK to confirm.

Use the arrow buttons ◄ and ► to enter the START MONTH *(December)*, then press OK to confirm.

Use the arrow buttons ◄ and ► to enter the START DAY *(24 December)*, then press OK to confirm.

Use the arrow buttons ◄ and ► to enter the START HOUR *(6:00 PM)*, then press OK to confirm.

Use the arrow buttons ◄ and ► to enter the END MONTH *(December)*, then press OK to confirm.

Use the arrow buttons ◄ and ► to enter the END DAY (*26 December*), then press OK to confirm.

Use the arrow buttons ◄ and ► to enter the END HOUR (*11:00 PM*), then press OK to confirm.

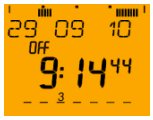
The system returns to the NEW DATE menu automatically.

8.2.6. SPECIAL PROGRAMS: Special 3 OFF

Special program 3

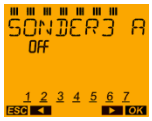
- Perm **OFF**
- Always **off** during the programmed date ranges

Example:
The standard program switches on the car park lighting depending on the astro times. The special program **does not** switch on the car park lighting **each year 49 days after Easter (Whit Sunday) at 12:00 AM** until **51 days after Easter (Whit Monday) at 12:00 AM** (days taken from the "Holidays dependent on Easter in Germany" table).



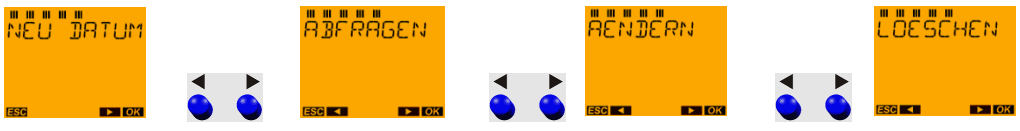
Press the MENU button to open the main menu from auto mode.

Confirm the PROGRAM menu by pressing OK.



Press button ► three times until SPECIAL 3 OFF appears on the display and press OK to confirm.

Sub-menu is displayed:



Note:

CHECK, MODIFY and DELETE can be selected in the sub-menu as well as NEW DATE. These sub-menu items function according to the same principle as that used in special program 1 or SPECIAL 1 ASTRO PROG.

CHECK → see also 9.2.2. SPECIAL PROGRAMS: Checking special 1 astro prog

MODIFY DATE → see also 9.2.3. SPECIAL PROGRAMS: Modifying special 1 astro prog

DELETE → see also 9.2.4. SPECIAL PROGRAMS: Deleting special 1 astro prog

Press the OK button.

The brief fade-in of the number of free memory locations can be cut short by pressing the OK button.

Note: *You can use the arrow buttons ◄ and ► to choose between FIXED DATE and DAYS BEFORE/AFTER EASTER.*

Press OK to confirm DAYS BEFORE/AFTER EASTER.

START EASTER SUNDAY is displayed with day 0. Use the arrow buttons ◄ and ► to set the start before/after Easter Sunday *(49 after Easter)*, then press OK to confirm.

Press OK to confirm START AFTER EASTER (*49 days after*).

Use the arrow buttons ◄ and ► to enter the START HOUR *(12:00 AM)*, then press OK to confirm.

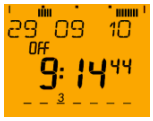
Use the arrow buttons ◄ and ► to enter the END AFTER EASTER (*51 days after*), then press OK to confirm.

Use the arrow buttons ◄ and ► to enter the END HOUR (*12:00 AM*), then press OK to confirm.

The system returns to the NEW DATE menu automatically.

8.2.7. SPECIAL PROGRAMS: Total simulation

If you want to check the switching times, you can view all of them (calculated astro times and programmed ON/OFF switching times; the holiday program is not shown) under TOTAL SIMULATION. The simulation of the switching times can begin with a **freely selectable start date**.



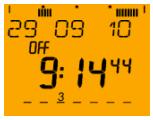
Press the MENU button to open the main menu from auto mode.

Confirm the PROGRAM menu by pressing OK.

Press button ► four times until TOTAL SIMULATION appears on the display and press OK to confirm.

➔ *For next steps, see 8.2. ASTRO menu: Total simulation*

8.2.8. SPECIAL PROGRAMS: Deleting all



Press the MENU button to open the main menu from auto mode.

Confirm the PROGRAM menu by pressing OK.

Press button ► five times until DELETE ALL appears on the display and press OK to confirm.

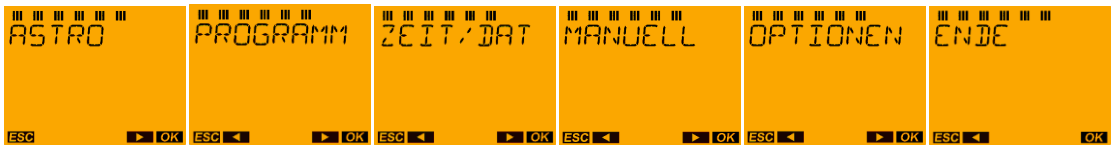
Press the OK button.

The confirmation of the delete procedure is displayed briefly, followed by an automatic return to the DELETE ALL menu.

The system returns to the DELETE ALL menu automatically.

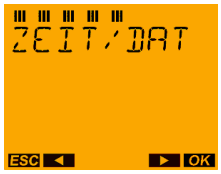
9. Menu: TIME/DATE

Press the MENU button to open the main menu from auto mode:



Sub-menu: TIME/DATE

9.1. TIME/DATE menu: Time



Press the OK button.

Press the OK button.

Example: The time 1:21 PM needs to be set.

Note:
If a DCF or GPS antenna is connected (only possible with SELEKTA 171 top2 RC), the time cannot be changed, since automatic time synchronisation has already been performed via the antenna. The time can then only be called up.

Use the buttons ◄ and ► to enter the correct time. To do so, first enter the hours and press OK to confirm.

Then use the buttons ◄ and ► to enter the minutes and press OK to confirm.

Note:
As soon as the hours or minutes are changed, the seconds are reset to 00, where they remain. It is not until the minutes of the newly set time have been confirmed with the OK button that the time switch continues to run. As such, the time switch can be restarted synchronised to the second with real time.

In the event that the time was only checked and not changed, the system returns to the TIME menu item.

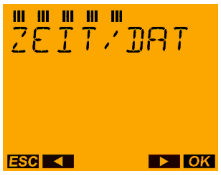
Now the TIME menu can be selected again (OK button).

With the button ► it is possible to change to the other menu items in the TIME/DATE menu or to scroll to the END and return to auto mode using the OK button.

The menu can also be exited with the MENU (ESC) button.

Comment:
If the time has been changed, the system returns to auto mode automatically after confirmation with the OK button.

9.2. TIME/DATE menu: Set date



Press the OK button followed by ►.

Press the OK button.

Example: The date 11.02.2008 needs to be set.

Note:
If a DCF or GPS antenna is connected (only possible with SELEKTA 171 top2 RC), the date cannot be changed, since automatic time synchronisation has already been performed via the antenna. The date can then only be called up.

Use the buttons ◄ and ► to enter the correct year and press OK to confirm.

Use the buttons ◄ and ► to enter the current day and press OK to confirm.

Use the buttons ◄ and ► to enter the current day and press OK to confirm.

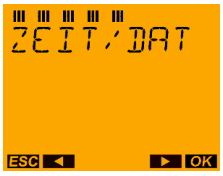
In the event that the date was only checked and not changed, the system returns to the SET DATE menu item.

Now the SET DATE menu can be selected again (OK button).
With the buttons ◄ and ► it is possible to change to the other menu items in the TIME/DATE menu or to scroll to the END and return to auto mode using the OK button.
The menu can also be exited with the MENU (ESC) button.

Comment:
If a new date has been set, the system returns to auto mode automatically after confirmation with the OK button.

9.3. TIME/DATE menu: SU-WI
(automatic summer/winter time switchover)

On the correct date, the time switch automatically carries out the changeover from winter to summer time and the reset from summer to winter time, provided that the changeover rule applicable in the respective country has been activated.



Press the OK button, followed by ► twice.

Press the OK button.

It is possible to choose between six preset changeover rules, define your own changeover rules using two different methods, or switch off the automatic summer/winter time switchover.

With the buttons ◄ and ► it is possible to select:

If a changeover rule is selected with the OK button, this rule is activated and the system returns to the SU-WI menu item.

SU-WI EUROPE

Changeover rule valid for Germany, France and all countries in the European Union in which the Central European time zone is applicable.

- The time switch goes forward on the last Sunday in March from 2:00 AM to 3:00 AM and on the last Sunday in October it goes back from 3:00 AM to 2:00 AM.

SU-WI GB/IRL/P

The changeover rule which is applicable to the UK, Ireland and Portugal (Western European time zone).

- The time switch goes forward on the last Sunday in March from 1:00 AM to 2:00 AM and on the last Sunday in October it goes back from 2:00 AM to 1:00 AM.

SU-WI FIN/GR/TR

Changeover rule valid for all countries in which the Eastern European time zone is applicable (Finland, Greece, Turkey, etc.).

- The time switch goes forward on the last Sunday in March from 3:00 AM to 4:00 AM and on the last Sunday in October it goes back from 4:00 AM to 3:00 AM.

SU-WI CDN

The changeover rule for the USA and Canada according to the "Energy Policy Act 2005" (with the exception of Arizona, Hawaii and parts of Indiana), which has no longer been applicable "temporarily" since 2007.

- The time switch goes forward on the first Sunday in April from 2:00 AM to 3:00 AM and on the last Sunday in October it goes back from 3:00 AM to 2:00 AM.

SU-WI USA07

The changeover rule for the USA and Canada according to the "Energy Policy Act 2007" (with the exception of Arizona, Hawaii and parts of Indiana), which has been applicable in the USA and Canada "temporarily" since 2007.

- The time switch goes forward on the second Sunday in March from 2:00 AM to 3:00 AM and on the first Sunday in November it goes back from 3:00 AM to 2:00 AM.

SU-WI IRAN

Changeover rule which was applicable in Iran up until 2007 at least.

- In accordance with the Persian calendar, the time switch goes forward at midnight on 1 Farvardin (21 March, or 20 March in a leap year) and goes back at midnight on 30 Shahrivar (21 September, or 20 September in a leap year).
  Comment: In the SELEKTA top2/top3 time switches, this is achieved by having the time switch go forward on 22 March (21 March in a leap year) from 12:00 AM to 1:00 AM and on 22 September (21 September in a leap year) it goes back from 1:00 AM to 12:00 AM.

SU-WI FREE RULE

Here it is possible to stipulate your own changeover rule.

- First set the month for the summer/winter time switchover.

- Then set the week for the summer/winter time switchover (week 1 to 5). This corresponds to the first, second, third, fourth or last week in the month (week 5 therefore always refers to the last week in the month).

- This is followed by the selection of the week day 1 to 7, i.e. the week day Monday to Sunday can be set. The set week day is valid both for the changeover from winter to summer time as well as for the changeover from summer to winter time.

- Finally, the hour for the summer/winter time switchover is selected, i.e. the hour at which the time switch goes forward by one hour. The changeover from summer to winter time is carried out at the same hour (it then goes back one hour later to this time). The setting range is from 12:00 AM to 10:00 PM. 11:00 PM is blocked to ensure that, when going back from summer time to winter time, the time after the date change at 12:00 AM does not have to go back to 11:00 PM on the previous day.

- To go back from summer to winter time, only the month for the reset and the week in the month (1 - 5) have to be set. The rule is then saved.

SU-WI FIXED DATE

In this case, two fixed dates can be entered (month + day + changeover hour), on which the changeover is to be made from winter to summer time and vice versa each year.

- First enter the month for the summer/winter time switchover (e.g. March).

- Then enter the day for the summer/winter time switchover (e.g. 29 March).

- Finally, the hour for the switchover is entered, i.e. the hour at which the time switch goes forward by one hour (e.g. at 2:00 AM). The setting range is from 12:00 AM to 10:00 PM. 11:00 PM is blocked to ensure that, when going back from summer time to winter time, the time after the date change at 12:00 AM does not have to go back to 11:00 PM on the previous day.

- To go back from summer to winter time, only the month for the reset and the day must be entered (e.g. reset on 30 October). When resetting, one hour later there is an automatic return to the time set previously for the winter/summer time switchover (e.g. from 3:00 AM to 2:00 AM).

Information on using the SU-WI rule in the southern hemisphere:

The free rule and the changeover with fixed date can be used both for the northern hemisphere and the southern hemisphere.

When used for the southern hemisphere, you simply have to use the date in the second half of the year (e.g. October) for the changeover from winter to summer time, and the date in the first half of the year (e.g. March) for the reset from summer to winter time.

9.4. TIME/DATE menu: Week day

In SELEKTA top2 time switches, the digits 1 - 7 are used to display the seven week days. In this case, it is usual that a public holiday is shown as the seventh day of the week and 1 is used for the first working day:

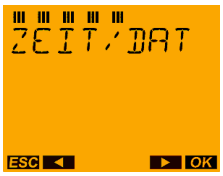
Europe: public holiday = Sunday → Monday = 1, Tuesday = 2, ….. Sunday = 7

Israel: public holiday = Saturday (Sabbath) → Sunday = 1, Monday = 2, ….. Saturday = 7

Arabian countries: public holiday = Friday → Saturday = 1, Sunday = 2, Monday = 3, …. Friday = 7

Therefore, in SELEKTA top2 time switches, the allocation of week day numbers can be entered:

MENU/►/TIME/DATE/OK/►3x/WEEK DAY/OK



Press the OK button, followed by ► three times.

Select with ◄ and ►.
Then confirm by pressing OK.

Press the OK button.

This is where the current week day, the date and the week day number for the current day are shown. The week day number flashes and can be changed.

Example: The date is Monday 11.02. and Monday has the number 1.

This therefore means:

1 = Monday, 2 = Tuesday, 3 = Wednesday, 4 = Thursday, 5 = Friday, 6 = Saturday and 7 = Sunday.

With the buttons ◄ and ► the week day numbers can be changed if required and the setting can then be confirmed using the OK button.

The allocation of the numbers to week days is saved and the system returns to the WEEK DAY menu item.

Now the WEEK DAY menu can be selected again (OK button).

With the button ► it is possible to change to the other menu items in the TIME/DATE menu or to scroll to the END and return to auto mode using the OK button.
The menu can also be exited with the MENU (ESC) button.

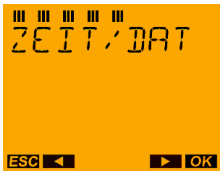
9.5. TIME/DATE menu: Form date

In the SELEKTA top2/top3 time switches, the date is shown in the text line.

Worldwide three different formats are usual for showing the date:

Europe:	day.month.year → e.g. 31.12.2000
USA:	month/day/year → e.g. 12/31/2000
International (e.g. Asia):	year–month–day → e.g. 2000–12–31

Therefore, in SELEKTA top2/top3 time switches, the date format can be entered:



Press the OK button, then the ► button four times.

Press the OK button.

The date format currently selected (in this case, European format) is shown using the example date 31.12.2000 (the year is only shown with two digits).

Use the buttons ◄ and ► to change the date format if required:

Then confirm the desired setting with OK.

The setting for the date format is saved and the system returns to the FORM DATE menu item.

Now the FORM DATE menu can be selected again (OK button).

