



talento dialog

Switching programs

compiling

editing

transferring

WA-Ekf 3893/06.99/S:MMS/D:Kohl/80.10.0938.7

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Before starting

Familiarity with the PC and practical experience with Windows are required for successful work with **"talento dialog"**.

You are familiar with the following work steps:

- Creating a file
- Saving a file
- Printing a file
- Mouse function (context menu)

Installation/Deinstallation

Software requirements

This program works under the following operating systems:

- Windows 3.x
- Windows 95
- Windows NT 4.0

Hardware requirements

PC-Hardware:

- 486 DX2 66, Pentium, Pentium-MMX or Pentium II
- 4 MB RAM (8 MB recommended) for Windows 3.x
- 8 MB RAM (16 MB recommended) for Windows 95
- 24 MB RAM (32 MB recommended) for Windows NT
- 4 MB free hard disk memory for installing the program files

External Hardware:

(Digital time switches and accessories):

- Year time switch (talento 891 ... 894; 991 ... 994)
- talento taxxi = Manual programming unit
- Serial cable for connection to the PC
(Standard 1:1 cable, included in the scope of delivery of the talento taxxi-set)

Intalling the Software

This program installs a **Borland data base engine** into the directory **c:\idapi**.

If this already exists, the necessary adaptations are to made during installation. The program is installed in the standard directory **c:\talento**.

All details in this manual refer to this directory.

No conflicts with other applications are currently known when operating "**talento dialog**".

- Insert the data carrier into the appropriate drive.
 - Select the language
 - Select Run ... in the File menu (Windows 3.x).
- or
- Select Run... in the start menu of Windows 95/NT.
 - Start installation with Setup.exe and follow the instructions.

- If the installation has been completely carried out, you can start the program.
Mark the options:
Yes I want to restart the program.

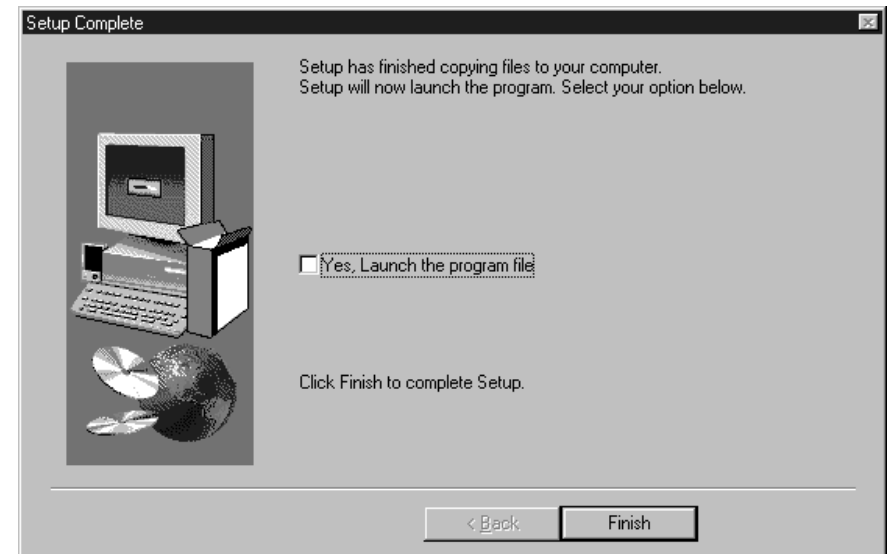


Figure 01: End of installation

Deinstalling software

During the installation, the logic operation “Deinstall” was created in the target program group.

Note: Do **not** delete the Borland database engine (c:\idapi) manually, as the data base can also be used by other user programs. Only if you are absolutely sure that no other application accesses this data base, the directory and entries in the file win.ini can be deleted.
(Also see the Install.log file in the installation directory).

- Windows 3.x:
Start deinstallation in the talento program group.
or
- Windows 95/NT:
Select – Deinstall – in the start menu –
program group – talento.

Follow the instructions.

Introduction

With **"talento dialog"**, compile the switching programs for digital time switches of the type:

- | | |
|--------------------------|--------------------------|
| • talento 891, 1-channel | • talento 991, 1-channel |
| • talento 892, 2-channel | • talento 992, 2-channel |
| • talento 893, 3-channel | • talento 993, 3-channel |
| • talento 894, 4-channel | • talento 994, 4-channel |

without radio interface DCF77

Every switching output of a time switch can control one load (application).

All time switches have 400 memory locations.

In the **Edit switching program window**, the occupied memory locations are displayed, e.g. 53/400, indicated green. However, in the **"talento dialog"** you can create more part-programs (memory locations), indicated red, if you deactivate one ore more part-programs, see Section 3.3.4.

- Switching programs can be created in two different ways:

Under User support, select,
See section 10 :

- Beginners

When compiling the switching programs, an assistant supports you during the individual program steps.

- Advanced

You should already be familiar with the programming steps.

The respective windows for entering the data are called up directly, see Section 3.9.

- The switching programs of the individual switching outputs are shown in clear tables or graphics:
 - Graphic, year
 - Graphic, day(s)
- You can represent the switching programs as an evaluation:
 - Switching times
 - Energy consumption
- You can protect the switching programs with a code word.

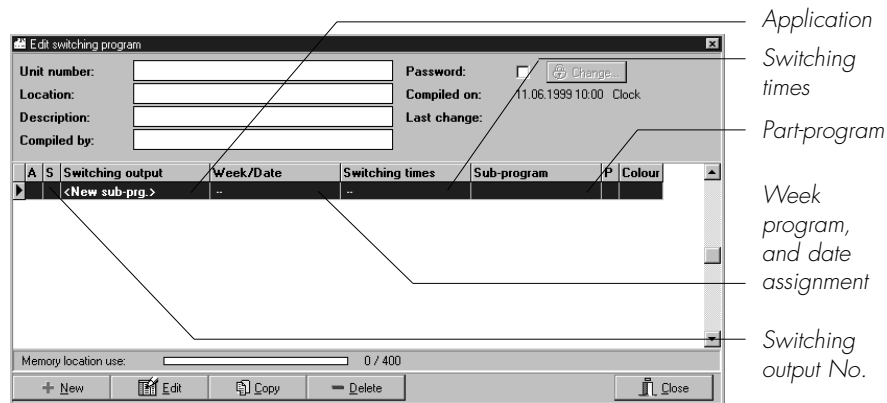


Figure 02: Contents of a part-program

1. Switching programs

Depending on the type of time switch, one to four applications are assigned to a switching program.

- Yard lighting
- Sales lighting
- Advertising lighting

etc.

One or more part-programs form an application. These consist of:

- Date
- Switching times
- Switching commands

There are four different types of programs:

- 1.1 weekly program (without date assignment)
- 1.2 weekly program with date assignment (From – to, without year number)
- 1.3 weekly program with date assignment (from – to, with year number)
- 1.4 weekly program with automatic date assignment

1.1 Week program

A **week program** is a part-program **without** date assignment.

A number – e.g. 1 – is automatically assigned to this part-program.

You define which application is switched on at which days of the week.

Examples:

- Every Monday
- Every Wednesday and Thursday
- Every working day (Monday – Friday)
- Every weekend

etc.

Switching ON and switching OFF of the applications can be programmed at different times for every day of the week.

Weekly programs always have the priority 0, (See Section 3.3.4 for Priority).

Only the priority 1-9 can be assigned to a part-program with date assignment.

1.2 Week program with date assignment, without year number

Standard setting: A complete date with year number, the year number **must** be deselected.

If a date range is assigned to a part-program, e. g. 24.12. to 26.12, all switching times in this part-program are executed in this period **every year**.

This part-program has a higher priority than a week program. However, it can be changed, See Section 3.3.4.

1.3 Week program with date assignment, with year number

Standard setting: A complete date with year number. The year number is maintained.

If a date range is assigned to a part-program, e. g. from 24.12.2000 to 26.12.2000, all switching times in this part-program are executed only once in this period.

This part-program has a higher priority than a week program and a program with date assignment without year number.

However, it can be changed, see Section 3.3.4.

1.4 Week program with automatic date assignment

Date assignments can also be automatically allocated to a part-program. There are two selection possibilities.

You can define these date assignments **with** or **without** a year number.

The corresponding switching times are executed in the usual way in the selected periods.

This part-program has a higher priority than a week program, but it can be changed, see Section 3.3.4.

Note: You assign a date to an existing week program with the switching times No. 1.

The name **date assignment No. 1**: is allocated to this date assignment.

When you create a new part-program, proceed as described in Section 3.3.

The new part-program, a new date assignment and new switching times automatically receive a name with ascending numbers, e.g. for switching output 2:

Date assignment No. 2

Switching times No. 2

Part-program No. 2

e.g. for switching output 3:

Date assignment No. 3

Switching times No. 3

Part-program No. 3

The date assignments and switching times created in this way can be allocated as required to a new part-program.

e.g. for switching output 4:

Date assignment No. 2

Switching times No. 1

Part-program No. 3

2. Switching commands

Three types are available for switching the applications:

2.1 ON/OFF (Standard)

An **ON/OFF switching command** is always assigned to a switching time.
A load is switched ON or OFF.
The state of the load is maintained until the next switching command.