With the button ► it is possible to change to the other menu items in the TIME/DATE

menu or to scroll to the END and return to auto mode using the OK button.
The menu can also be exited with the MENU (ESC) button.

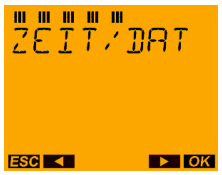
9.6. TIME/DATE menu: Form time

In the SELEKTA top2/top3 time switches, the current time is shown on the time display. Worldwide two different formats are usual for showing the time:

Germany, France, etc.: 24-hour clock, e.g. 4 o'clock in the afternoon = 16:00

USA, UK, etc.: AM/PM format, e.g. 4 o'clock in the afternoon = 4:00 PM

Therefore, in SELEKTA top2/top3 time switches, the time format can be entered:



MENU/►/TIME/DATE/OK/►5x/FORM TIME/OK

Press the OK button, then the ► button five times.

Press the OK button.

The current time format selected is displayed.

or

With the buttons ◄ and ► the date format can be changed if required and the setting can then be confirmed using the OK button.

The setting for the time format is saved and the system returns to the FORM TIME menu item.

Now the FORM TIME menu can be selected again (OK button).
With the button ► it is possible to change to the other menu items in the TIME/DATE menu or to scroll to the END and return to auto mode using the OK button.
The menu can also be exited with the MENU (ESC) button.

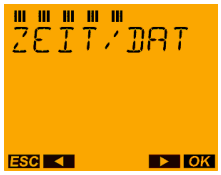
Comment:

24-hour time format = 12-hour AM/PM time format

00:00	=	*12:00 AM*
11:59	=	*11:59 AM*
12:00	=	*12:00 PM*
12:01	=	*12:01 PM*
23:59	=	*11:59 PM*

9.7. TIME/DATE menu: Easter date

The date for Easter can be defined in the EASTER DATE sub-menu item. You can choose either STANDARD or ORTHODOX CHURCH, since the date of Easter is calculated differently in the Orthodox Church. All other moveable Christian holidays are calculated from Easter Sunday. The Easter date affects all the public holidays dependent on Easter.



Press the OK button, then the ► button six times.

Press the OK button.

The current EASTER DATE selected is displayed.

or

With the buttons ◄ and ► the Easter date can be changed if required and the setting can then be confirmed using the OK button.

The setting for the Easter date is saved and the system returns to the EASTER DATE menu item.

Now the EASTER DATE menu can be selected again (OK button).

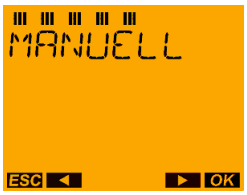
With the button ► it is possible to change to the other menu items in the TIME/DATE menu or to scroll to the END and return to auto mode using the OK button.
The menu can also be exited with the MENU (ESC) button.

10. Menu: MANUAL

Section 5.4 describes how it is possible to exit auto mode directly and enter manual and permanent switching. Alternatively, this can also be set in the MANUAL menu. Furthermore, additional manual switching functions are possible (differ depending on the device type).

Press the MENU button to open the main menu from auto mode:

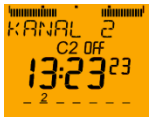
MENU/►2x/"MANUAL"/OK



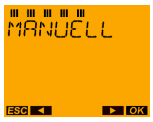
With ◄ and ►/OK

Note:
MANUAL menu items are shown based on the example of a 2-channel time switch (SELEKTA 172 top2). The displays for 1-channel and 2-channel time switches differ slightly.

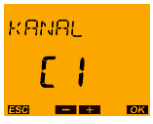
10.1. MANUAL menu: Perm ON/Perm OFF



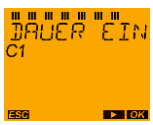
Press the MENU button to open the main menu from auto mode.



Press button ► twice and confirm the MANUAL menu by pressing OK.



Use button ► to select the desired channel, then press OK (only for 2-channel devices).



Select PERM ON and confirm with the OK button or press button ► and

Select PERM OFF, then confirm with the OK button.

The display now returns to auto mode.

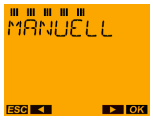
Note: If PERM ON permanent switching is activated and the MANUAL menu is called up again, END PERM ON appears.

10.2. MANUAL menu: Overr ON

Note: If HOLIDAY is active, manual switching is no longer available during this time.

MENU/"PROGRAM"/►2x/OK/►2x/"OVERR ON"/OK

Press the MENU button to open the main menu from auto mode.



Press button ► twice and confirm the MANUAL menu by pressing OK.

Use button ► to select the desired channel, then press OK (only for 2-channel devices).

Press button ► twice. OVERR ON or OVERR OFF is shown (depending on which switching status is currently active in auto mode).

With the OK button you can confirm the respective display statement.

If OVERRIDE has been entered and the MANUAL menu is called up again, the display shows END OVERRIDE.

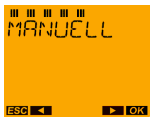
If PERMANENT has been entered, no manual switching can be performed (priorities!), i.e. permanent switching must be ended first.

Response: With permanent switching active, OVERRIDE can indeed be selected in the MANUAL menu. However, when this is confirmed with the OK button, an abort occurs and the system returns to the PERMANENT END menu item.

10.3. MANUAL menu: Timer

For TIMER (hourglass sequence timer function), you can choose either TIMER ON or TIMER OFF.
The maximum timer time which can be set is 23 hours 59 minutes (no seconds).
Note: Permanent switching operations have a higher priority than timer switching operations.

Press the MENU button to open the main menu from auto mode.



Press button ► twice and confirm the MANUAL menu by pressing OK.

Use button ► to select the desired channel, then press OK.

Press button ► until TIMER appears on the display and confirm with the OK button.

Use button ► to choose between switch-on ON and switch-off OFF and press OK to confirm.

Use button ► to select the sequence duration (hours), then press OK to confirm.

Use button ► to select the sequence duration (minutes), then press OK to confirm.

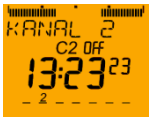
After confirming with the OK button, the timer starts, i.e. in auto mode C1 or C2 TIMER appears, depending on the channel selected beforehand.

In order to delete a set timer, select the TIMER menu item in the MANUAL menu, just like when setting the timer; the text END TIMER appears. Confirm this with the OK button and the sequence timer stops.

If a sequence timer is activated, in the TIMER menu item the remaining timer time is shown counting down.
After deleting (confirm END TIMER with the OK button), the display returns to auto mode.

10.4. MANUAL menu: Holiday

Permanent OFF switching is not the only type of holiday program available;
you can also choose between permanent ON and permanent OFF.



Press the MENU button to open the main menu from auto mode.

Press button ► twice and confirm the MANUAL menu by pressing OK.

Use button ► to select the desired channel, then press OK (only for 2-channel devices).

Press button ► until HOLIDAY appears on the display and confirm with the OK button.

A direct input start occurs with the ON – OFF- selection

or with button ►

After confirming a selection with the OK button, the holiday date is set:

With the top2 time switches, the holiday program can be programmed with the date and the exact time (start and end of the holiday program possible for each complete hour), i.e. not only at midnight (change in day).
Example: In the case of a switching program which switches on every day at 8:00 AM to 10:00 PM, the holiday start can be programmed to switch off at 1:00 PM on the day of departure.

The settings start with BEGIN HOLIDAY. Press OK to confirm.

Select the year with button ► and confirm with the OK button.

Similarly, use the buttons ► to enter the month, day and time for the holiday to start and confirm the desired setting with the OK button.

The same settings must now be made for the end of the holiday.
Likewise, the desired month, day and time for the holiday to end are entered with the buttons ►.

The holiday date is saved and the system returns to the HOLIDAY menu item.

If a holiday period has already been saved and the input HOLIDAY → OK has been carried out, a selection menu appears:

CHECK – MODIFY – DELETE – END (no NEW, since only one holiday period can be programmed).

or change with ► ►

►

Notes:

- *The holiday start plus one hour is used as a default for the holiday end.*
- *If the start hour is 11:00 PM, the default value for the next day is taken as midnight.*
- *The default values are used as minimum values for setting the holiday end, i.e. the holiday end cannot be before the holiday start.*

11. Menu: OPTIONS

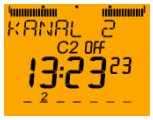
Press the MENU button to open the main menu from auto mode:

Note:

The external input is only featured on the SELEKTA 171 top2 RC and SELEKTA 172 top2 device types.

11.1. OPTIONS menu: Hour counter

"Operating hours" refers to the hours that the relay and, therefore, the connected users were switched on (relay ON time), i.e. when ON switch command and mains voltage are available.



Press the MENU button to open the main menu from auto mode.

Press button ► three times and confirm the OPTIONS menu with the OK button.

The Hour counter sub-menu appears. Confirm the display with the OK button.

There are three sub-menu items:

Use button ► to change

to

►

►

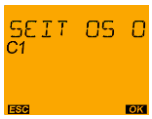
11.1.1. HOUR COUNTER: Displaying operating hours

(MENU→OPTIONS→HOUR COUNTER)

Press OK to confirm.

Use button ► to select the desired channel, then press OK (only for 2-channel devices).

The respective operating hours are displayed (max. 999,999.9 hours). Confirm the display with the OK button.



The date of the last deletion now appears (if no reset has been performed since the device was delivered, 01.01. and the production year are shown).
Press OK to confirm.

The system returns to DISPLAY.

11.1.2. HOUR COUNTER: Deleting operating hours

(MENU→OPTIONS→HOUR COUNTER)

Use button ► to change to the DELETE menu.

Press OK to confirm.

Use button ► to select the desired channel, then press OK (only for 2-channel devices).

Confirmation is required, i.e. definitively confirm the deletion with the OK button. The counter is then reset to zero and the deletion date is entered.

The system returns to DELETE.

11.1.3. HOUR COUNTER: Operating hours service

Operating hours service is used to better track and monitor operating hours (to establish maintenance intervals).
In the Service sub-menu, an hour quantity can be entered manually as well (max. 199,999 hours, typing in the relevant digits individually).
Should the operating hours exceed the set value, SERVICE is shown in auto mode.

When SERVICE is displayed, you can

- Delete the operating hours.
- Increase the hours in the Service sub-menu.

If the value has been set to 000,000 hours, SERVICE is deactivated.

Entering the service interval:
(MENU→OPTIONS→HOUR COUNTER)

Press button ► twice to change to the SERVICE menu.

Press OK to confirm.

Use button ► to select the desired channel, then press OK (only for 2-channel devices).

The first digit flashes. Use button ► to select the number 0 for a service interval of fewer than 100,000 hours or 1 for 100,000 or more hours.

Continue by pressing OK. The second digit flashes. Use button ► to select 0 – 9, then press OK.

The other digits are set in the same way, until the number of service operating hours has been entered in full.
After the last digit is confirmed with the OK button, the system returns to SERVICE and the input is saved.

Example:

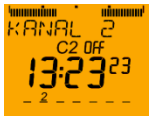
In the case of channel C1, upon reaching 190,000 operating hours, SERVICE is shown in the text line in auto mode.

11.2. OPTIONS menu: Ext input

At the external time switch control input, one switch or several buttons per channel can be connected. The control input can be used to call up the following functions: override, timer, staircase light, perm ON, perm OFF, only astro and special 1 astro prog.

Example 1: For corridor or staircase lighting with a permanent light phase controlled by astro times, adjustable short-term lighting can be activated outside this phase controlled by buttons. Several buttons in the staircase can be switched parallel to the input.

Example 2: The entrance to a yard is illuminated according to astro times and also switched off in the early hours of the morning, e.g. between 12:00 AM and 5:00 AM. If required or in special circumstances, the light can be manually set to permanently on via a switch outside of the astro times and programmed switching times (perm ON/OFF).



Press the MENU button to open the main menu from auto mode.

Press button ► three times and confirm the OPTIONS menu with the OK button.

Press button ► until EXT INPUT appears on the display and confirm with the OK button.

Use button ► to select the desired channel, then press OK (only for 2-channel devices).

There are three sub-menu items:

Use button ► to change between 

11.2.1. EXT INPUT: Not active (factory setting)

- The external input has no function.
- If an external switch or button is connected this can, if required (for an open day, for example), be deactivated by software without having to disconnect the wire.

Press OK to confirm.

The system returns to EXT INPUT.

11.2.2. EXT INPUT: Button functions

Functions of the button:

- OVERRIDE has the same function as manual switching, but via the button. When the button is pressed, the channel status reverses until the next automatic or programmed switch.
- TIMER offers the option of loading the internal sequence timer of the time switch with a previously set sequence duration and of starting the sequence function by pressing the connected button.
  - The desired channel status (ON or OFF) and the timer sequence time in hours and minutes must be entered.
  - If the button is pressed, the timer is loaded with the set time and the channel is set to the stipulated ON or OFF status (e.g. button press = ON for 5 minutes).
  - If the button is pressed again whilst the timer time is elapsing, the timer channel status remains unchanged and the counter starts again from the full sequence time.
  - You can delete the timer by holding the button down for at least 3 seconds or selecting MANUAL menu → END TIMER.
- STAIRCASE LIGHT (for resetting or deactivation, adjustable from 1 minute to max. 23 hours 59 minutes)
  - For resetting: press the external button and the corresponding channel is switched on for the set time. Press the external button again whilst the time is still elapsing and the time starts to run down from the beginning again.
  - For deactivation: press the external button and the corresponding channel is switched on for the set time. Press the external button again whilst the time is still elapsing and the time ends.

<u>BUTTON – OVERRIDE function</u>

Press OK to confirm.

Press OK to confirm.

When OVERRIDE is confirmed with the OK button, the system returns to auto mode and OVERRIDE operation (switching preselection) is set.

BUTTON – TIMER function

Press OK to confirm.

Use button ► to change to TIMER.

Press OK to confirm. Buttons ► can now be used to select ON/OFF.

Confirm the ON or OFF selection by pressing OK.

Use the buttons ► to enter the hours and press OK to confirm.
Then enter the minutes in the same way and press OK to confirm.

The system returns to EXT INPUT.

BUTTON – STAIRCASE LIGHT function

Press OK to confirm.

Press button ► twice to change to the STAIRCASE LIGHT menu.

Press OK to confirm the STAIRCASE LIGHT menu.

It is now possible to choose between FOR RESETTING and FOR DEACTIVATION.

or use button ► to change to 

Press OK to confirm.

Use the buttons ► to enter the minutes and press OK to confirm.

The system returns to EXT INPUT.

11.2.3. EXT INPUT: Switch functions

Functions of the switch:

- PERM ON switches the channel ON when the switch is closed.
- PERM OFF switches the channel OFF when the switch is closed.
- ONLY ASTRO offers the option to press the external switch and enable only the switching times that have been calculated astronomically to be active, i.e. programmed switching times in the standard and special program have no effect when the switch is closed.
- SPECIAL 1 ASTRO PROG offers the option to press the external switch and enable only special program 1 and the switching times that have been calculated astronomically to be active. The programmed switching times in the standard program then have no effect.

SWITCH – PERM ON function

Press OK to confirm.

Press OK to confirm.

The function of the external input is activated. The system returns to EXT INPUT.

SWITCH – PERM OFF function

Press OK to confirm.

Use button ► to change to PERM OFF.

Press OK to confirm.

The function of the external input is activated. The system returns to EXT INPUT.