2.2 Pulse (switching command with a defined length for the ON or OFF state)

A pulse switching command is always assigned to a switching time.
The corresponding switching output is active for the defined pulse time.

A pulse switching command consists of:
Start time
Pulse time (ON or OFF)

2.3 Cycle (cyclical switching command with a defined length for the ON and OFF state)

A cycle switching command is always assigned to a switching time.

The corresponding switching output is active/inactive for the defined times.

A cycle switching command consists of:

Start time

Cycle time (pulse time + pause)

Pulse time

Note: Certain time switches of the "talento" series are suitable for accurate-to-the-second switching (ON and OFF).

If you program switching commands in the second range, the following secondary effects can occur:

- a) impaired lighting unit quality (flicker)
- b) impaired radio reception (crackling)

To prevent this, ensure that:

- a) a maximum of one switching operation occurs per minute, under rated load or
one switching operation occurs per second, at maximum $0,28 \times$ rated load
- b) a maximum of five switching operations occur per minute and
there is more than one second pause between two switching operations

In each individual case, determine whether additional protective measures are necessary, e.g. installing appropriate components (varistor, suppresser diode, RC element)

3. Compiling switching programs

Familiarise yourself with the following sections.
On the basis of an example, you learn how a switching program is compiled. This was stored in your directory during installation on your hard disk (demo.tpx).

3.1 Program start

You learn how “**talento dialog**” is started.

3.2 Preparing a switching program

You learn how to select a time switch with the assistant and how to prepare its applications.

3.3 Compiling a week program

You learn how to compile a weekly program with the assistant.

3.4 Week program with date assignment

The assistant shows you:

- 3.4.1 How to assign a date/date range **without** year number to a week program.
- 3.4.2 How to assign a date/date range **with** year number to a week program.
- 3.4.3 How to assign **automatically** a date/date range with/without year number to a week program.

3.5 Pulse switching commands

You compile switching times with a pulse function.

3.6 Cycle switching commands

You compile switching times with a cycle function.

3.7 Copying part-programs

You learn how to copy and individually edit a part-program.

3.8 Deleting

You delete/remove entire part-programs and individual contents.

3.9 Advanced

When you are familiar with **“talento dialog”**, select the advanced user support, see Section 11.



Figure 03: Select application



Figure 04: Application Assistant

3.1 Program start

You start "talento dialog"

- under Windows 3.x by double-clicking on the **talento** symbol in the corresponding program group.
- under Windows 95/NT via **Start → Programs → talento dialog**

The Intro "talento dialog" window is open.

3.2 Preparing a switching program

3.2.1 Select application

You define for which time switch type the switching program is created.

Click on the **Select application button**,
or

In the menu **File → New...**

A new switching program is created and the **Application assistant** window is opened.

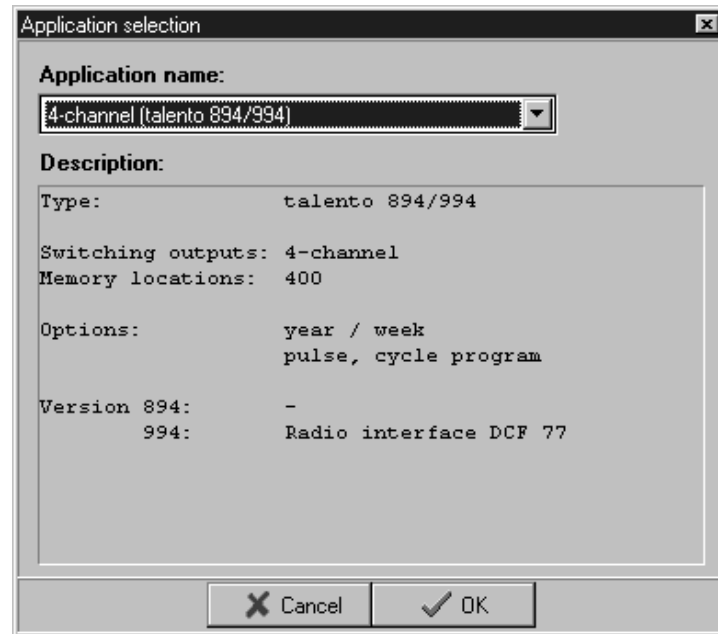


Figure 05: Select application

Click on **Select application...** . The window **Select application** is opened.

Define the time switch type for which the switching program is to be created.

1-channel talento 891/991 or 2-channel talento 892/992
or

3-channel talento 893/993 or 4-channel talento 894/994

Example: 4-channel (talento 894/994)

Select application, close with **OK**.

Click on **Continue** in the assistant. The **Define switching outputs** window is opened.

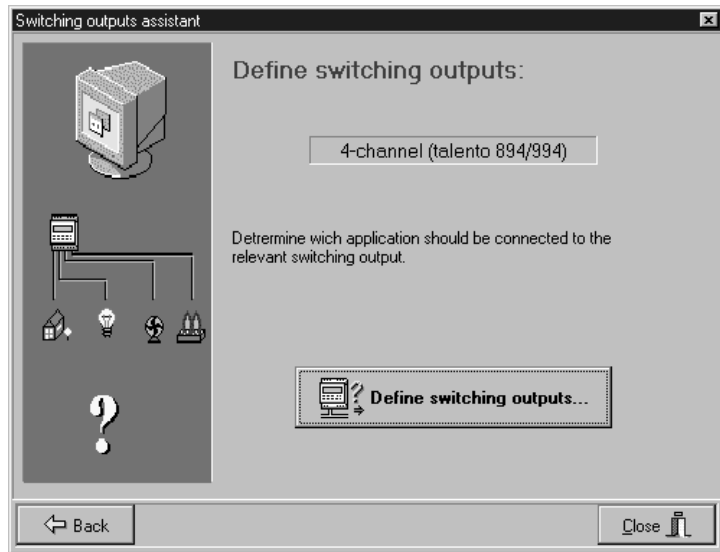


Figure 06: Define the switching outputs

3.2.2 Defining application

You determine the basic settings for each application:

- Define the switching output
- Select the switching symbol
- Define designation
- Enter power rating

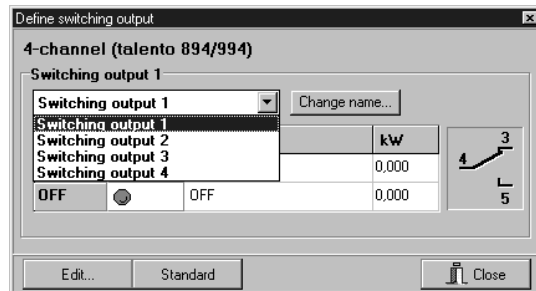


Figure 07: Define switching output

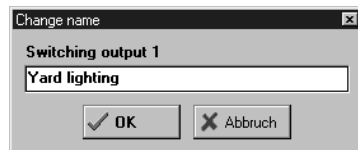


Figure 08: Change name

3.2.2.1 Defining switching output

Click on the corresponding symbol.
The **Define switching output** window is opened.

In the pulldown menu **Switching output**, select a switching output.

Example: Switching output 1

If necessary, you change the term "Switching output 1". Click on **Change name...** and enter a name which describes the corresponding applications.

Examples:

For switching output 1 = Yard lighting

For switching output 2 = Sales room lighting

For switching output 3 = Advertising lighting

For switching output 4 = Heating, circulating air

Confirm this entry with **OK**.

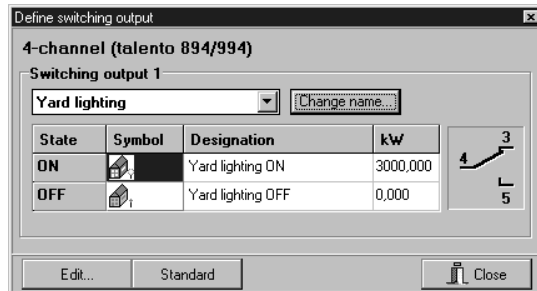


Figure 09: Switching state symbol

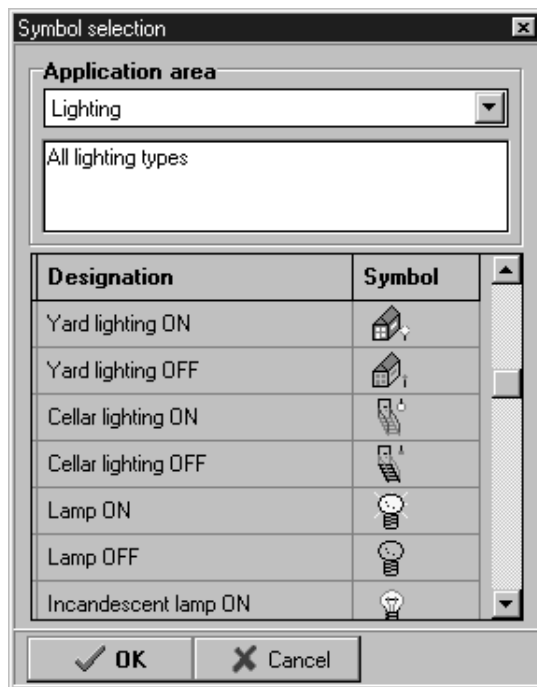


Figure 10: Select symbol

3.2.2.2 Selecting switching symbols

Click on the corresponding symbol and then on **Edit...**

This gives you a list for various applications with different symbols.

You determine the symbol for the relevant state – ON and OFF.

Example:

Select the application **Yard lighting** in the **lighting for** category

- [Symbol] **Building lighting ON** for switching ON
- [Symbol] **Building lighting OFF** for switching OFF

Confirm this entry with **OK**.

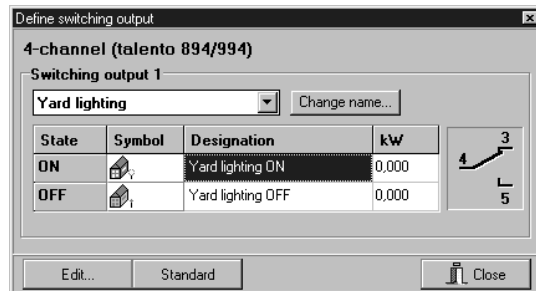


Figure 11: Define the designation

3.2.2.3 Defining designation

Mark the table fields under Designation and click on **Edit...**

You can change the entry as required.

Confirm this entry with **OK**.

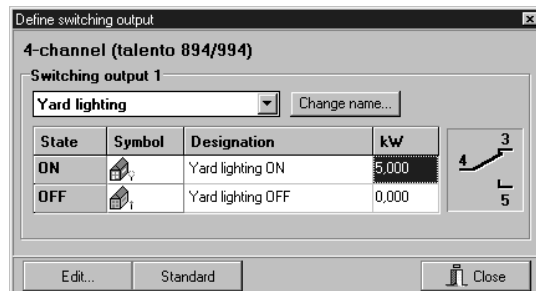


Figure 12: Enter the power rating

3.2.2.4 Entering power rating

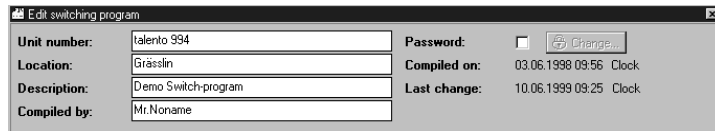
Mark the table fields under **kW** and click on **Edit...**

Enter the power rating (rated capacity) of the connected load.

This value is the basis for calculating the energy consumption, see Section 5, Evaluate switching program.

Confirm this entry with **OK**.

Close **Define switching output**.



The screenshot shows a window titled "Edit switching program" with a close button (X) in the top right corner. The window contains two columns of information. The left column has four labels: "Unit number:", "Location:", "Description:", and "Compiled by:". The right column has three labels: "Password:", "Compiled on:", and "Last change:". The "Unit number" field contains "talento 994". The "Location" field contains "Grässlin". The "Description" field contains "Demo Switch-program". The "Compiled by" field contains "Mr. Noname". The "Password" field has a checkbox and a "Change..." button. The "Compiled on" field contains "03.06.1999 09:56 Clock". The "Last change" field contains "10.06.1999 09:25 Clock".

Unit number:	talento 994	Password:	<input type="checkbox"/> Change...
Location:	Grässlin	Compiled on:	03.06.1999 09:56 Clock
Description:	Demo Switch-program	Last change:	10.06.1999 09:25 Clock
Compiled by:	Mr. Noname		

Figure 13: Project-specific information

3.2.3 Project-specific information

Enter your individual data in these four fields:

- Unit number: e.g. Designation/
Time switch number
- Location: e.g. Storey/Number of
the distribution cabinet
- Description: e.g. Task of the switching
program
- Compiled by: e.g. Name of the
programmer

Activate code word, see Section 8

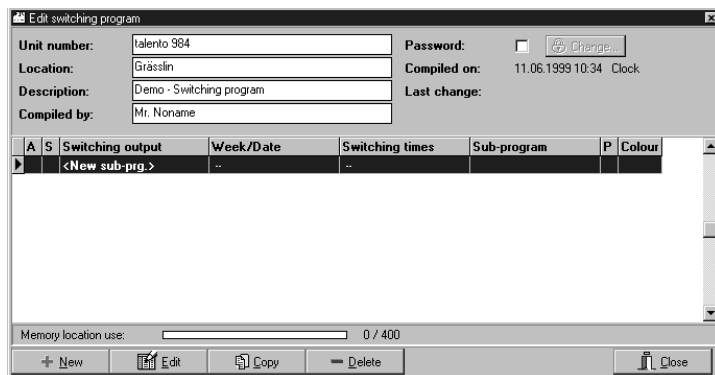


Figure 14: Preparing a new part-program

3.3 Compiling a week program

3.3.1 Defining the program

The yard lighting should be switched ON and OFF automatically:

Monday to Friday

05:30 ON	08:00 OFF
17:30 ON	21:30 OFF

Saturday

05:30 ON	08:00 OFF
----------	-----------

The yard lighting remains OFF on Sundays.

Note: If you have set Beginner under **User support**, see section 11, you are supported by an assistant when entering the data.

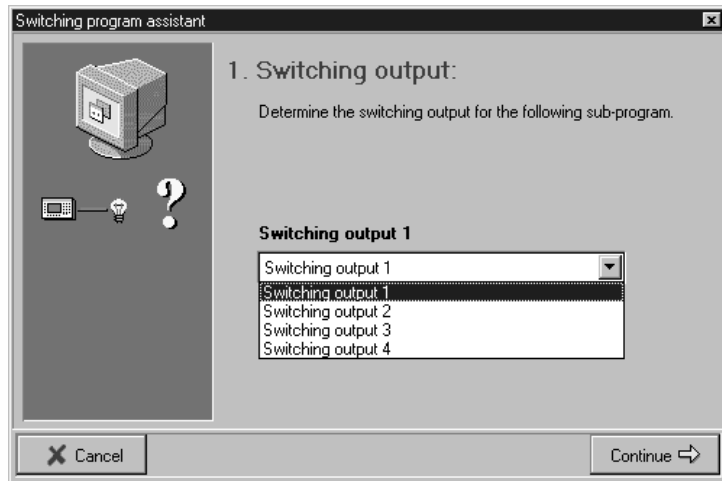


Figure 15: Assistant – 1. Switching output

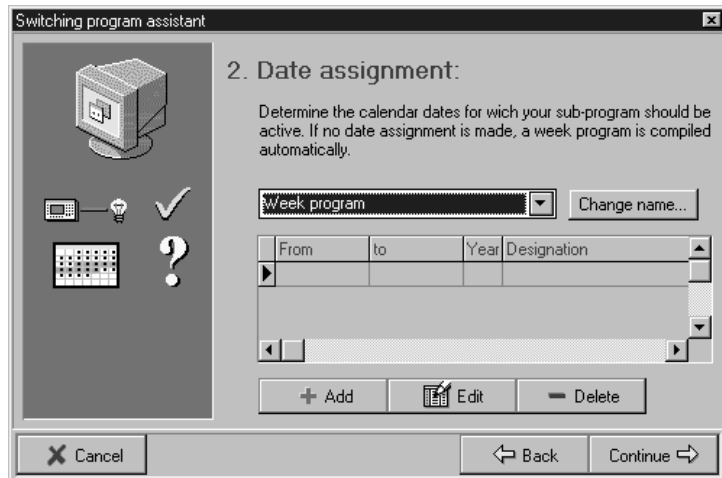


Figure 16: Assistant – 2. Date assignment

3.3.2 Defining a switching output

With **New**, open the first window in the assistant.

Select the corresponding switching output. With **Continue**, open the second window in the assistant.

Note:
No date is assigned to a week program.

With **Continue**, open the third window in the assistant.

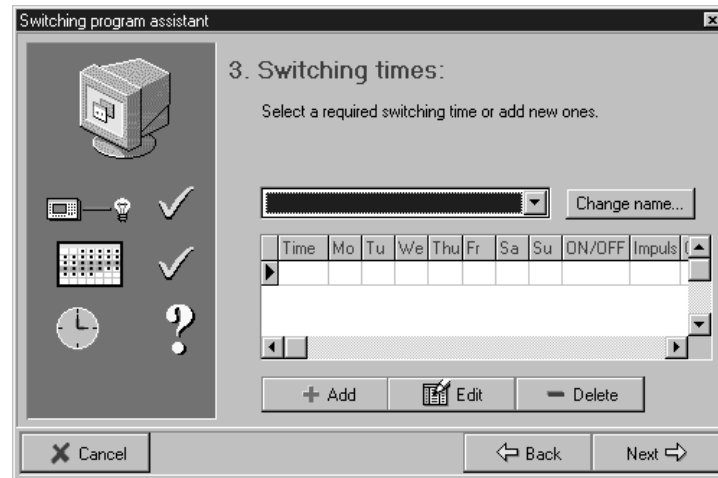


Figure 17: Assistant – 3. Switching times

3.3.3 Defining switching times

Select **Add** or an existing entry and **Edit**. The **Edit switching times** window is opened.