SWITCH – ONLY ASTRO function

Press OK to confirm.

Press button ► twice to change to the ONLY ASTRO menu.

Press OK to confirm.

The function of the external input is activated. The system returns to EXT INPUT.

SWITCH – SPECIAL 1 ASTRO PROG function

Press OK to confirm.

Press button ► three times to change to the SPECIAL 1 ASTRO PROG menu.

Press OK to confirm.

The function of the external input is activated. The system returns to EXT INPUT.

11.2.4. EXT INPUT: Applications

- Remote switching application:
    - Control the external input via modem.

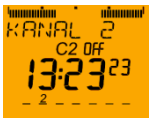
- Semi-automatic OVERRIDE application:
    - The semi-automatic function offers various implementation options in the residential and commercial property fields for switching on the lights in corridors, hallways and staircases, switching on the lights in offices for cleaners for a short period, etc.
    - Switch on light manually (EXT input button = manual override), but switch off again in a time-controlled manner (only OFF switching times are programmed).
    - The semi-automatic function therefore prevents undesired lighting during the whole night.
    - Switch on light automatically using an ON time in the time switch, but switch off again by hand using the EXT input button = manual override. As a precaution, a very late OFF switching operation can also be programmed via the time program.
    - The manual switch-off prevents unnecessarily long ON switching operations and, in the case of short ON switching operations, an unwelcome "getting caught in the dark".

- TIMER application:
    - The TIMER offers a wide variety of implementation options in the residential and commercial property fields, e.g. switching off of lights in utility and cellar rooms (automatic switch-off).
    - The light is switched on manually (EXT input button = TIMER ON with specific switch-on time) and switched off after the timer time has elapsed.
    - Pump controls example: by using the time program on the time switch, a time-controlled pump switch-ON/OFF takes place and by using the EXT input button = ON timer 10 minutes, the pump is switched on additionally for 10 minutes if required.

11.2.5. EXT INPUT: Technical information

- 230 V input, i.e. simply connect phase L1 via a switch or button to the EXT input.
- In the time switch there is a resistor of 220 kOhm between Ext input and N. This ensures that a current of approx. 1 mA flows. Therefore, use NYM cable (not bell wire).
- Button with glow lamp path cannot be used.
- The line length is limited to maximum 100 m since, when using cables with several wires with L1, L2, L3 and N in a cable, capacitive pick-ups (overvoltages) can occur (in an extreme case up to 3 mA of current can flow). In the case of a longer line, there is therefore the danger that the control signal on the EXT input cannot be correctly detected.

11.3. OPTIONS menu: LCD lighting



Press the MENU button to open the main menu from auto mode.

Press button ► three times and confirm the OPTIONS menu with the OK button.

Press button ► until LCD LIGHTING appears on the display and confirm with the OK button.

It is now possible to choose between ALWAYS ON and OFF AFTER 1 MINUTE.

or use button ► to change to

Press OK to confirm. The system returns to LCD LIGHTING.

- ALWAYS ON = background lighting is never switched off.
- In the case of OFF AFTER 1 MINUTE, the background lighting is switched off again 75 seconds after the last time the button was pressed.
- Comment: In battery mode (no mains), there is no LCD lighting.

11.4. OPTIONS menu: Language

You can change the language in the text line here (29 different languages are saved).

Press the MENU button to open the main menu from auto mode.

Press button ► three times and confirm the OPTIONS menu with the OK button.

Press button ► until LANGUAGE appears on the display and confirm with the OK button.

Use button ► to change to another language and confirm with the OK button.
The system returns to LANGUAGE.

11.5. OPTIONS menu: PIN

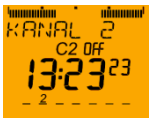
Using the PIN menu item, it is possible to lock the time switch keypad.

In this case, a four-digit PIN can be entered and, after activation of the PIN, time switch operation is locked out. When pressing the buttons, the correct number combination is required in order to release the operating access to the time switch.

The PIN menu item has two sub-menus: NO PIN – WITH PIN

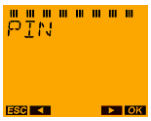
The time switch is delivered without the PIN keypad lock. In the PIN menu, the selection NO PIN appears.

- WITH PIN → OK button
    - The PIN currently saved is shown (default: 00 00).
    - Press the OK button to go to the screen for entering the new PIN.
    - Four digits are requested, one after the other.
    - The time switch is then immediately locked with the PIN entered.
    - Press a button: PIN appears and the first digit can be entered.
    - If no button is pressed for 75 seconds, the time switch is automatically locked again.
- If the time switch no longer locks itself, NO PIN must be selected in the PIN menu and confirmed.
- Super PIN information
    - A super PIN specific to each device enables each top2 time switch to be unlocked again regardless of the PIN that has been set.
    - The super PIN is generated from the serial number visible on the side of the device. It is therefore unique to each time switch.
    - The super PIN can be determined using super PIN software. Please contact the Theben hotline directly if you wish to find out the super PIN.



Press the MENU button to open the main menu from auto mode.

Press button ► three times and confirm the OPTIONS menu with the OK button.



Press button ► until PIN appears on the display and confirm with the OK button.

or use button ► to change to

If NO PIN is confirmed with the OK button, the system returns to PIN.

If WITH PIN is confirmed, the current PIN appears on the display (in this case, 0000). Press OK to confirm.

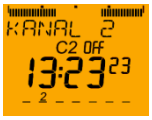
NEW PIN appears on the display. The first position flashes.

Now you can use button ► to select numbers 1 to 9 for the first position and
press OK to confirm.
Then select the second position, and so on. Keep confirming until the system returns to the previous menu.

Important: The PIN is immediately valid and the time switch is locked by it.

11.6. OPTIONS menu: Factory settings

This function resets the time switch to factory settings. Any settings made previously are overwritten. The time switch is reset to the delivery condition.



Press the MENU button to open the main menu from auto mode.

Press button ► three times and confirm the OPTIONS menu with the OK button.

Press button ► until FACTORY SETTINGS appears on the display and confirm with the OK button.

Press OK to confirm.

Confirm LOAD FACTORY SETTINGS by pressing the OK button.

The system returns to the delivery condition (see Section 1 Initial start-up).

Behaviour (time reset to the delivery condition)

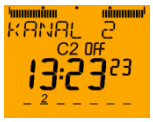
- Language selection (language as in the delivery condition)
- Date (unchanged)
- Time (unchanged)
- Su-wi setting (setting as in the delivery condition)

→ Auto mode

- Reset to the delivery condition
  - Date format
  - Time format
  - LCD lighting
  - Settings for the external inputs
  - PIN is deactivated
  - Holidays empty
  - Su-wi changeover rule
  - All switch commands are deleted
  - The operating hours (without battery and mains hours and without mains connection date) are deleted and the current deletion date is entered.

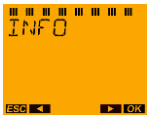
11.7. OPTIONS menu: Info

- The INFO menu item contains four different displays, which show information without text.
- Press the OK button to access display 1, then press OK again to return to the menu (displays 2, 3 and 4 can only be accessed by pressing the right arrow).
    - Display 1: The text line displays the production week, production year and SEL (product name). Example: 06 09 SEL
      (= production date: YY (year) WW (calendar week) SEL.
      The software version is shown in the large 7-segment display.
    - Display 2: The battery hours are shown here.
    - Display 3: The mains hours are shown here.
    - Display 4: The mains connection date is shown here.



Press the MENU button to open the main menu from auto mode.

Press button ► three times and confirm the OPTIONS menu with the OK button.



Press button ► until INFO appears on the display and confirm with the OK button.

Display: production year (07), week (33), designation (TR) and software version (1.23)

Press button ► in order to access display 2 (battery hours).

Press button ► in order to access display 3 (mains hours).

Press button ► in order to access display 4 (date of the first mains connection).

Use button ► to go to END. Press OK to return to auto mode.

11.8. Explanation of priorities (from high to low)

- Highest priority: External input: enable
  External input: perm OFF
  External input: perm ON
  Permanent switching
  Holiday
  Manual switching
  Timer
- Lowest priority: Switching times

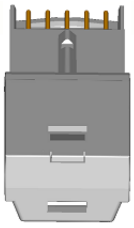
When an ON switching time and an OFF switching time are programmed for the same time, OFF has priority, i.e. there is no ON switching.

- Manual switching priorities:
  - OVERRIDE is deleted by
    - Changing the channel status with a program switch command
    - Permanent being activated (also via external input)
    - Timer being activated (also via external input)
    - Holiday start
    - OBELISK program being started

Note: *Manual switching and timer delete each other upon activation.*

12. OBELISK top2 memory card

All top2/top3 devices can be easily programmed using an OBELISK top2/top3 memory card and OBELISK top2 PC software.



OBELISK top2 memory card

12.1. OBELISK top2 memory card in the time switch cover

The OBELISK top2 memory card can be stored ready-to-use in the time switch cover.

- The time switch cover can be completely closed with an OBELISK top2 inserted, i.e. the time switch can also be sealed with an OBELISK top2 inserted.
- Note: The strap on the OBELISK top2 is suitable for removing with a screwdriver.
- Tip for removing without a screwdriver: press the front part of the OBELISK top2 down and it tilts, making it easier to remove.

12.2. OBELISK copying functions

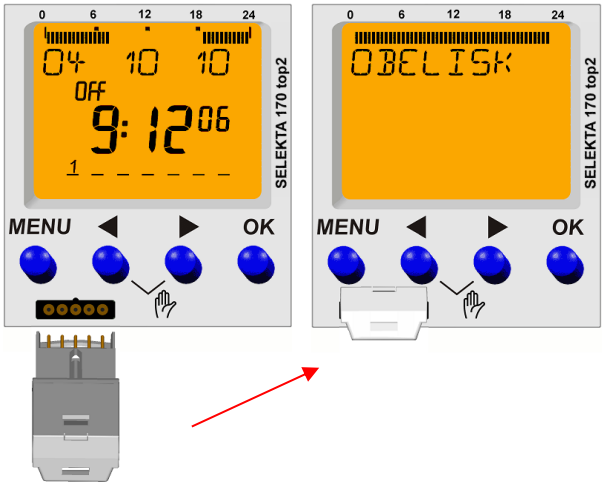
- OBELISK programs do not have to match the device type.
- Examples:
    - OBELISK with SELEKTA 170 top2 program → load into another SELEKTA 170 top2 ⇨ possible ☑
    - OBELISK with SELEKTA 171 top2 RC program → load into SELEKTA 170 top2 ⇨ not possible ⦸
        - As a result, no switching times are transferred either.
    - OBELISK with SELEKTA 170 top2 program → load into SELEKTA 172 top2 ⇨ not possible ⦸

- No option to load the program in C1 or C2 either.

- OBELISK with SELEKTA 172 top2 program → inserted and selected in SELEKTA 170 top2: COPY TIME SWITCH → OBELISK (overwrite) ⇨ possible ☑

12.3. OBELISK menu

If an OBELISK top2 memory card is inserted in auto mode, the OBELISK data is verified (this lasts for a few seconds and is shown by a progress bar):



- If the OBELISK top2 does not match the time switch type, OBELISK ERROR is shown. Only the copying process TIME SWITCH → OBELISK is still possible. When selecting other menu items, OBELISK ERROR is shown.

- If the OBELISK top2 and time switch do match, the OBELISK menu is shown.

COPY OBELISK → TIME SWITCH
continue with button ▶

or execute with OK

COPY TIME SWITCH → OBELISK
continue with button ▶

or execute with OK

START OBELISK PROGRAM (for a description, see 13.4)
continue with button ▶

CHECK OBELISK
continue with button ►

END

If the OBELISK top2 is disconnected again whilst the OBELISK menu is displayed, the OBELISK menu is exited and, after displaying "ABORT" briefly, the system returns to auto mode.

Exception If the OBELISK top2 is disconnected after confirmation of the END menu, ABORT is not displayed.

- *Notes:*
    - *When the OBELISK top2 is inserted, only both right-hand buttons ► and the OK button are available, since both left-hand buttons "Menu" and ◄ are difficult to operate.*
    - *An inserted OBELISK top2 is not detected if the time switch is reset → needs to be removed and re-inserted.*
    - *If the time switch is locked by a PIN, an inserted OBELISK top2 is ignored.*
    - *If no button is pressed in the OBELISK menu for the duration of the automatic return, the system changes to auto mode. If a button is pressed again, the OBELISK menu is displayed again, provided the OBELISK top2 is still inserted.*
    - *When copying, the text COPY is shown for the duration of the copying procedure, along with a progress bar on the time switch display. If the OBELISK top2 is disconnected during this time, incomplete or erroneous program data is stored.*
    - *The power reserve is reduced when OBELISK top2 is inserted (in battery mode).*

Note: If nothing is saved on the OBELISK top2 (i.e. it is empty) and the menu item COPY OBELISK → TIME SWITCH is selected, an "empty program" is written to the time switch. The switching times in the time switch are deleted.

12.4. Start OBELISK PROGRAM

Insert the OBELISK top2. After verification of the date, the OBELISK menu appears.

Continue with button ► until START OBELISK PROGRAM appears.
Press OK to confirm.

The system switches to auto mode, however, OBELISK is displayed in the time switch text line and the program saved in the OBELISK top2 is active.

- Since this has activated a new switching program, any set MANUAL switching is deleted.

- Press a button on the time switch to end the execution of the program on the OBELISK top2 memory card. After displaying ABORT, the system returns to the OBELISK menu and START OBELISK PROGRAM is displayed.

- In the case of an activated OBELISK PROGRAM, the switch commands are executed from the OBELISK top2. All time switch settings (date format, time format, etc.) remain unchanged and cannot be changed in SELEKTA top2 time switches with the OBELISK top2 memory card either.

- If the OBELISK top2 is disconnected during the execution of the OBELISK PROGRAM, the program is ended. After displaying ABORT, the system changes to the normal auto mode and returns to the switching program saved in the time switch.

- It is also possible to execute an OBELISK PROGRAM with ALWAYS OFF (no switching times or only an OFF switching time is saved). By inserting this OBELISK top2 memory card and starting the OBELISK PROGRAM, it is possible to suppress the execution of the switch commands saved in the time switch.

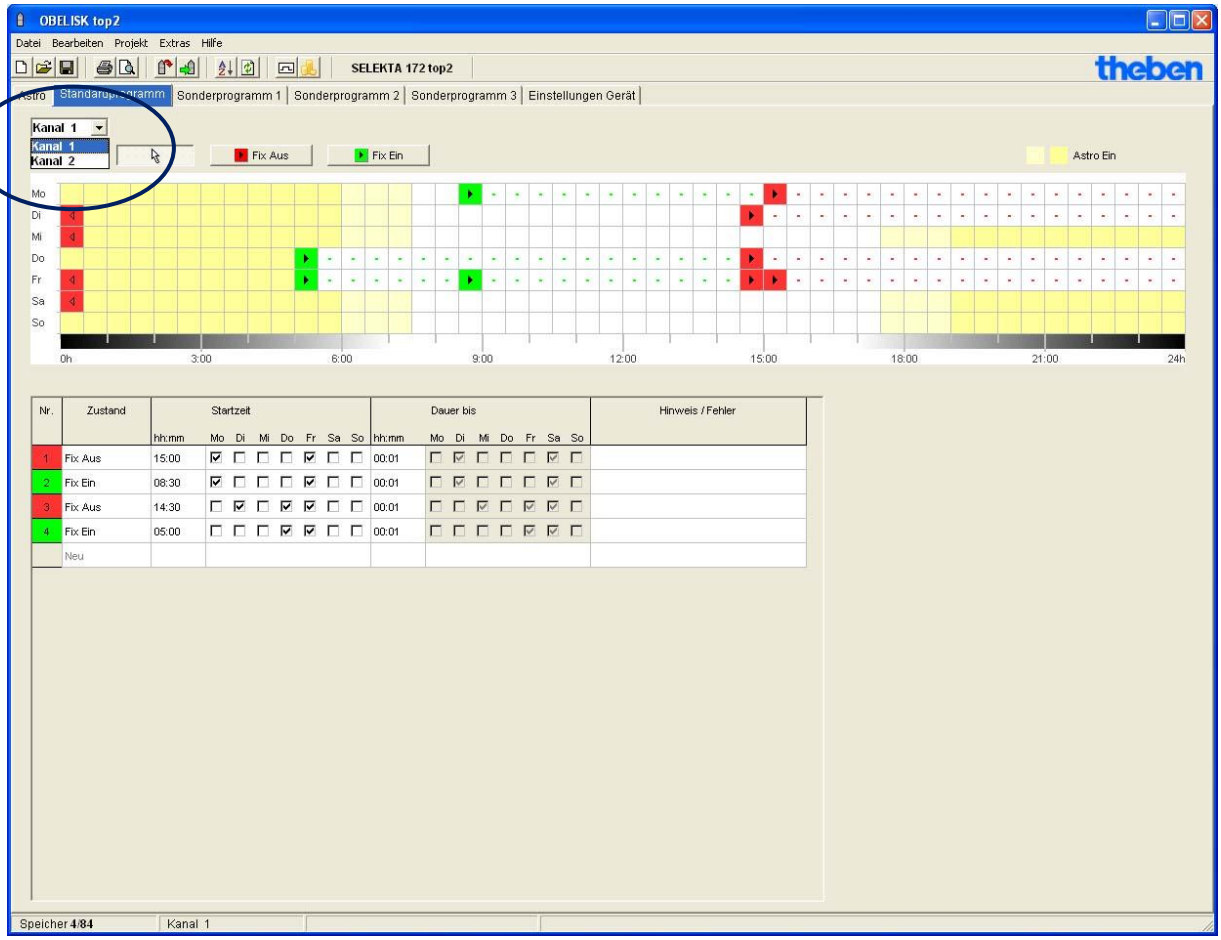
12.5. PC software OBELISK top2

In the download area of the Theben homepage www.theben.de, the PC software OBELISK top2 is available for download free of charge.

Using the OBELISK top2 software, it is possible to easily create switching programs for the time switches on a PC, save them as a project and transfer them to the time switches via the OBELISK top2 memory card.

Software support is available by selecting the item "OBELISK top2 help" under "Help" in the OBELISK top2 software or directly by pressing the F1 button.

Note on the graphical programming of IMPULSE and CYCLE: When programming the impulse and cycle times, it must be ensured that the impulse duration or pulse and pause duration are always entered in the table, otherwise "Program contains errors" is shown (see figure, red circles).



12.6. Speech OBELISK

- Operator guidance in the time switch is given using text fade-ins in the text line. Five different languages are available per item number in the time switch.
- With the support of the OBELISK top2 software, a speech OBELISK can be created. The text data of 30 different languages is stored in the software.
- The speech OBELISK data for a selected language can be loaded into any OBELISK top2 memory card via the USB connector.

USB connector

- A speech OBELISK only contains one language.

- If a speech OBELISK is inserted into a TR top2/top3 time switch, the OBELISK menu appears. The appropriate menu items are now COPY OBELISK → TIME SWITCH and END. In all other cases, OBELISK ERROR is displayed.

- After the copying procedure has been completed, the downloaded language is set as the active language in the time switch.

- If a language is copied into the time switch again, the last language to be downloaded is overwritten.

- If the OBELISK top2 is disconnected during the copying procedure, the re-loadable language in the time switch is deleted for security reasons, since the copying procedure was not complete.

- By copying the program from the time switch to the OBELISK top2 (menu item COPY TIME SWITCH → OBELISK), it is possible to overwrite the OBELISK language again and to therefore generate an OBELISK program.

12.7. What does the normal OBELISK program transfer?

- The OBELISK program for the SELEKTA 170 top2, SELEKTA 171 top2 RC and SELEKTA 172 top2 time switches can only transfer the saved switching programs (switching time, astro times, special programs).

- **Not transferred**: holiday program, language configuration, hour counter, external inputs, LCD lighting setting, date format, summer/winter rule, etc.

13. BLE Bluetooth OBELISK top3

Note: The BLE Bluetooth OBELISK top3 can only be used for devices from the OBELISK top3 range.

In mains mode

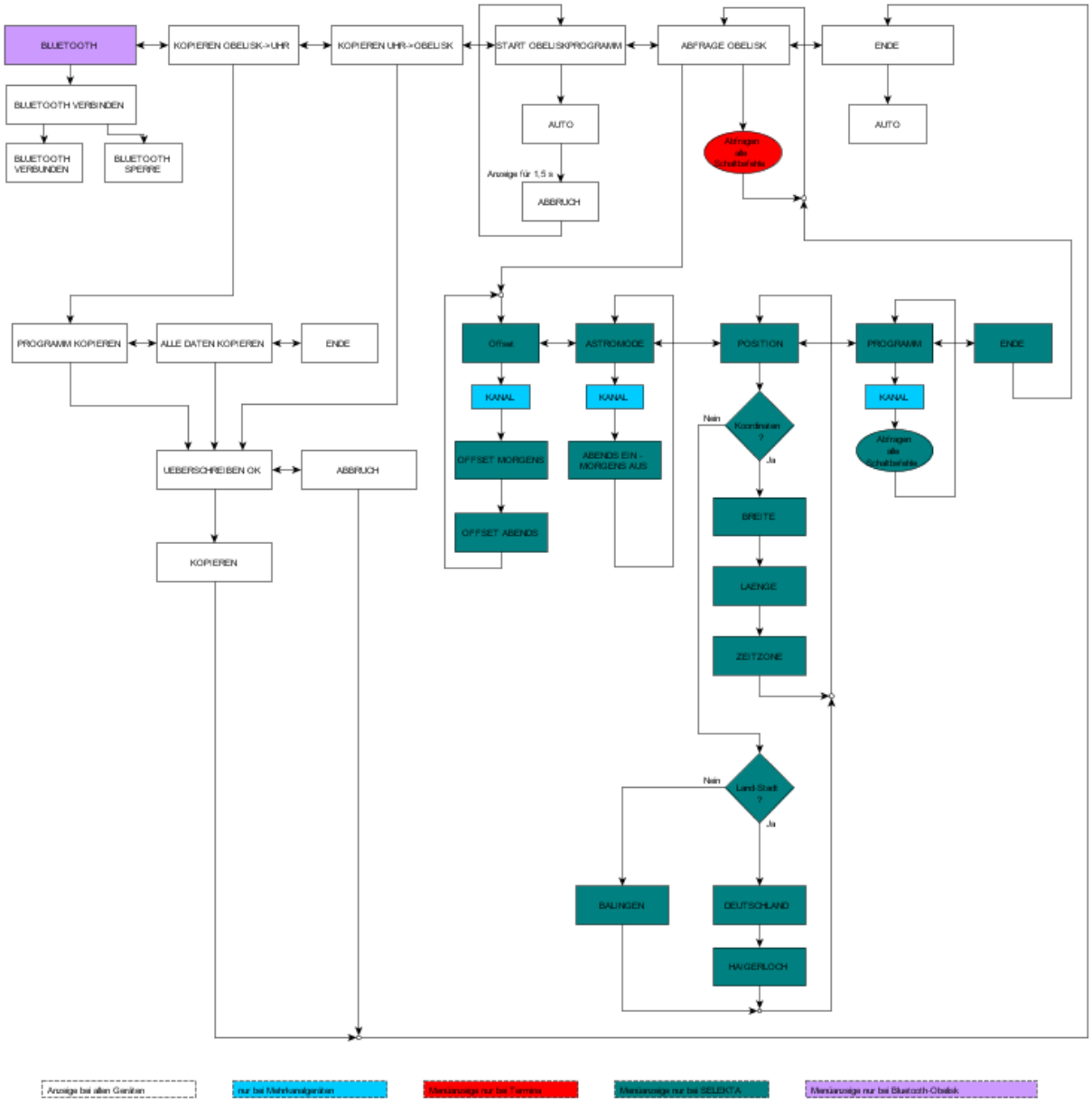
- When the BLE OBELISK top3 is plugged in, the OBELISK menu opens and "BLUETOOTH" is displayed. After 70 s with no BLE connection (no BLE status telegram with the message "Connected"), the clock switches to auto mode.

- Press a button to switch the clock back from auto mode to the "BLUETOOTH" display. If a correct BLE connection code is received whilst the "BLUETOOTH" display is active, "BLUETOOTH ACTIVE" stays displayed.

- If the OK button is pressed in the OBELISK menu whilst the BLUETOOTH display is active, CONNECT BLUETOOTH appears and the system waits for a connection telegram from a BLE node. If a BLE node sends a connection code, that code is accepted and "BLUETOOTH ACTIVE" is displayed.

In battery mode

- It is also possible to establish a Bluetooth connection in battery mode. After 70 seconds, the clock enters sleep mode. Press the OK button twice to wake the clock up again and activate Bluetooth.



13.1 top3 app

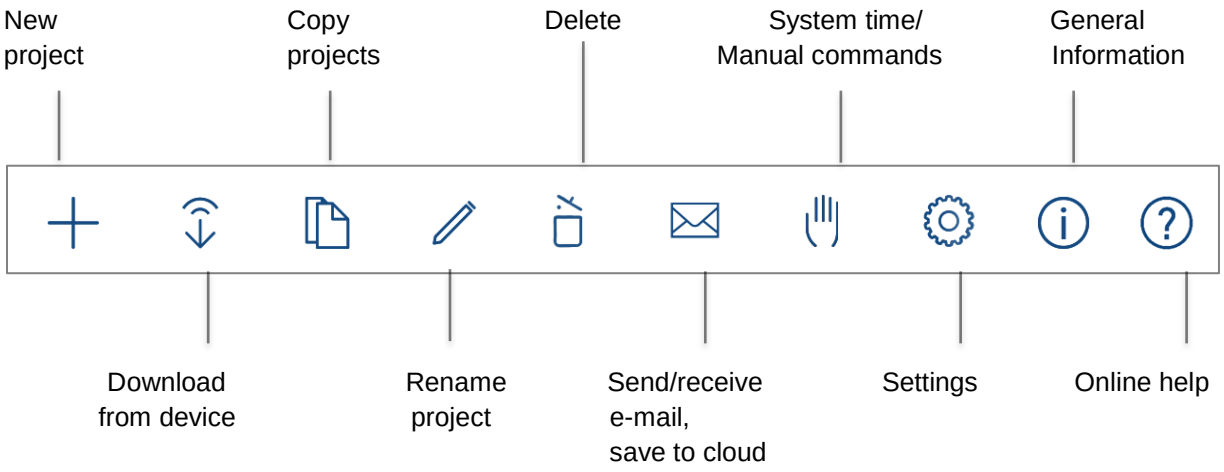
The new top3 generation of Theben devices can be programmed and controlled from mobile end devices (smartphones and tablets) via an app. As well as transferring switching programs, you can also send direct switch and configuration commands to the device.

The app has been developed for Android and iOS operating systems (Android 4.4 KitKat [API18] and higher, iOS 8 and higher).

13.2 Communication

Communication takes place via Bluetooth Low Energy (BLE). The BLE interface takes the form of a plug-in Bluetooth dongle, which is inserted into the standard OBELISK interface and activated.

13.3 Symbols in the app start menu



13.4 Other symbols in the app

Send project/transfer to device

List icon

Graphical view

Channel switchover

13.5 App functions

Projects:

- Create a new project
- Edit existing projects on the mobile device
- Duplicate existing projects on the mobile device
- Transfer existing projects from the mobile device to the time switch
- Transfer existing projects from the time switch to the mobile device
- Send projects from the mobile device via e-mail
- Import/open projects from an e-mail attachment
- Save or load projects to a cloud

Direct commands/Device status:

- Send time and date to the device
- Execute manual switch command
- Enter/delete holiday program
- Read out operating hours

13.5.1 Setting a project weekly program

A project always consists of a program (e.g. Monday to Friday, 8:00 AM ON and 8:00 PM OFF) and device settings.

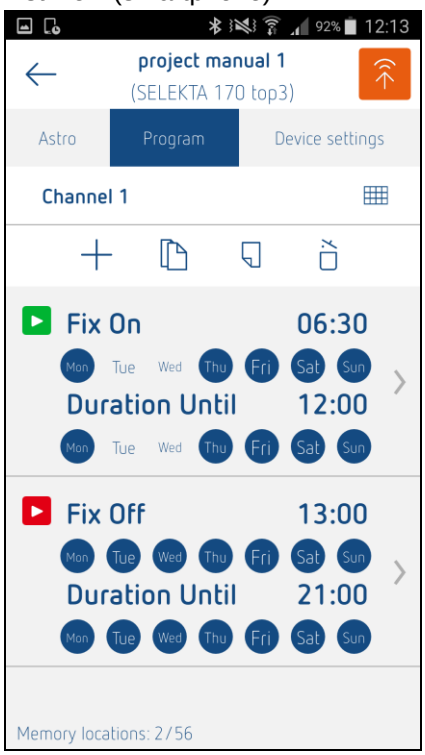
All data (program + device settings = project) can be transferred simultaneously. It is also possible to transfer just the program or just the settings. Check this in the app before starting the data exchange.

A project is always intended for a specific device type (e.g. switching program for SELEKTA 174 top3) and can only be transferred to that same device type too.

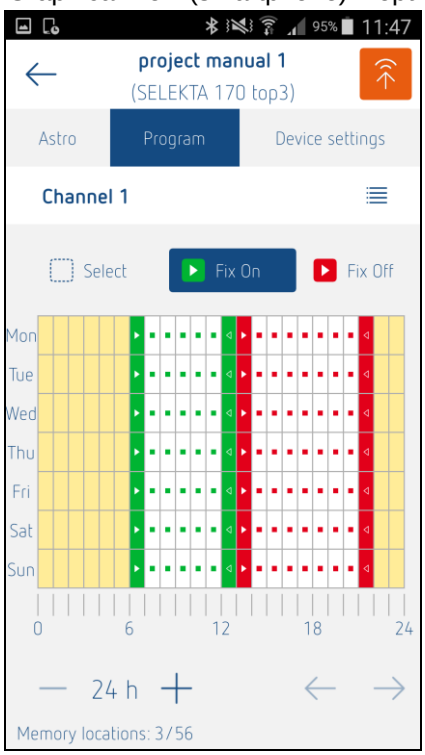
If a device is locked with a PIM code, this is requested before the data is transferred.

Any switch-on and switch-off times you like can be defined for each day of the week. The switching times are set to the minute (hh:mm) either via a list view or, alternatively, a graphical input interface, similar to that found in the OBELISK PC software.