Click on the clock symbol for switching time. The **Change time** window is opened. Set the appropriate times from the above examples.

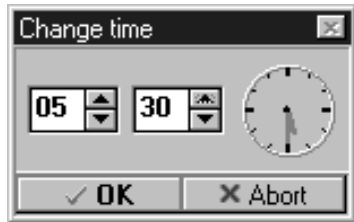


Figure 18: Changing the time

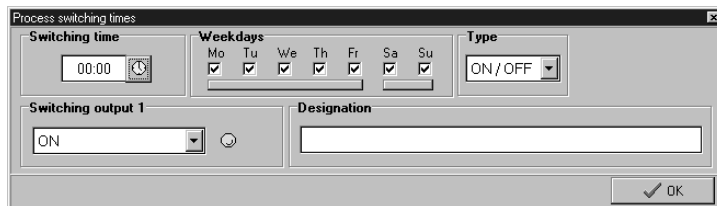


Figure 19: Editing the switching times

The input is made as follows:

- Click on the field and enter the values or
- Click on the arrows next to the relevant input field, or
- Move the small clock pointer with the mouse

Example: Time: 5:30

Confirm this input with **OK**.

- You determine the days of the week on which the switching commands should be executed.

You can select days of the week individually or can combine any days of the week as a group.

Mark the individual fields

Mo - Tu - etc. or click on the bar under the days of the week.

Mo - Tu - We - Th - Fr or Sa - Su

In our example, the lighting remains OFF on Sundays.

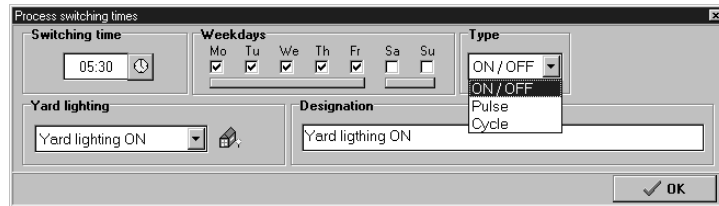


Figure 20: Selecting type

- For our example, select the standard setting: ON/OFF under **Type**.
- Determine the switching state ON or OFF for Switching outputs (pulldown menu).
- If required, you can make your individual entries in the Designation fields:
e.g.: Yard lighting ON/yard lighting OFF.

Confirm these inputs with **OK**.

The “**talento dialog**” returns to the assistant.

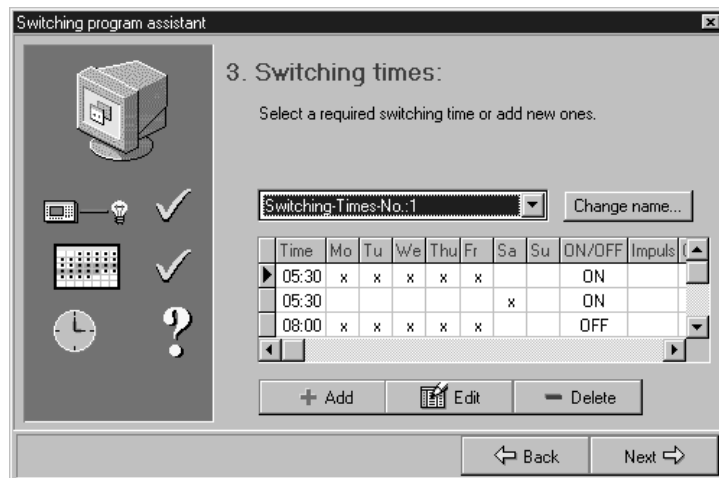


Figure 21: Assistant – 3. Switching times

A name has automatically been assigned to this switching time.

However, you can redefine this name – **switching times No. 1** – as required via Name.

Under this name, you can define additional switching times (see example) in the usual way.

Open the fourth window in the assistant with **Continue**.

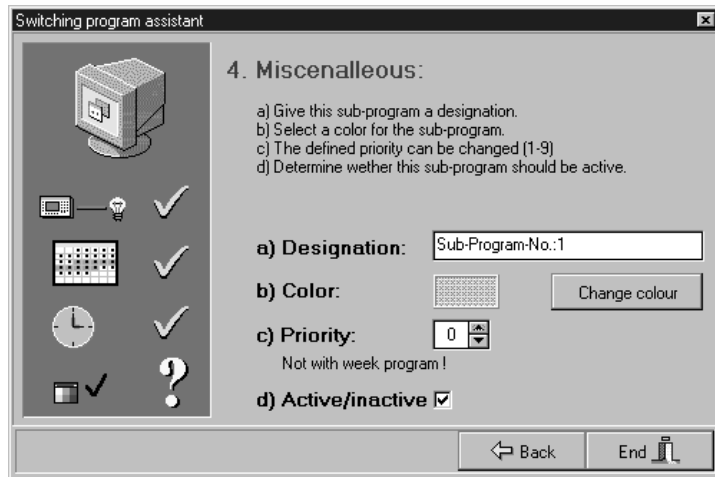


Figure 22: Assistant – 4. Miscellaneous

3.3.4 Additional information

You can adapt these items to your individual requirements.

- a) Give this part-program a designation
e.g. routine program
- b) Select a colour for this part-program.
Choose another colour if necessary.
The colour distinguishes another individual part-program in the graphic representation for the year overview.
- c) You can change the defined priority (1-9).
0 = Week program only
1 = Low priority
9 = Highest priority
- d) Determine whether this part-program should be active.

The screenshot shows a software window titled "Edit switching program". It contains several input fields for unit information and a table of switching outputs.

Unit information fields:

- Unit number: talento 994
- Location: Grässlin
- Description: Demo Switch-program
- Compiled by: Mr.Noname
- Password: [] Change...
- Compiled on: 03.06.1998 09:56 Uhr
- Last change: 10.06.1999 09:25 Clock

A	S	Switching output	Week/Date	Switching times	Sub-program	P	Colour
		<New sub-prg.>	--	--			
✓	1	Yard lighting	Week program	Switching-Times-No.1	Sub-Program-No.1	0	

Figure 23: Yard lighting week program

Example: You compiled several part-programs in advance and, at a given time, you determine which of them are used.

The assistant is closed with **End**.

The new part-program – week program – is now listed in the **Edit switching program** window.

To print this representation: See Section 7.

3.4 Compiling a week program with date assignment

3.4.1 Week program with date assignment, **without** year number

Standard setting: A complete date with the year number.

The year number **must** be deselected.

If a date range is assigned to a part-program, e. g.:

From 15.7. to 31.8, all switching times in this part-program are executed **every** year during this period.

Example: The defined week program should only be executed at certain times,
From 15.7. to 31.8.
(Company holidays)
From 10.9. to 30.9.
(Autum holidays) etc.

The week program previously entered is listed in the **Edit switching program**.

Mark your part-program.

Enter the second window in the assistant in the usual way.

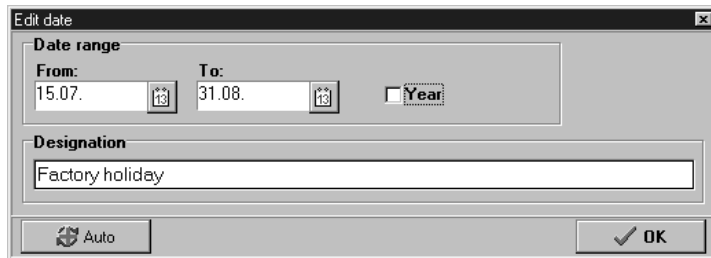


Figure 24: Edit date



Figure 25: Change date

Open the **Edit date** window with **Add**.
The current date (PC-date) is displayed.

- Under designation, enter a name which describes the relevant date range, e.g. summer holidays.
- By clicking with the mouse next to the number fields, open another input field. Enter the corresponding details
From: to:
In the case of an individual date, the same date is in both fields.
- The year number **must** be deselected.
All switching times in this part-program are executed **every year** during this period.
Confirm this input with **OK**.

A name is automatically assigned to this date range/individual date.

However, you can redefine this name –

date assignment No.:1 – via **Change name**.

With **Add**, enter all data in turn which belongs to this part-program.

All further steps are identical, whereby you can immediately determine the switching times after defining the switching output – if necessary.

With **Continue**, open the third window in the assistant, see Section 3.3.3

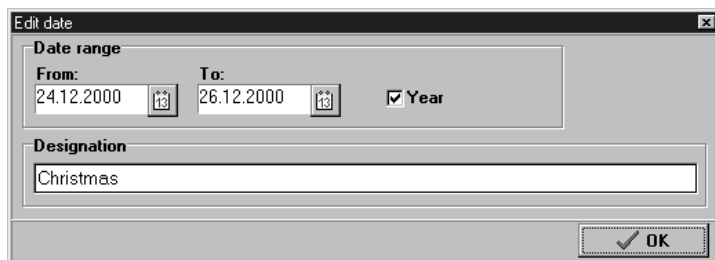


Figure 26: Edit date



Figure 27: Change date

3.4.2 Week program with date assignment, **with** year number

Standard setting: A complete date with year number.

The year number is **maintained**.

If a date range is assigned to a part-program, e. g. from 24.12.2000 to 26.12.2000, all switching times in this part-program are executed only **once** in this period.

The previously entered week program is listed in the **Edit switching program** window.

Mark your part-program.

Enter the second window in the assistant in the usual way.

With **Add**, open the **Edit date** window. The current date (PC date) is displayed.

- Under Designation, enter a name which describes the relevant date range, e.g. Christmas.
- By clicking on the mouse next to the numbers field, open another input field. Give the corresponding information
From: to:
In the case of a single date, the same date is in both fields.
- The year number is **maintained**.
All switching times in this part-program are executed only **once** in this period.

Confirm this input with **OK**.

A name has been automatically assigned to this range/single date.

However, you can redefine this name – date assignment No. 1 – via **Change name** .

With **Add**, add in turn all data which belong to this part-program. All further steps are identical, whereby you can immediately define the switching times after defining the switching output – if required.

Continue with the third window in the Assistant, see Section 3.3.3

3.4.3 Weekly program with **automatic** date assignment

You can automatically assign date ranges to any part-program.

The previously **entered weekly program** is listed in the Edit switching program window. Mark your part-program.

Enter the second window in the assistant in the usual way.

With **Add**, open the **Edit date** window.

With **Auto**, open the **Automatic add** window.

You can choose from the two possibilities:

- Public holidays
- Months



Figure 28: Public holidays selection

Choose your country.

An overview of the usual public holidays for that country is listed.

In the relevant line, double click to define which public holidays remain active and which do not.

Other selection criteria are:

- All
- Floating
- Defaults
- None
- Fixed

Confirm your selection with **OK**.

Note: Your details are now listed in the switching program assistant. You can mark a particular line and hide/deselect the year numbers for these details via **Edit** in the window **Edit date**.

The assigned switching times are executed accordingly, see Sections 3.4.1 and 3.4.2.

With Continue, open the window
3. Switching times, see Section 3.3.3

With Continue, open the window
4. Miscellaneous, see Section 3.3.4

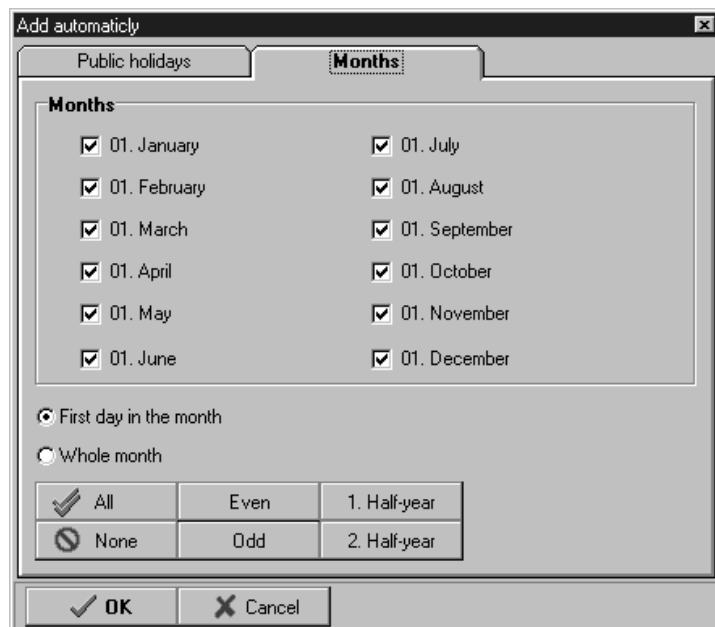


Figure 29: Months selection

Selection on the basis of months:

By clicking with the mouse, you determine whether the first of the relevant month remains active or not.

Other selection criteria are:

- All
- Even
- 1st half year
- keine
- ungerade
- 2nd half year

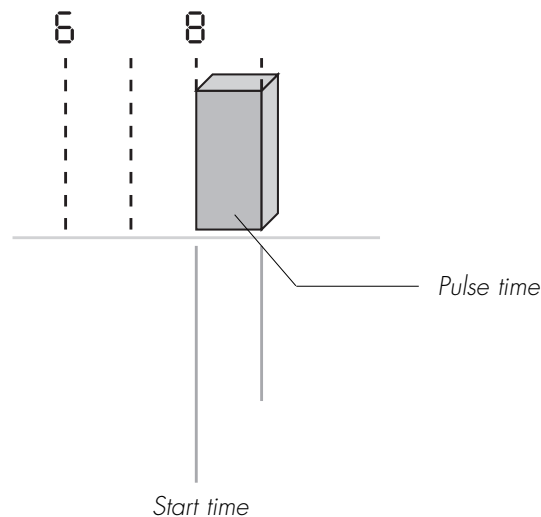
Confirm your selection with **OK**.

Note: Your details are listed in the switching program. You can mark a particular time and hide/deselect the year number for the details in the window **Edit date**.

The assigned switching times are executed accordingly, see Sections 3.4.1 and 3.4.2.

With Continue, open the window **3. Switching times**, see Section 3.3.3

With Continue, open the window **4. Miscellaneous**, see Section 3.3.4



The screenshot shows a dialog box titled 'Process switching times'. It has several sections: 'Switching time' with a clock icon and '08:00'; 'Weekdays' with checkboxes for Mo, Tu, We, Th, Fr, Sa, and Su; 'Type' with a dropdown menu set to 'Pulse'; 'Pulse duration' with a numeric field set to '10' and a unit dropdown set to 'sec'; 'Designation' with a text field containing 'Advertising sign ON'; and an 'OK' button at the bottom right.

Figure 30: Pulse switching command

3.5 Pulse switching command

An application is to be switched ON at a certain time and switched OFF after a predefined time.

A **pulse switching command** consists of:

Start time

Pulse time (ON or OFF)

Example:

Start time Monday to Friday 08:00

Pulse time 10 Seconds

Enter and input the data with the assistant,
see Section 3.3 and 3.4

- Start time
- Weekday(s)
- Switching state
- Under Designation, enter a name which describes the relevant application, e.g. Spotlight
- Type/pulse

You obtain an additional input field for the pulse time/Unit of measurement.

Pulse time: 1 to 99 seconds or 1 to 99 min.

Confirm these inputs with **OK**.

The **"talento dialog"** returns to the assistant.

3.6 Cycle switching command

An application is switched ON at a particular time. However, it should switch ON and OFF automatically in a predefined cycle.

A **cycle switching command** consists of:

Start time

Cycle time (pulse time + pause)

Pulse time

If you assign **no end time** to a cycle switching command, it operates continuously.

In practice, an end time is mostly a standard OFF switching command.

However, an end time **must** be a standard ON switching command if your application should be switched ON at the end of the cycle.

1st example:

Start time	Monday	08:00
Cycle time		60 Minutes
Pulse time		10 Minutes

Option:

End time	Friday	19:00
----------	--------	-------

2nd example:

Start time	Monday to Friday	09:00
Cycle time		60 Minutes
Pulse time		10 Minutes

Option:

End time	Monday to Friday	19:00
----------	------------------	-------

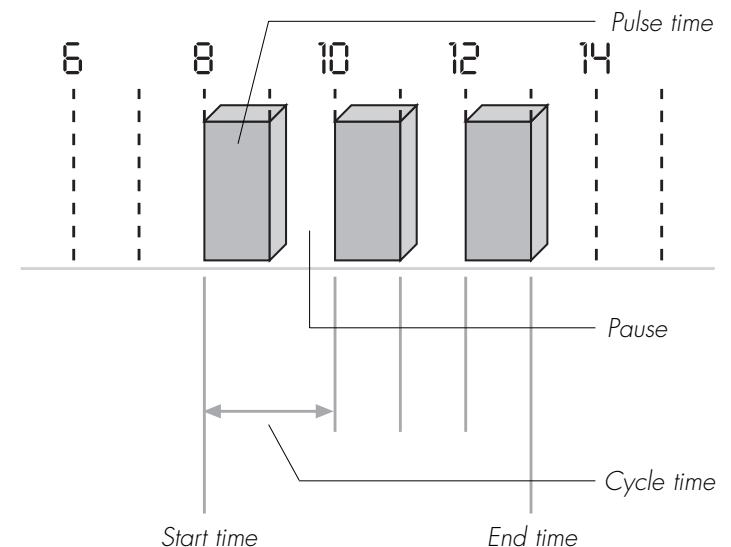




Figure 31: Cycle switching command

Entry and input of the data performed with the assistant, see Section 3.3 and 3.4

Define:

- Start time
- Week day(s)
- Switching state
- Under Designation, enter a name which describes the relevant application, e.g. Spotlight
- Type/cycle
The switching state is set to ON and you open the window **Program cycle** and click on the clock symbol under cycle.