List view (smartphone):



Graphical view (smartphone) – optional:

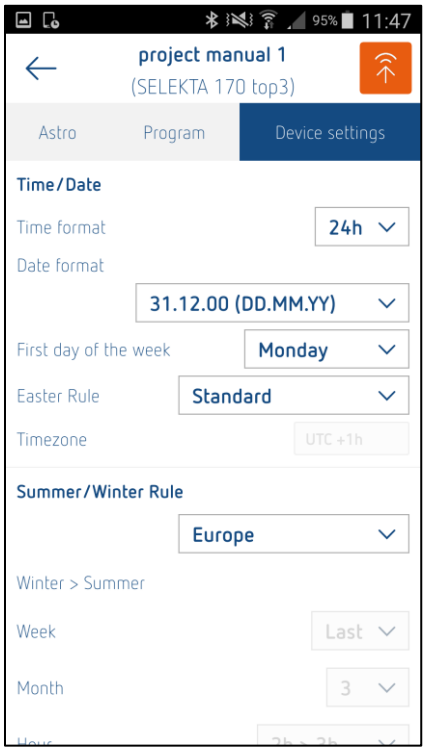


The following device parameters are available as selection boxes:

- Time format
  - 12 h
  - 24 h
- Date format
  - 31.12.00
  - 12/31/00
  - 00-12-31
- First day of the week
  - Monday
  - Tuesday
  - Wednesday
  - Thursday
  - Friday
  - Saturday
  - Sunday
- Summer/winter rule
  - Without summer/winter
  - Europe
  - Europe West
  - Europe East
  - Canada
  - USA
  - IRAN
  - Free rule
  - Fixed date

- Holidays
  - Not active
  - Off

    - On
- Hour counter
    - Service interval
- LCD lighting
    - Off after 1 minute
    - Always on



13.5.2 Creating a new project

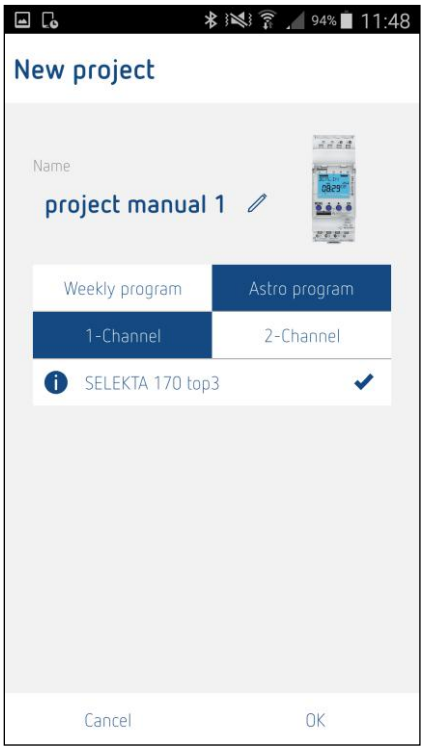
To create a new project, you must first select the device type for which you want to create the project. You can choose from the following device types:

- SELEKTA 170 top3 – astro and weekly program (1 channel)
- SELEKTA 174 top3 – astro and weekly program (2 channels)

Depending on the device type selected, you can then define a weekly program, for example.

Once you have made the required settings, the project is saved in the archive under a project name and can be transferred to the time switch over Bluetooth.

You can either transfer the entire project or just the program (switching times).



13.5.3 Editing existing projects on the mobile device

If existing projects have already been saved in the app, they can be selected and edited.

You can select an existing project by tapping it, then go on to edit it.

On the home screen, a project is identified as follows:

- Name of configuration (e.g. car park)
- Device type (e.g. SELEKTA 170 top3)
- Function icon

13.5.4 Duplicating existing projects on the mobile device

You can duplicate an existing project in the archive (save it under a new project name). You can edit the duplicated project without overwriting the original project.

13.5.5 Transferring an existing project from the mobile device to the time switch

- Here an existing project is selected on the mobile device and transferred to the time switch over Bluetooth.
- You can either transfer the entire project or just the program (switching times).
- Tap the red arrow icon to activate the Bluetooth connection and transfer the project to the time switch.

13.5.6 Transferring an existing project from the time switch to the mobile device

- Here a project is exported from the time switch, loaded to the app over Bluetooth and saved as an OT2 file.
- The project is opened and can be edited or saved locally under a project name. You can also transfer the project to another device.

13.6.7 Sending projects from the mobile device via e-mail 

An existing project file (OT2) can be sent from the app as an e-mail attachment.

This can be done, for example, by opening your standard e-mail program. The project file is inserted into a new e-mail automatically, which you can then send to any e-mail address.

After that, you can archive the project file on a PC, for instance, or edit it in the OBELISK PC software.

The project file must be saved in the OT2 format specific to Theben for this to work. Theben AG will provide the OT2 file format specification.

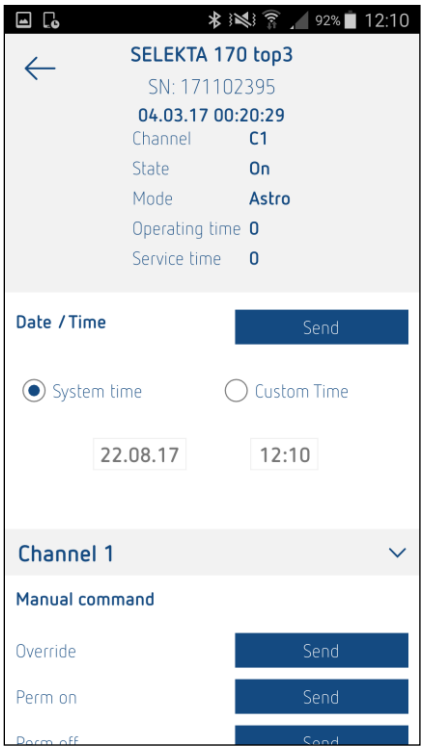
13.5.8 Importing/opening projects from an e-mail attachment

An existing project file (OT2) can be imported into the app from an e-mail attachment and opened there.

The user can, for example, create an existing project file on the PC and send it to the mobile device via e-mail. Tap and open the project.

13.5.9 Direct commands

As well as transferring projects, it is also possible to send direct commands to the devices over Bluetooth.

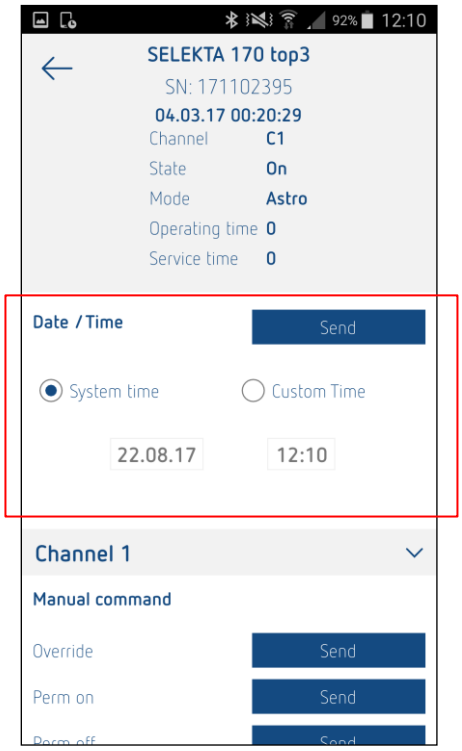


13.5.10 Sending the time and date to the time switch

You can use this app function to correct or modify the time switch time over Bluetooth.

There are two ways of doing this:

1. The mobile device time and date (system time) are transferred to the time switch. DD/MM/YYYY – hh/mm/ss
2. A user-defined time and date are transferred to the time switch. DD/MM/YYYY – hh/mm/ss



13.5.11 Sending location data to the time switch

You can use this function to send current geolocation data to the device. The location data is determined automatically via the smartphone/tablet GPS function or can be entered manually via longitude/latitude degrees.

- Latitude +/- 90°
- Longitude +/- 180°

13.5.12 Executing a manual switch command

You can use this function to switch the channels of the time switch manually (irrespective of the programmed switching times).

The following options are available:

- Manual switching/switching preselection
- Permanent ON
- Permanent OFF

13.5.13 Manual switching/Switching preselection

The channel status (ON/OFF) is reversed. The programmed switching program remains active in the time switch and is executed automatically again on the next switch command.

13.5.14 Permanent ON/OFF

The switching program in the time switch is deactivated and the selected channel is permanently ON or OFF.

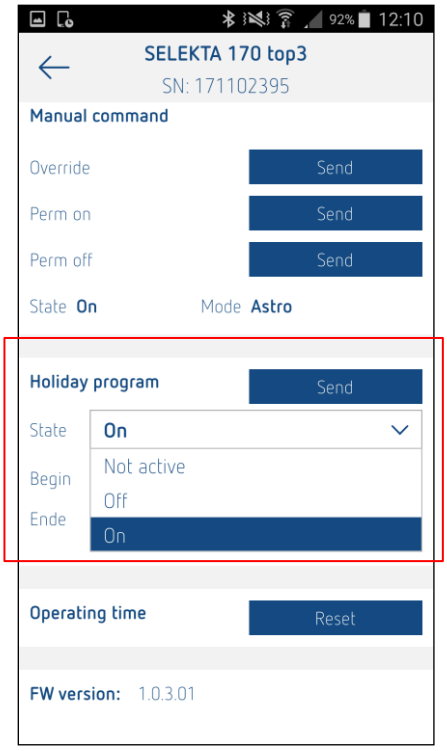
If permanent switching is deactivated, the time switch executes the programmed switching program again.

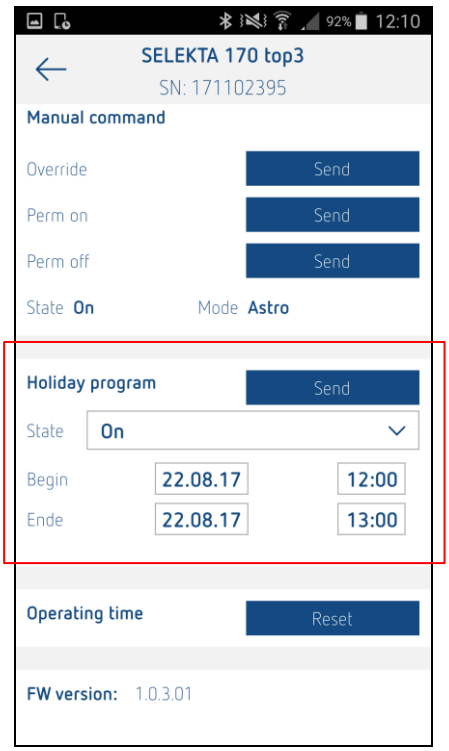
13.5.15 Entering/deleting the holiday program

You can use this function to manually enter or delete the holiday program.

A holiday program is active for a specific date range and is defined using the parameters below.

- Status
  - Not active
  - Off
  - On
- Start date/hour
- End date/hour





13.5.16 Reading out operating hours

The devices contain an hour counter and a service interval can be defined for maintenance purposes.

You can use the app to read out the current number of operating hours and the service interval, if one has been defined, as well as to modify or reset the service interval if required. If the number of operating hours for the service interval have been reached, this should be clear in the app (e.g. info icon, red text).

- Operating hours: Max. 999,999 h
- Service hours: Max. 199,999 h

14 Settings – App interface

The user can adjust the following settings for the app interface under the "Settings" menu item:

- Language
- Date format
- First day of the week
- Vibration/system tones
- Help
- Info

14.1 Language

You can select one of the following languages for the app user interface:

- German
- English
- French
- Italian
- Spanish
- Portuguese
- Dutch
- Swedish
- Danish
- Finnish
- Norwegian
- Hebrew
- Polish
- Turkish
- Greek
- Russian
- Czech
- Slovakian

The system language set for the smartphone/tablet is adopted as the default setting. However, the language can be changed manually under the "Settings" menu item.

14.2 Date format

The following options are available:

1) 31.12.00 – DD.MM.YY
2) 12/31/00 – MM/DD/YY
3) 00-12-31 – YY-MM-DD

The default setting is option 1 (31.12.00).

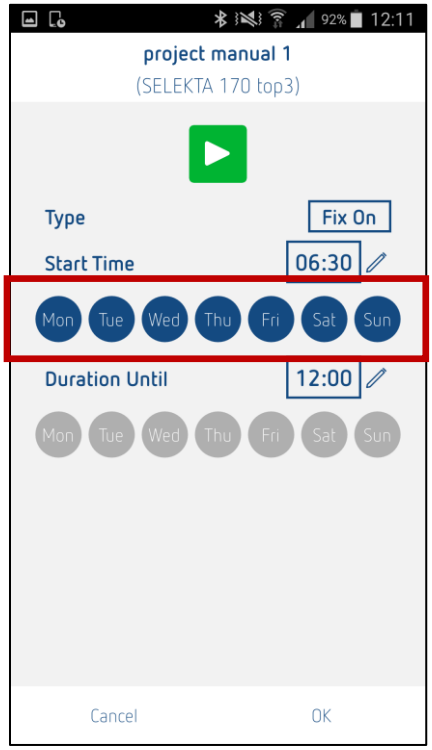
14.3 First day of the week

The following options are available:

1) Monday
2) Tuesday
3) Wednesday
4) Thursday
5) Friday
6) Saturday
7) Sunday

The default setting is option 1 (Monday).

The "First day of the week" setting is relevant for displaying programmed switching times. In some countries, Monday is not considered the first day of the week.



14.4 Vibration/System tones

The app vibrates or emits tones to give the user feedback (e.g. data transferred successfully, no Bluetooth device found). If the user does not want any feedback, it can be deactivated.

14.5 Help

This section provides links to the relevant online guides on the Theben website.

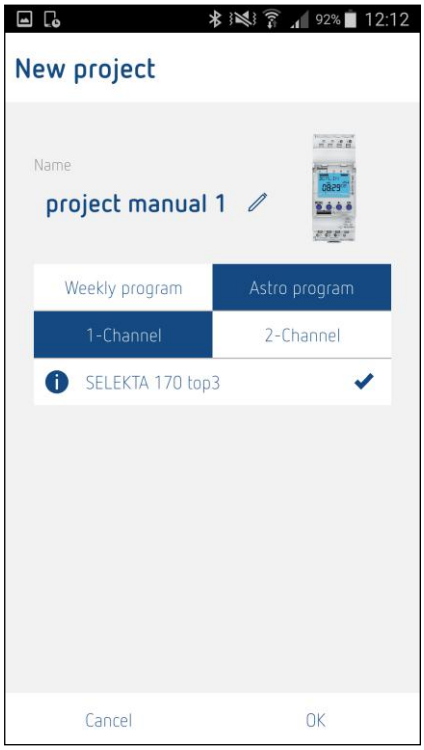
14.6 Info

App-specific data is displayed:

- Software version
- …

14.7 Creating a new project (see also page 86)

You can use the "+" icon in the navigation bar to create a new project.

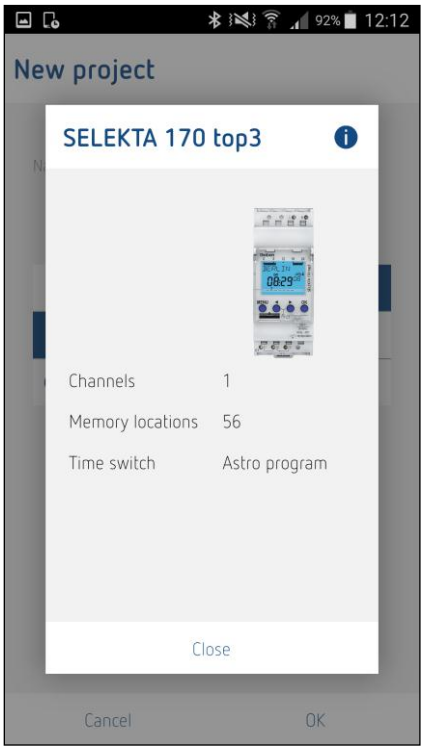


If a device is selected in the list, an image of the device appears in the selection window.

Tap the "**Cancel**" button to go back to the home screen.

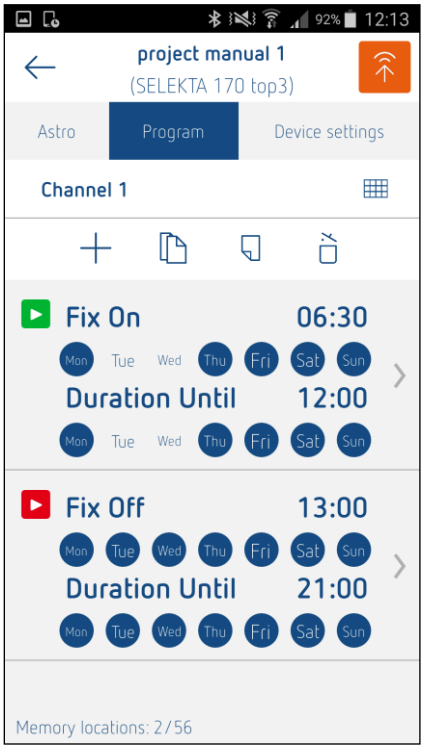
Tap the "**OK**" button to go to the programming view.

Tap the "**Info**" icon to display more details about the device.



14.8 Programming switching times in the list view (see also page 85)

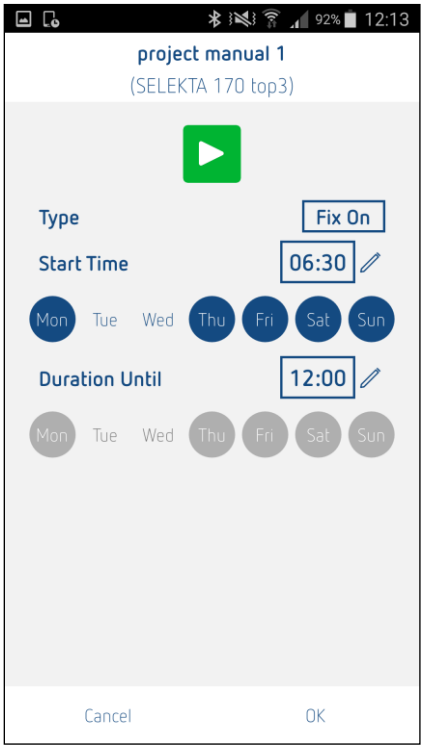
In the list view, all existing switching times are shown in list format.



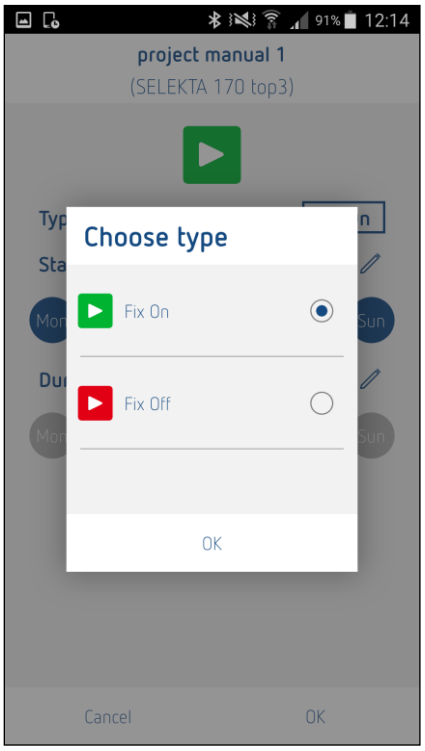
Description:

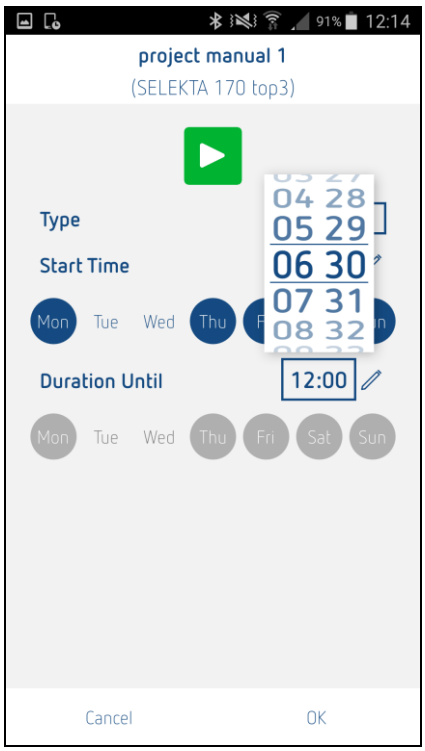
The list view displays the most important data relating to switching times
(type > ON/OFF, switching time, week days when the switching time applies).

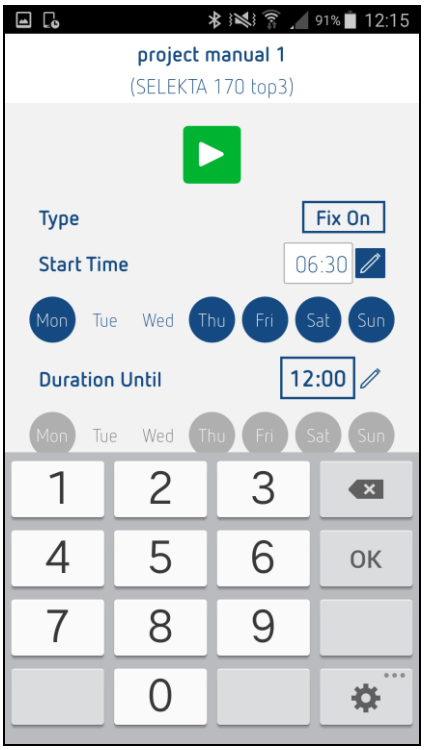
Tap a switching time to go to editing mode (for editing a switching time).



Enter the parameters (type, time, week day). The switching time can be entered either via the time picker or directly using the number pad.

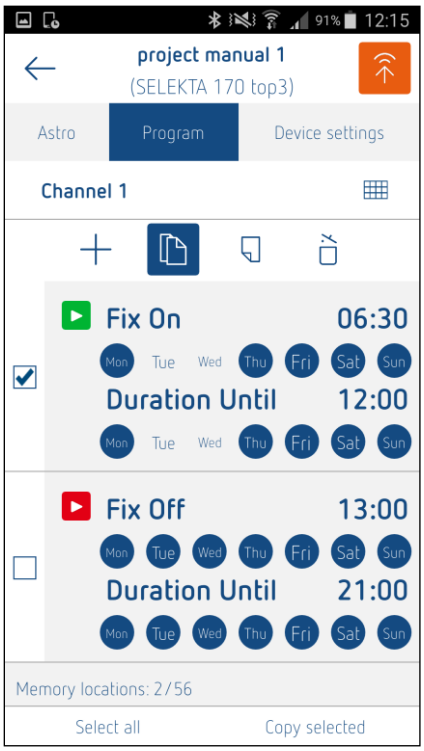

project manual 1
(SELEKTA 170 top3)
Choose type
Fix On
Fix Off
OK
Cancel
OK


project manual 1
(SELEKTA 170 top3)
Type
Start Time
04 28
05 29
06 30
07 31
08 32
Mon Tue Wed Thu
Duration Until
12:00
Mon Tue Wed Thu Fri Sat Sun
Cancel
OK

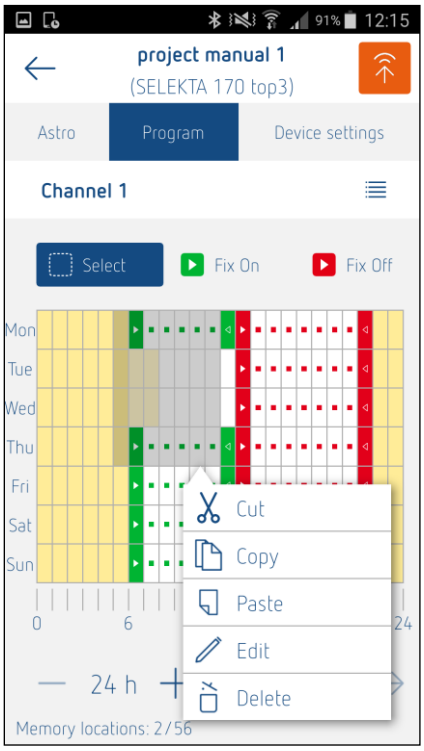

project manual 1
(SELEKTA 170 top3)
Type
Fix On
Start Time
06:30
Mon Tue Wed Thu Fri Sat Sun
Duration Until
12:00
Mon Tue Wed Thu Fri Sat Sun
1 2 3
4 5 6 OK
7 8 9
0

14.9 Copying switching times

You can use the "Copy" icon to copy one or more switching times from the list. A selection box appears to the left of every switching time in the list, as does a "Select all" field above the list (which is used to select all switching times in the list).

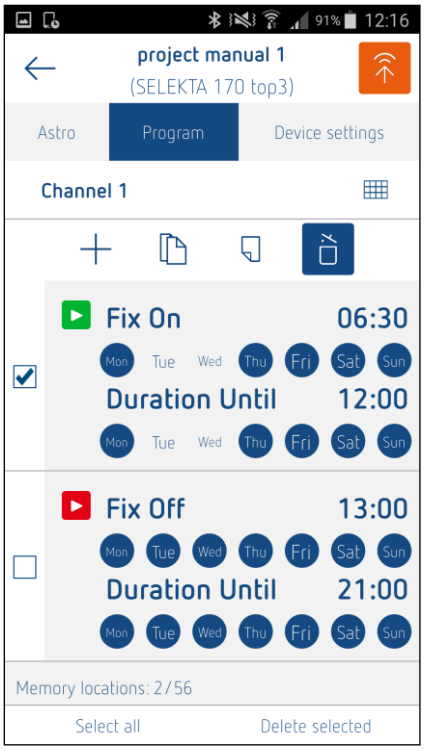


The selected switching times are now available on the clipboard and can be inserted again in any location (e.g. channel 2) via the "Paste" icon.



14.10 Deleting switching times

You can use the "Delete" icon to delete one or more switching times from the list. A dustbin symbol appears to the left of every switching time in the list, as does a "Delete all" field above the list (which is used to delete all switching times from the list).

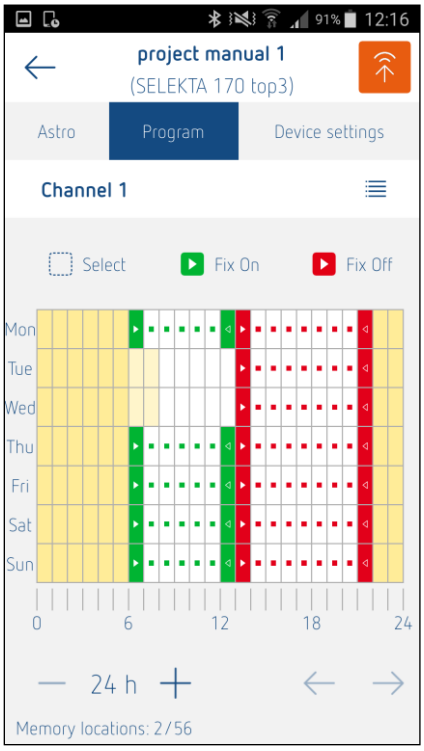


14.11 Programming switching times in the graphical view (optional)

It is possible to define switching times by touching a graphical user interface.

Example: Mon - Fri, 8:00 AM - 2:00 PM each day

Sat and Sun, 6:30 AM - 12:00 PM



With graphical programming, you can touch the screen to set the switching times **for each channel** in a grid. The resolution (time unit per grid element) can be scaled using the zoom function **"– 24 h + "** (1 hour, 30 minutes, 15 minutes). If the time unit is shorter than 1 hour (30 minutes, 15 minutes), you can scroll the programming area to the left or right with the arrows.

The switching status (ON/OFF) must be calculated for the range between switching times. For OFF, the corresponding box stays empty, for ON, a green dot is shown.

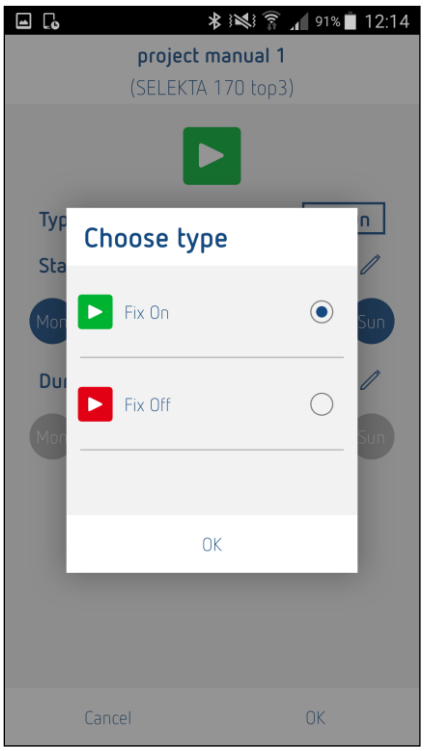
If there are several switching points in a grid range, the box is black.

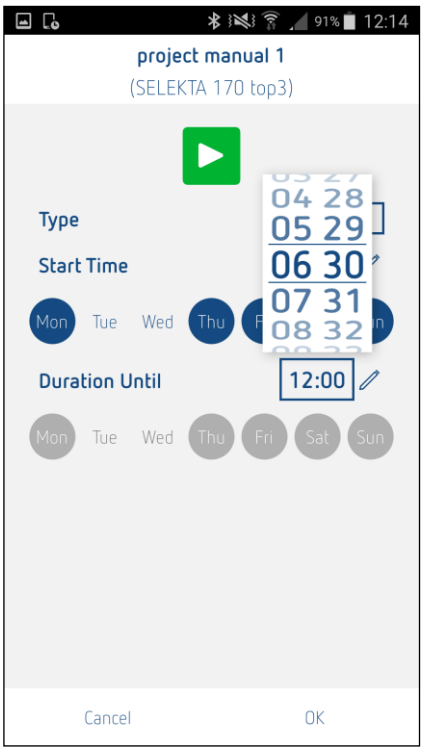
If you tap Select and a switching time, a pop-up menu appears with the options "Copy", "Paste", "Edit" and "Delete".