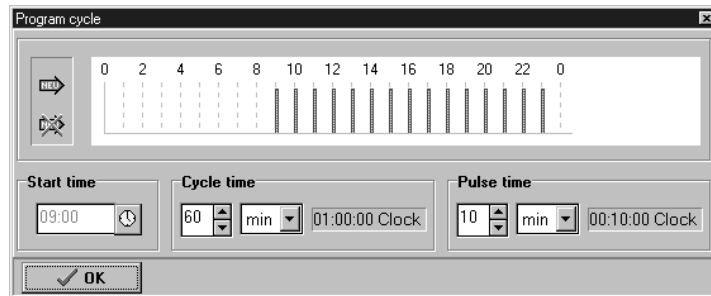


Figure 32: Program cycle

Supplement your inputs:

- Cycle time: 1 to 99 sec. or 1 to 99 min
- Pulse time: 1 to 99 sec. or 1 to 99 min
(ON switching duration)

Note: The pulse time can never be set longer than cycle time. If you attempt to set a pulse time which is longer than the cycle time, this value is automatically increased by one.

The previously set **start time** can be changed in this window if required.

Confirm these inputs with **OK**.

The “**talento dialog**” returns to the assistant.

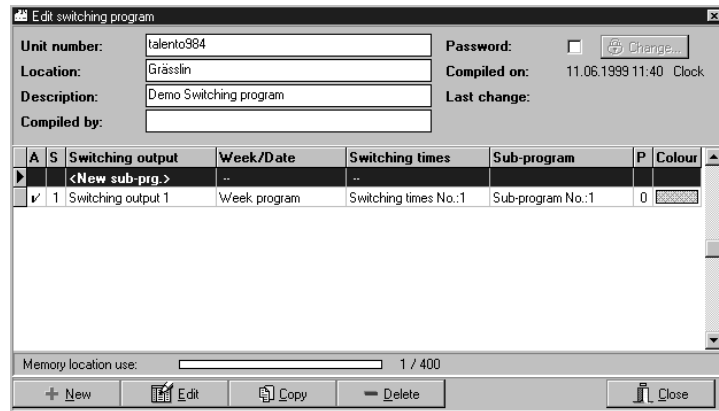


Figure 33: Copying part-program

3.7 Copying a part-program

You can copy existing part-programs. In the copy, you change only the data which must be adapted for your "new" part-program.

In the **Edit switching program** window, mark the corresponding part-program, e.g. **switching output 1, week program 1, switching times No. 1, part-program No 1**.

With **Copy**, open a window and there define the required switching output for your „new“ part-program.

Confirm your selection with **OK**.

The copied part-program is now also listed in the window **Edit switching program**, but with a new name, e. g. **switching output 2, week programs, Switching times No. 2, part program 2**

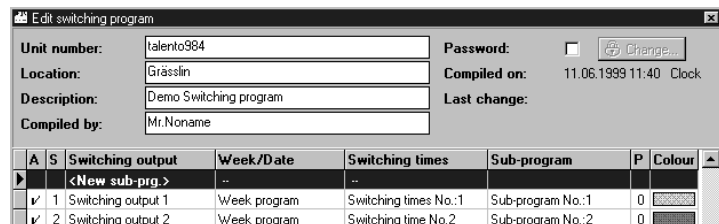


Figure 34: Copied part-program

All data in the "new" part-program is – as described in Section 3.3 – adapted accordingly to suit the current requirements.

3.8 Deleting

All data which was entered can be deleted in the relevant window.

You delete/remove the active line in each case.

- In the window **Edit switching program**
a complete part-program
(e.g.: part-program No. 1)
- In the relevant window in the assistant:
 - 2. Date assignment –
the selected date
 - 3. switching times – the selected
switching times
- In the window Overview part-program
(user support, advanced)
 - The selected date/date range
 - the selected switching times

The screenshot shows the 'Overview - sub-program' window. It has three main sections: 'Switching output', 'Week program / date assignment', and 'Switching times'.

Switching output: A dropdown menu shows 'Yard lighting'. To its right is a text field 'Sub-Program-No.:1'. Further right are 'Colour' (a color selection icon), 'Priority' (a numeric field with '0'), and 'Active' (a checked checkbox).

Week program / date assignment: A dropdown menu shows 'Week program'. To its right are buttons 'Change name...', '+ Add', 'Edit' (with a pencil icon), and '- Delete'. Below this is a table with columns 'From', 'to', 'Year', 'Designation', and 'move.'. The first row has a right arrow in 'From', an empty 'to', an empty 'Year', an empty 'Designation', and 'X' in 'move.'. There is a vertical scrollbar on the right.

Switching times: A dropdown menu shows 'Switching-Times-No.:1'. To its right are buttons 'Change name...', '+ Add', 'Edit' (with a pencil icon), and '- Delete'. Below this is a table with columns: 'Time', 'Mo', 'Tu', 'We', 'Thu', 'Fr', 'Sa', 'Su', 'DN/OFF', 'Inputs', 'Cycle', and 'Designation'. The first three rows are:

Time	Mo	Tu	We	Thu	Fr	Sa	Su	DN/OFF	Inputs	Cycle	Designation
05:30	x	x	x	x	x			ON			Yard lighting ON
05:30						x		ON			Yard lighting ON
08:00	x	x	x	x	x			OFF			Yard lighting OFF

Figure 35: Advanced

3.9 Advanced

If you have set "Advanced" under user support, see Section 11, the window **Overview part-program** is opened when a new program is compiled or when an existing one is edited. When the individual data items are entered, the same windows are opened which you already know from the assistant.

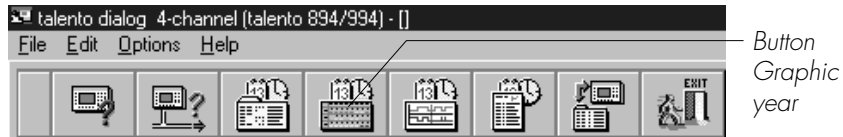


Figure 36: Start year graphic

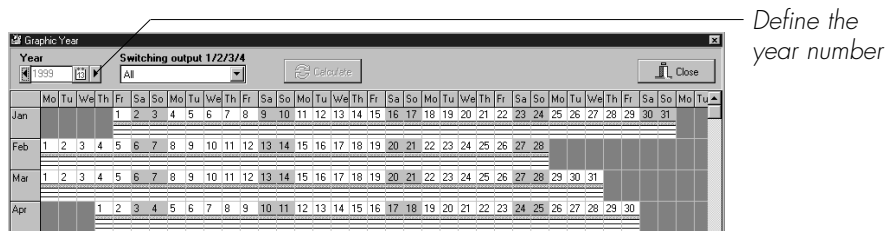


Figure 37: Graphic year

4. Graphic representation

4.1 Graphic year

This graphic gives an overview of the year, which you defined. You recognize the active part-programs by the colour assignment.

4.1.1 Enter via:

- The key F5
- The main menu **Edit** → **Graphic year**
- Click on the button **Graphic year**

The graphic is opened and recalculated at the same time (see options, settings).

4.1.2 Defining the year for the representation:

- The left and right arrow keys, by 1 year in each case
- By clicking with the mouse next to the numbers field you open another input

4.1.3 Define the switching outputs:

- All
- Individual

4.1.4 Recalculating/updating a Graphic

- Only when the appropriate markings is deactivated under Options/Settings.
- Only when changes have been made in the switching programs

Note: In this representation, double-clicking on any day opens the **Day(s) graphic**.

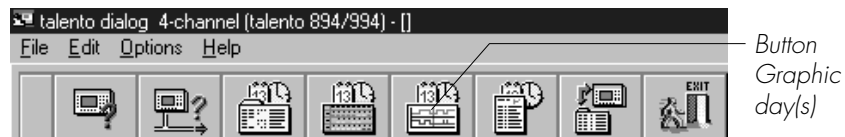


Figure 38: Start day Graphic

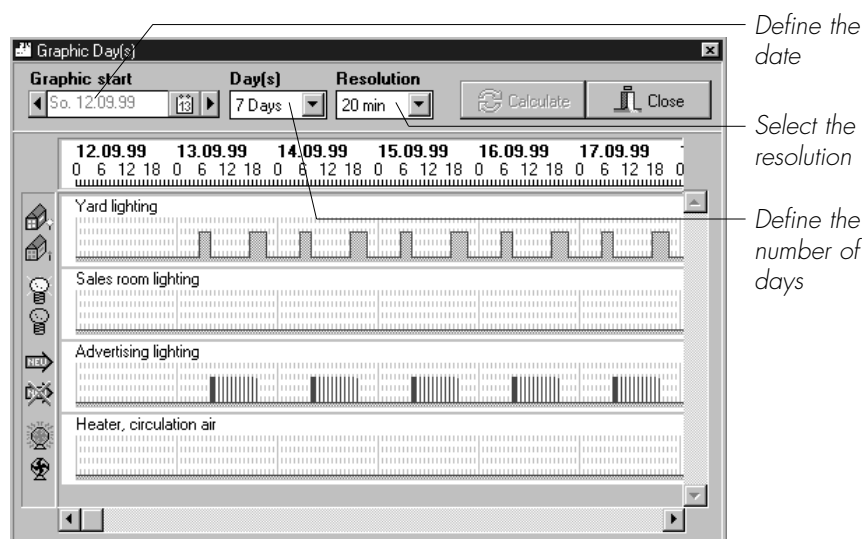


Figure 39: Graphic day(s)

4.2 Graphic day(s)

This graphic offers you a detailed overview of the active switching programs.