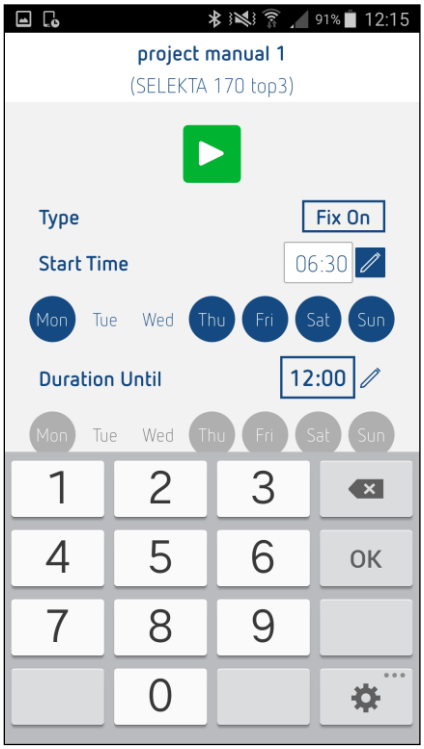
Copy, Paste, Delete: An individual switching time or a selected range

Edit: An individual switching time

A graphical switching time is edited in the list view.

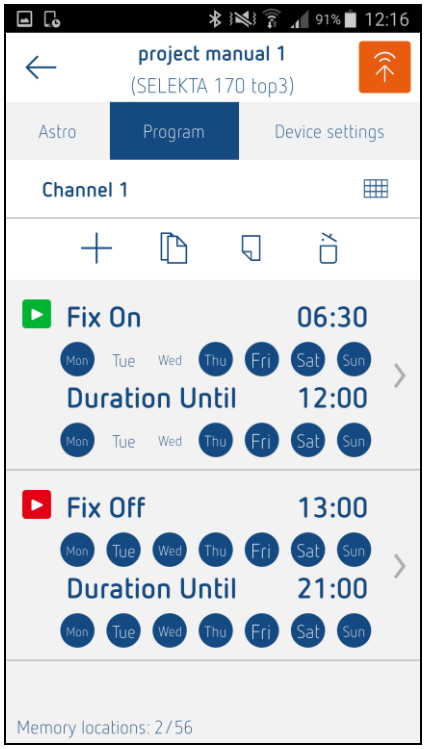






14.12 Programming switching times – List view/Graphical view

Fixed switch-on and switch-off times can be set in astronomical time switches, as well as astro switching points (sunrise and sunset).

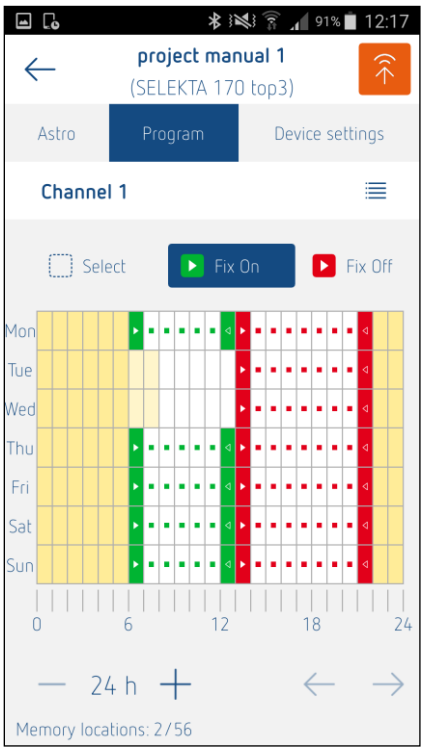


The copy, paste and delete functions (screens) are identical to the time switches.

Note: Here switching times are defined with a start time and "Duration until" (switching time pairs). Internal sorting depends only on the start time.

Several week days (week day blocks) can only be selected if the duration is shorter than 24 hours.

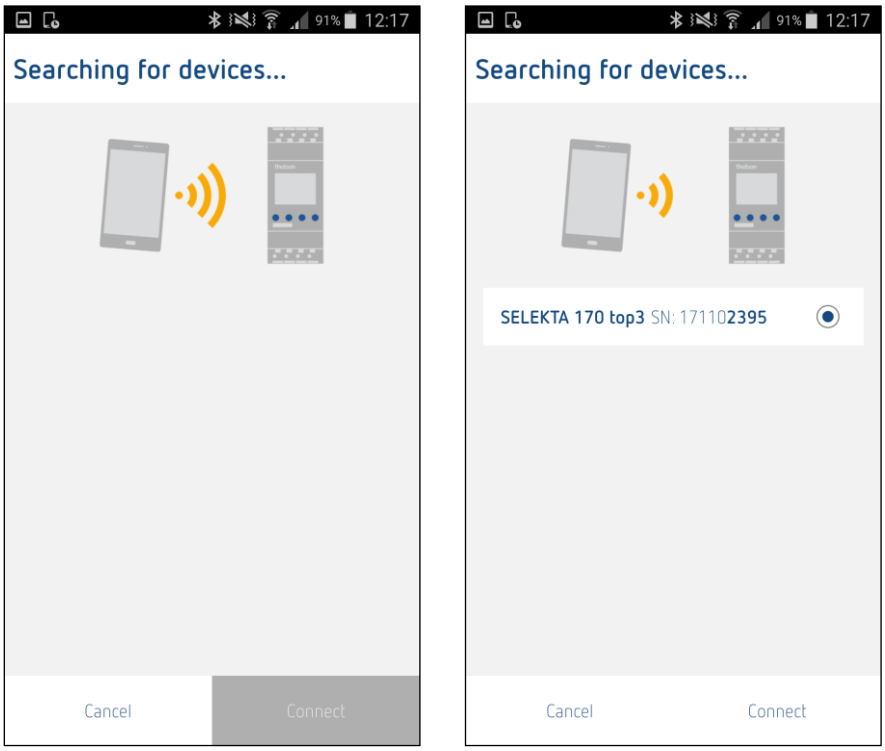
Programming fixed switching times – Graphical view (optional)



For astro time switches (SELEKTA), the earliest and latest sunrise times should be selected in the graphical view (orange/yellow area in the grid).

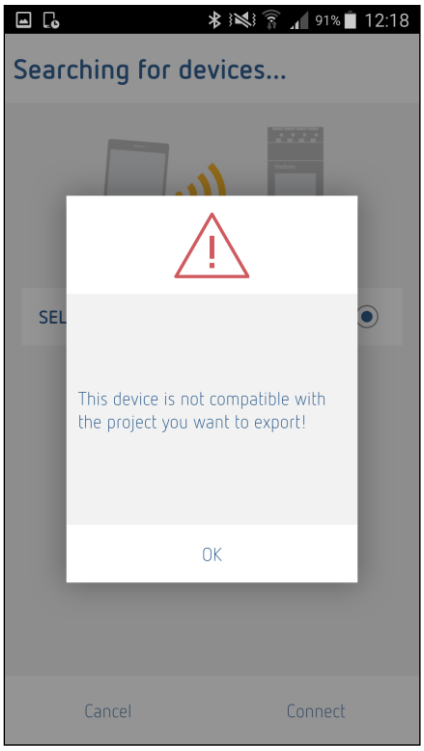
14.13 Transferring switching times from the app to the time switch

Tap the orange arrow symbol to start a transfer and search for all devices available over BLE in the vicinity.



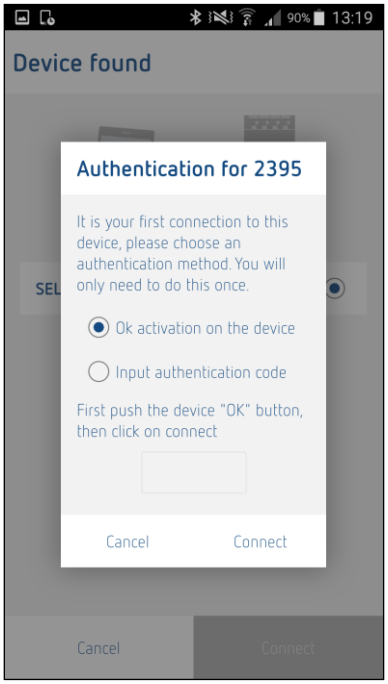
All the devices found appear in a list (devices with a Bluetooth dongle inserted). The device type and serial number (with the last four digits in bold) are displayed.

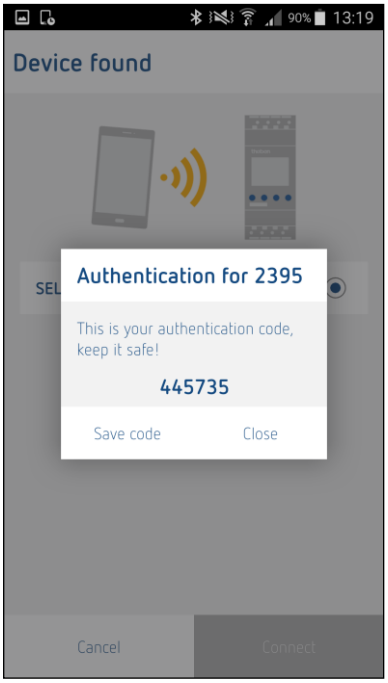
After selecting the required device, you must check that it is of the correct type (example: a SELEKTA 170 top3 project can only be loaded into a SELEKTA 170 top3). If the device type does not match, a corresponding error notification appears:

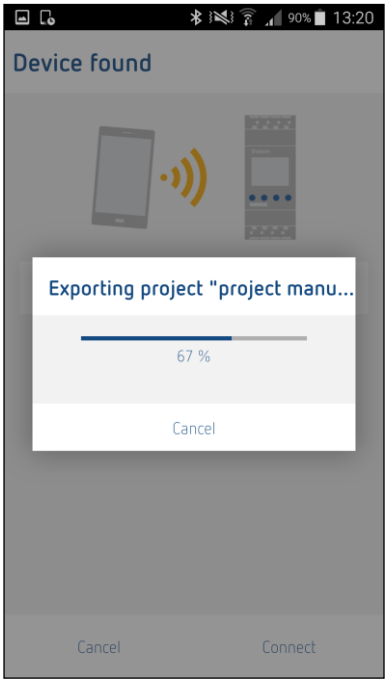


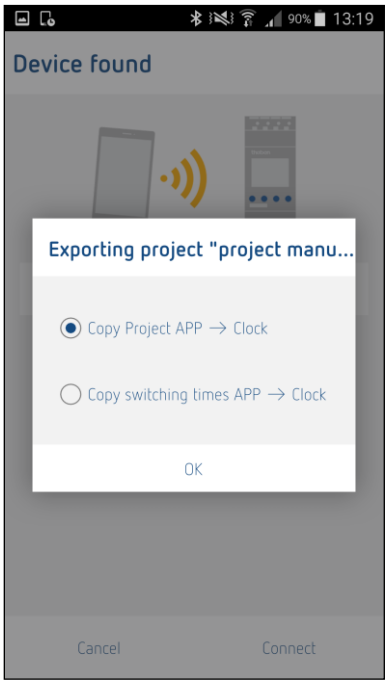
Tip: Load the device project onto your smartphone/tablet first. You then have the correct device automatically.

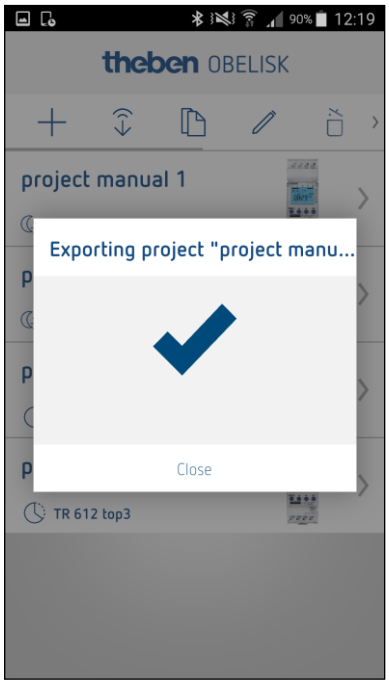
If the device type matches, the connection is established and the program (switching times) or project is transferred.








13:19
Device found
Exporting project "project manu...
Copy Project APP → Clock
Copy switching times APP → Clock
OK
Cancel
Connect


12:19
theben OBELISK
project manual 1
Exporting project "project manu...
Close
TR 612 top3

14.14 Transferring switching times from the time switch to the app

You can export a project from a device to the app via the "Receive data" menu item.

The app searches for all devices available over Bluetooth in the vicinity and displays them in a list.

After selecting the required device, the connection is established and the project is transferred from the time switch to the app. Once data transfer is complete, a "Success" or "Error" message appears.

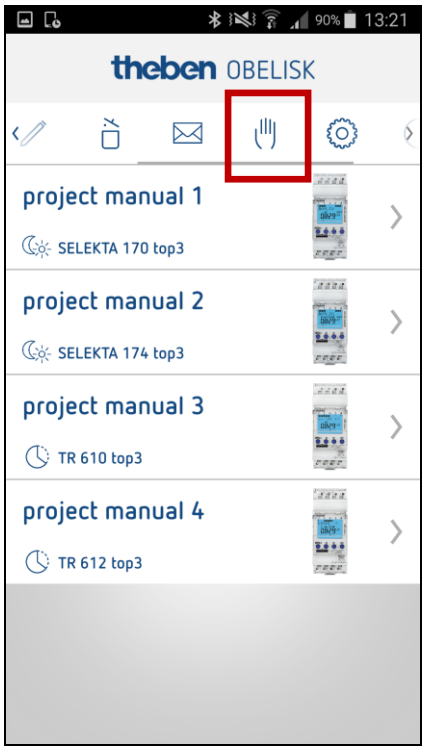
If the transfer was faulty, you can try again or close the dialogue box.

If the transfer was successful, the view changes to edit mode and shows the switching times.

14.15 Accessing the time switch directly

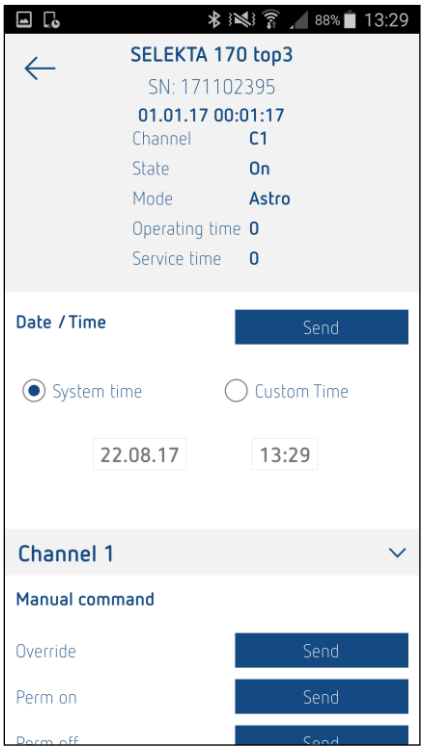
As well as transferring projects, it is also possible to send direct switch and data commands to the device over Bluetooth.

Tap the "Direct access" icon to search for all devices available over Bluetooth in the vicinity and display them in a list.



After selecting the required device, the connection is established and the current system status of the device is shown.

If the transfer was faulty, you can try again or close the dialogue box.