4.2.1 Enter via:

- The key F6
- The main menu **Edit → Graphic day(s)**
- Click on the button **Graphic day(s)**

The graphic is opened and recalculated at the same time. (see Options, Settings)

4.2.2 Defining the date for the graphic start:

- With the left and right arrow keys, in each case. By the number of days set under Day(s).
- By clicking with the mouse once next to the numbers field, you open the input field for the date.

4.2.3 Selecting the number of days to be shown:

- 1 to 7 days

4.2.4 Define the resolution of the representation:

- 1, 2, 3, 4, 5, 10, 15, 20 min

Note: In the case of switching operations which follow each other quickly, (e.g. 16:00 ON, 16:01 OFF) select a high resolution, e.g. 1 min.

4.2.5 Recalculating/upgrading a graphic

- Only if the corresponding marking is deactivated under Options/settings
- Only if changes have made in the switching program

Note: In this representation, the window **Switching output info** is opened by clicking once with the mouse at any point.

4.2.6 Switching output info

- Always refers to the last switching operation of the selected representation on this day, at the relevant time
- You can directly open the corresponding part-program for editing

To print this representation: See Section 7.

5. talento dialog astro

The function "**astro**" offers you the following possibility. The switching times (per channel) can be programmed according to the sunrise and sunset, depending on your location.

- When entering free definable periods of time, these switching times can be activated.
- You choose the changeover from winter to summertime according to your needs.
Active and/or inactive.
- The switching times which are calculated with the astro program can be represented graphically.

5.1 Preparation of the astro program

Before entering the partial programs with astro the adjustments (see page 16..21) have to be carried out in advance.

- choose application
- define switching output
- determine switching symbol and designation
- enter power consumption

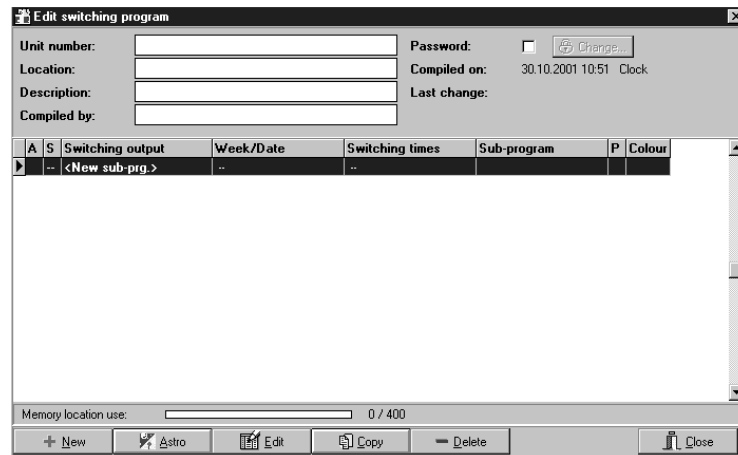


Fig. 40: open program astro

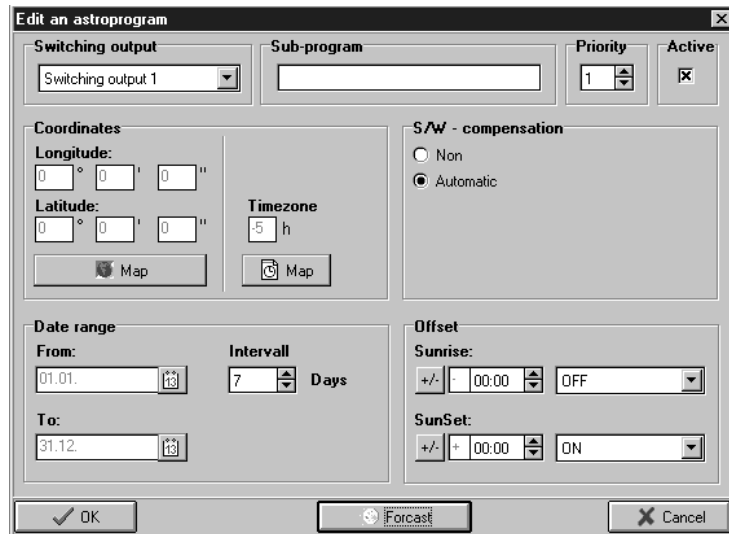


Fig. 41: determine basic adjustments

5.2 Drawing up the program

- click in the window "to work on the switching program" on the switching field "astro".
The window "creating of the astro program" is opened.

5.3 Basic adjustments of the partial program

- choose the right channel according to the switching output
- give a name to the partial program (e.g. illumination yard)
- define the priority of the partial program e.g.
1 = low priority
9 = high priority
- determine activity of the partial program

Fig. 42: choose map

Fig. 43: choose coordinates

5.4 Coordinates

In order to calculate the switching times for your location it is necessary to enter the respective geographical coordinates. Your location is indicated in degree of longitude and degree of latitude. The more precise you define your location the more precise are the switching times.

The indications of your location can be found with help of the map or if well-known entered manually.

- With regard to the coordinates click on the switching field **"choose"**.
The window "map" now opens.
- Move the mouse in the map to your location.
The program indicates the coordinates of your location, depending on the mouse. The coordinates get saved when clicking the mouse button,
- or:
- click on the switching field **Auto/Hand** and enter the coordinates of your location.

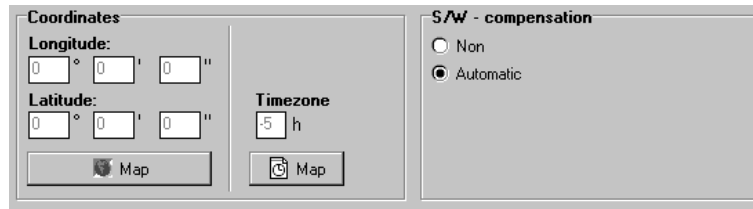


Fig. 44: choose map

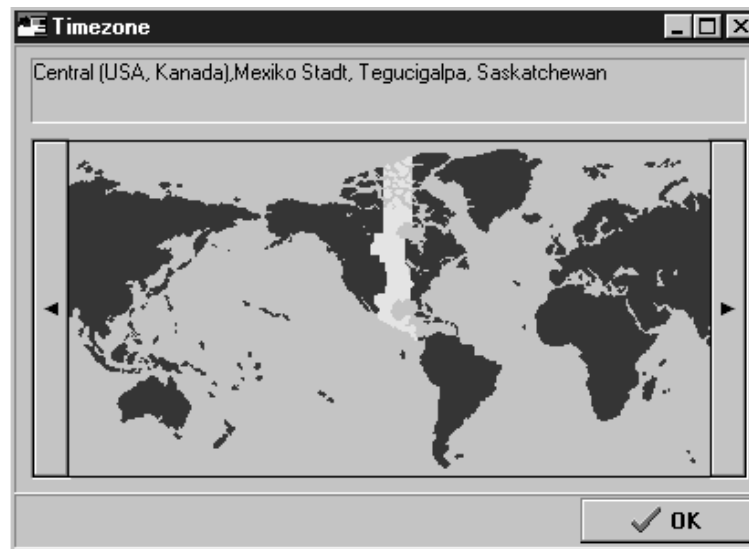


Fig. 45: choose time zone

5.5 Time zone

In order to calculate the switching times the time zone according to your location is required. (MEZ = Middle European Time is pre-regulated).
The world map determines the corresponding time zone.

- Click on the "map" to define the time zone.
The window "time zone" opens.
- Choose your time zone.
Some cities are inserted in the text field in order to receive a better orientation.

5.6 Compensation summer/ -wintertime

You determine the compensation:

- **Automatically**, when using the indications of the EU guidelines.
- If you determine your "own summer/-wintertime" for your location, it is required to enter the week-days.
- When clicking the mouse button besides the numerical field you open another input field. Enter the necessary datas
- **No**, if you do not require a summer/-wintertime change

The screenshot shows a configuration window with two main sections: 'Date range' and 'Offset'.
Date range: Includes 'From:' (01.01.), 'To:' (31.12.), and 'Intervall' (7 Days).
Offset: Includes 'Sunrise:' (+/- 00:45 OFF) and 'SunSet:' (+/- 00:15 ON).
 At the bottom are buttons for 'OK', 'Forecast', and 'Cancel'.

Fig. 46: determine period of time

5.7 Period of time

In the date field you note which period of time the astro program uses (max. 1 year)..

- With a mouse click besides the field of numbers you open another input field.
When entering a single date, in both fields appears the same date.

Interval

The calculated switching times for your astro program can be found among the fixed period of time.

- You determine the interval between 2 and 14 days. Within this period of time- e.g. interval = 10- the switching commands are always carried out at the same time, depending on the sunrise/-sunset

Example:

You chose the period 25.03.–25.05.00.
Due to the natural sun-course astro calculated the switching times.
They are therefore different from day to day.
When using an interval of 10 days, the calculated switching times get ascertained, the actual switching times get carried out within these 10 days always at the same time.