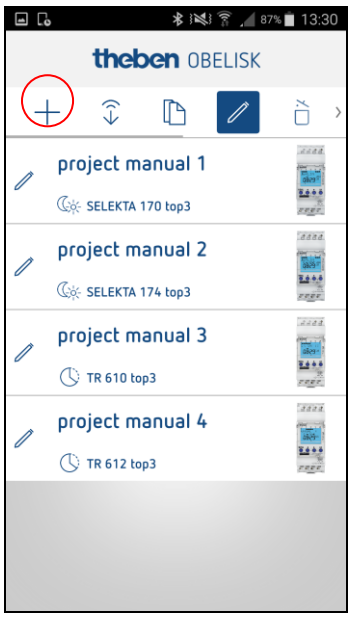


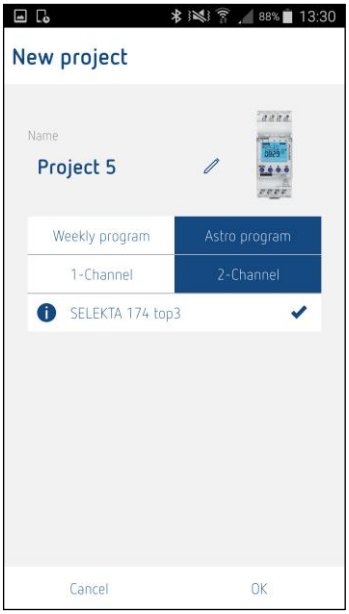
You can now send various direct commands to the device from the overview screen.

15 Example of app usage

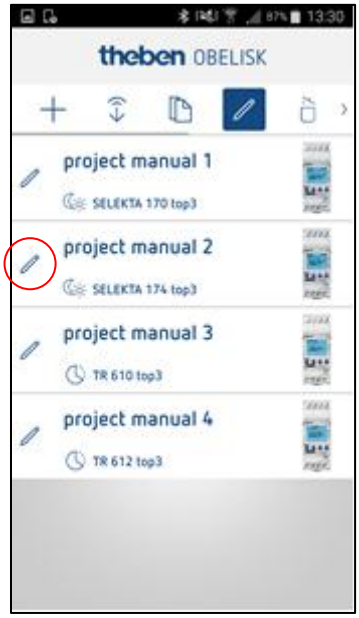
Goal: A SELEKTA 174 top3 time switch with astro and weekly programs is to be programmed so an automatic coffee maker switches on in the morning and off again in the evening.

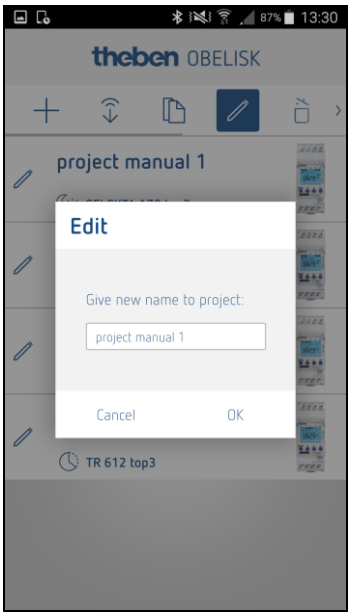
1) Tap the "+" symbol to create a new project. This sub-menu is where you specify the project name (in this example, the project is called "Project manual 1") and select the corresponding device. The SELEKTA 174 top3 is a time switch with astro and weekly programs and two channels. These elements have to be selected now. Then confirm with "OK".





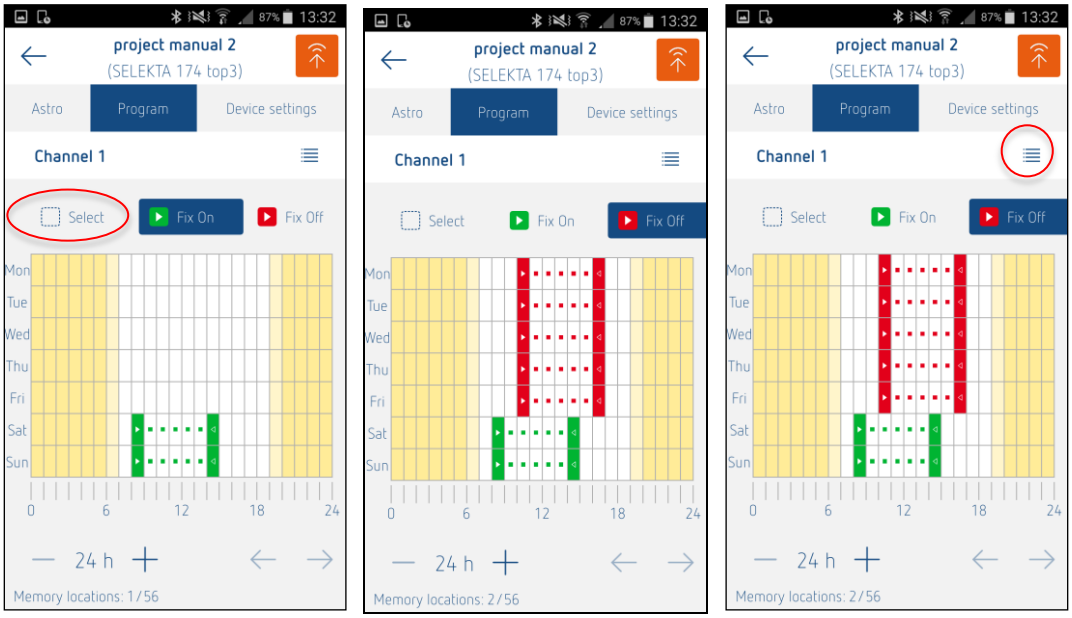
2) Back in the start menu, you can change or create the name. To do this, select the required project by tapping the pencil symbol.



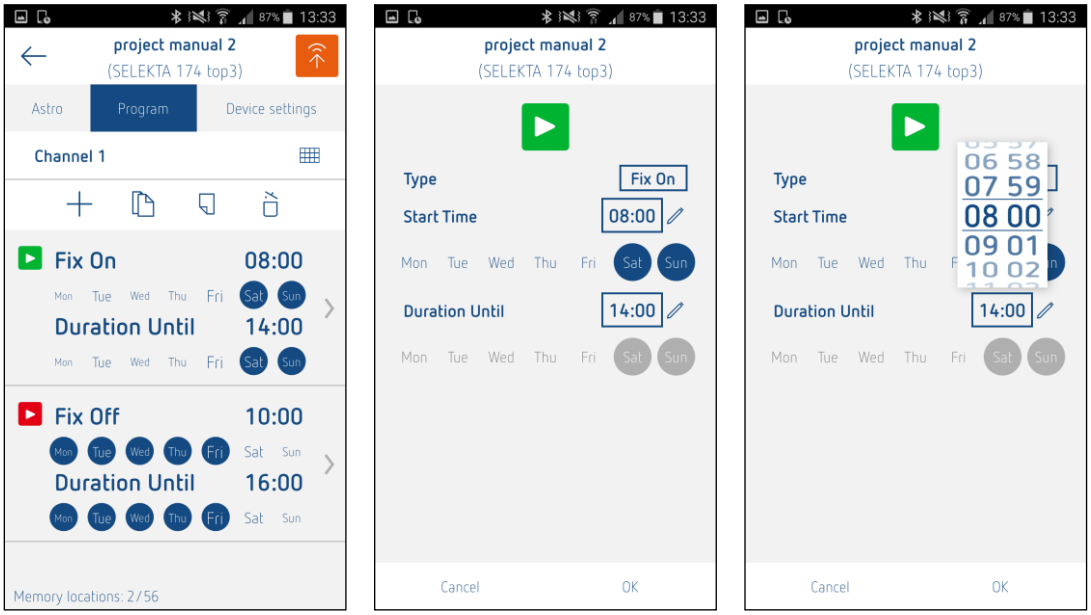


3) Now tap the project to go to the settings. The required weekly and switching times can be set roughly in the menu that opens. For example, the time switch is to be active from Monday to Sunday, from 6:30 AM to 6:00 PM each day. To make these settings, tap "On" and drag your finger over the required week days and times. This defines the switch-on times. Then repeat the procedure for "Off".

You can use the "Select" function to choose several boxes. This opens a sub-menu where you can select the function "Copy", "Paste", "Edit" or "Delete".



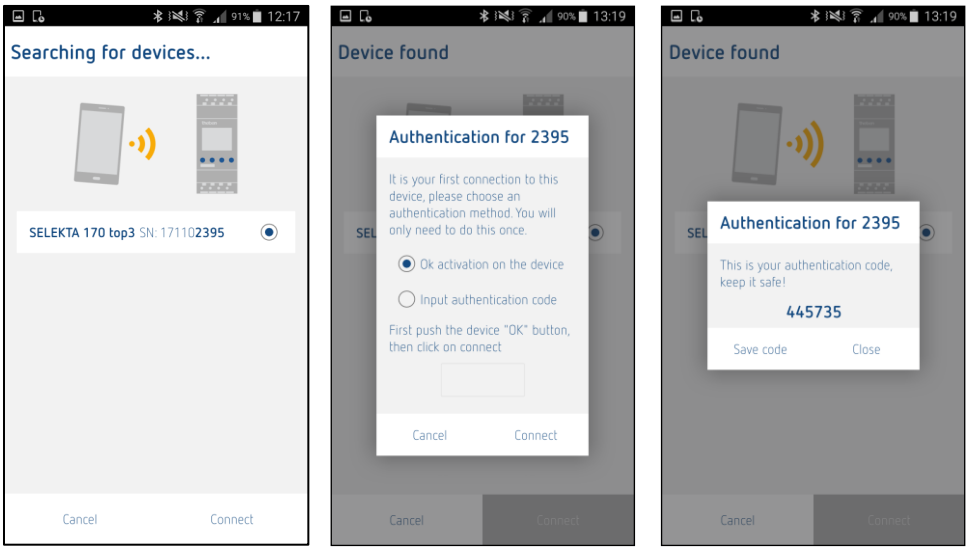
4) If the required weekly times have been set only roughly, you can edit them more precisely by tapping the list icon
"☰". You can define the time to the exact minute for particular days here.

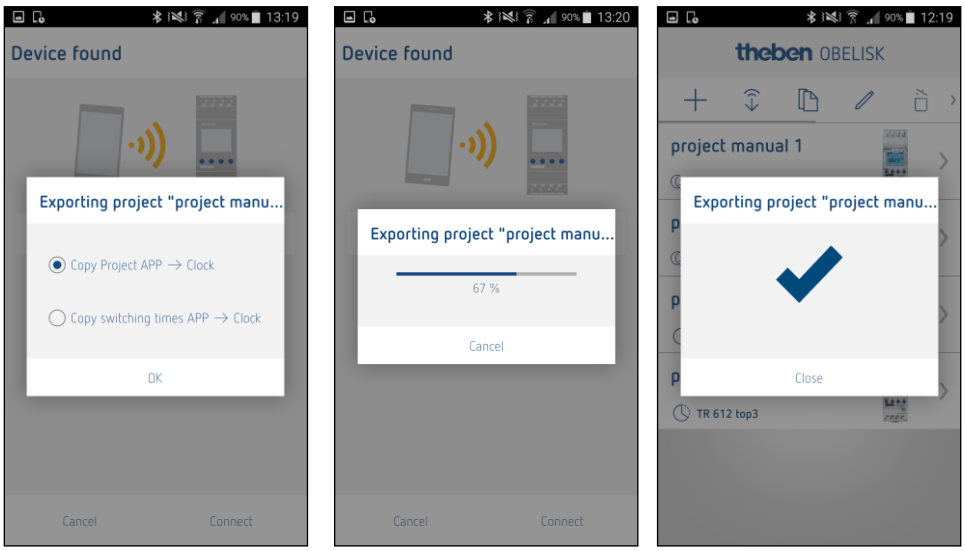


5) Insert the Bluetooth OBELISK top3 into the time switch. "Bluetooth" appears on the display, along with the four-digit serial number of the time switch.

6) **Pairing**: once the program has been defined, the app now has to be connected to the time switch. Tap the "Send function" icon , then tap "Connect". Press the "OK" button on the time switch to start a 30-second countdown. You must confirm the connection in the app within this time by tapping "Connect". The authentication code that appears (see the third image below) allows third parties to connect the time switch to the app in future, without having to involve the time switch itself. This can be helpful if the time switch is inaccessible.

Step 6 only has to be performed on initial start-up. Once the app has been connected to the device for the first time, it is quite easy to transfer projects to the time switch using the "Send function" . The project is now exported and the time switch runs according to the settings that have been made.





16 General application examples

16.1 Lighting of billboards and neon advertising signs

Billboards should be lit up even at night so they are easy to see and grab people's attention. The SELEKTA top2 automatically controls the lighting of company logos, neon advertising signs and information boards.

- Billboards can be lit up 1 hour before sunset (offset -60 minutes) to ensure they are well visible.

- To save energy, lighting for advertising signs can be switched off in the early hours of the morning from 1:00 AM to 4:00 AM, for example, using the night switch-off function.

16.2 Street and facade lighting

If streets are lit up at night, it makes things safer for all road users. Illuminated facades make city centres light and attract people to look round the shops during the evening.

Street lighting is automatically switched on at sunset and off at sunrise.

- **Tunnel lighting special application**: Astro mode is used in reverse here.
  Viewing conditions change as you enter a tunnel and the human eye has to get used to the lower level of light. To ensure the difference in brightness is not too great when entering a tunnel at night and entering it during the day, only every second lamp in the tunnel is switched on at night and all lamps are switched on during the day, for example.

In the interests of cost, facade lighting is usually switched off between the hours of 1:00 AM and 4:00 AM; it is then switched back on at 6:00 AM until sunrise.

16.3 Car park lighting

Car parks are lit up to make them safer and suitable for use at night. SELEKTA top2/top3 can be used to automatically control the lighting of car parks at night. Car park lighting is switched on at sunset and off at sunrise.

17 Technical data

- Minimum loads:
  - 230 V AC: 10 mA
  - 24 V DC: 100 mA
  - The minimum load is required to ensure that the relay contacts do not get dirty.

18 TROUBLESHOOTING

Problem/malfunction:	Hour setting 11:00 PM is not possible for "free rule" and "fixed date".
Cause:	Since it is very complex from a technical software point of view to change the date when performing the summer/winter changeover, this situation is avoided by making it impossible to set the hour to 11:00 PM.
Solution:	Set the summer/winter changeover to 10:00 PM or 12:00 AM (see page 49).

Problem/malfunction:	"The summer/winter changeover does not work properly in Australia!"
Cause:	The changeovers in the southern hemisphere are exactly the opposite of those in the northern.
Solution:	Use the free rule and set the date from the first half of the year (e.g. March) for the summer/winter changeover and the date from the second half of the year (e.g. October button) for the winter/summer changeover. (See page 49 ff.)

Problem/malfunction:	OBELISK top2 does not start when inserted.
Causes:	PIN is activated; incorrect OBELISK; not in auto mode.
Solution:	Set to NO PIN. If you have forgotten the PIN, please contact the Theben hotline. Press the ESC button to return to auto mode. (See page 71 ff.)

Problem/malfunction:	When OBELISK top2 is inserted, the two left-hand buttons do not work.
Cause:	These buttons do not work, as they are difficult to access when the OBELISK top2 is inserted.
Solution:	Only the two right-hand buttons can be used (see page 77 ff.).

Problem/malfunction:	OBELISK top2 displays ERROR on the time switch before overwriting.
Cause:	The OBELISK top2 is not programmed for this type of time switch or has data which is not readable in the required time switch.
Solution:	The only option is to rewrite the OBELISK top2 from the time switch to OBELISK top2 or perform the necessary settings via the PC software (see page 77 ff.).

Problem/malfunction:	"Service" flashes on the display.
Cause:	The set number of operating hours for which the relay was switched on has been reached.
Solution:	Reset the hour counter (see page 63).

19 Service address/Hotline

Service address

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