Note:

Every switching command (date and switching time) needs a certain quantity of memory places. Always try to choose the interval as large as possible. You "serve" memory places, see page 7.

The dialog box is titled 'Offset/Switching state'. It is divided into two main sections: 'Date range' and 'Offset'.
 In the 'Date range' section, there are two date pickers: 'From:' (set to 01.01.) and 'To:' (set to 31.12.). Between them is an 'Intervall' field set to 7, followed by the unit 'Days'.
 In the 'Offset' section, there are two rows. The first row is for 'Sunrise:', with a time offset of +/- - 00:45 and a state of OFF. The second row is for 'SunSet:', with a time offset of +/- + 00:15 and a state of ON.
 At the bottom of the dialog, there are three buttons: 'OK' (with a checkmark icon), 'Forecast' (with a forecast icon), and 'Cancel' (with an X icon).

Fig. 47: determine offset/switching state

5.8 Offset/Switching state

You regulate the difference between the calculated and the actual switching time. The switching time can be determined from +/-1 minute up to +/-24 hours for:

- Sunrise
- Sunset

Example:

- The corresponding channel (e.g. switching output) switches "ON" only 45 min. after the calculated sunrise.
Offset= + 00.45
- The chosen channel switches " Off" 1h 15 min. before the calculated sunset.
Offset= - 01:15

5.9 Switching state

With regard to the switching of your application you choose between:

- ON
- OFF
- IMPULSE
- No modifications
(no switching command during sunrise and sunset)

(see manual page 12,13, impulse times from 1...99 sec. or 1...99 min, page 38).

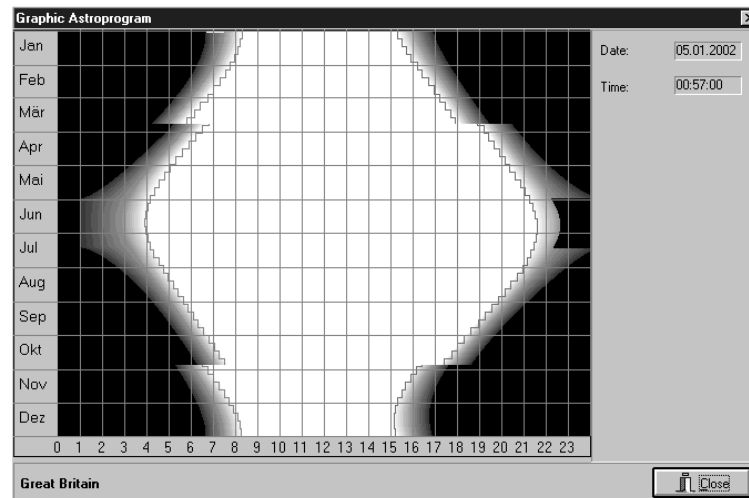


Fig. 48: graphics

5.10 Graphic representation

The astro program indicates in the graphic representation the course of the calculated switching times, considering:

- compensation summer/-wintertime
- period of time
- interval
- offset

Further informations:

- twilight zone
- date and time
- click on the switching field "graphic", the window "graphic-astro program" opens.
- when entering with the mouse in the graphic representation, date and time of every position is indicated.

Edit switching program

Unit number: 0012310 Password: ☐

Location: London Compiled on: 30.10.2001 10:51 Clock

Description: Astro Last change:

Compiled by: xxx

A	S	Switching output	Week/Date	Switching times	Sub-program	P	Colour
		<New sub-pg.>	--	--			
✓	1	Switching output 1	01.01. - 07.01.	Switching time No.1	Sub-program No.:1	1	
✓	1	Switching output 1	08.01. - 14.01.	Switching time No.2	Sub-program No.:2	1	
✓	1	Switching output 1	15.01. - 21.01.	Switching time No.3	Sub-program No.:3	1	
✓	1	Switching output 1	22.01. - 28.01.	Switching time No.4	Sub-program No.:4	1	
✓	1	Switching output 1	29.01. - 04.02.	Switching time No.5	Sub-program No.:5	1	
✓	1	Switching output 1	05.02. - 11.02.	Switching time No.6	Sub-program No.:6	1	
✓	1	Switching output 1	12.02. - 18.02.	Switching time No.7	Sub-program No.:7	1	
✓	1	Switching output 1	19.02. - 25.02.	Switching time No.8	Sub-program No.:8	1	
✓	1	Switching output 1	26.02. - 04.03.	Switching time No.9	Sub-program No.:9	1	
✓	1	Switching output 1	05.03. - 11.03.	Switching time No.10	Sub-program No.:10	1	
✓	1	Switching output 1	12.03. - 18.03.	Switching time No.11	Sub-program No.:11	1	
✓	1	Switching output 1	19.03. - 24.03.	Switching time No.12	Sub-program No.:12	1	

Memory location use: 195 / 400

Fig. 49: end program

5.11 To end the program

Click on "OK"

The program creates the partial programs by using the dates you entered. These partial programs can be modified/adapted according to the respective needs.



Figure 50: Start Evaluation

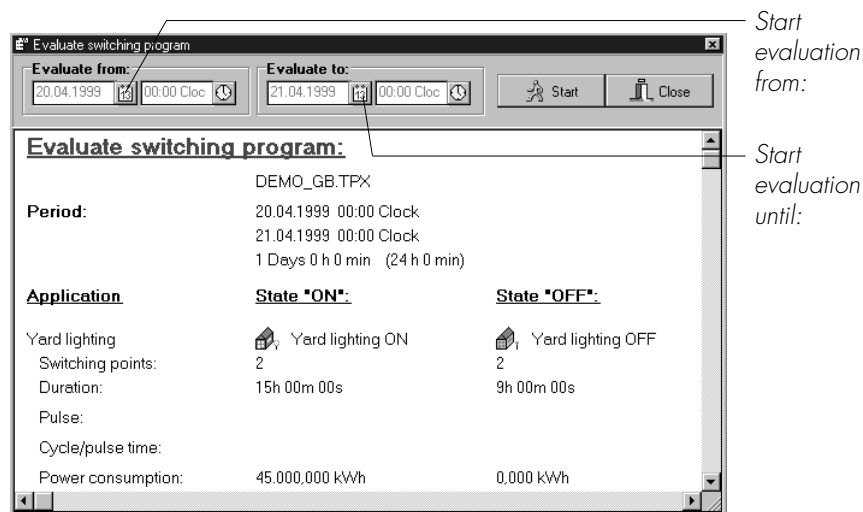


Figure 51: Evaluation

6. Evaluating a switching program

The evaluation shows you:

- The number of switching points
- The duration of ON and OFF switching states
- The pulse times
- The cycle/pulse times
- The consumption in kWh – this information is only correct if it corresponds with the nominal data of the connected load.

6.1 Enter via:

- The key F7
- The main menu **Edit** → **evaluate switching program**
- Click on the **Evaluate switching program** button

6.2 Defining the date and time for the evaluation:

- Enter the input field for the date by clicking once with the mouse next to the numbers field.
- With the clock symbol button, open the input field for the time

6.3 Starting evaluation

- The evaluation can take some time, depending on the size of the program

To print this representation: See Section 7.

7. Printing

The contents of the switching program can be printed for an item of documentation, e.g. customer files.

7.1 Enter via:

- The main menu **Print → file**

This gives you a preview in each case.

The contents of the respective active window are printed.

- Edit switching programs
The switching program appears in list form.
This can be several pages, depending of the size of the switching program.
- Graphic representation Day(s)
You obtain a day overview.
- Evaluate switching programs.
The evaluation shows the data over the selected periods.

8. Code word

You can define a code word for each switching program. This ensures that only authorised persons can open and edit the switching programs. You can change this code word if necessary.

Pay attention to upper case/lower case letters. The code word can consist of:

- Letters A Z, a z
- Numbers 0 9
- Letters and numbers

8.1 Defining a code word

The window **Edit switching program** is opened, see 3.2.3

Activate the code word. The window **Change code word** is opened.

Select a code word which you can easily remember.

Example: Meier001

(Do not use any special symbols, e.g.: #, @, \$, ß)

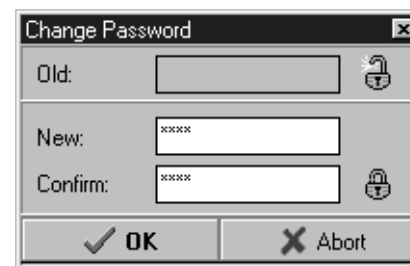


Figure 52: New code word

Enter your code word under **New** and under **Confirm**.

8.2 Changing the code word

When you change the code word, the necessary safety question is asked.



Figure 53: Change code word

Enter the previous code word under **Old**.
The fields **New** and **Confirm** are activated
and you enter your new code word.

Note: Ensure that the code word is activated
before you save the switching program
(Close talento dialog), otherwise the
switching program can also be opened
and edited by other persons.

9. Transferring a switching program

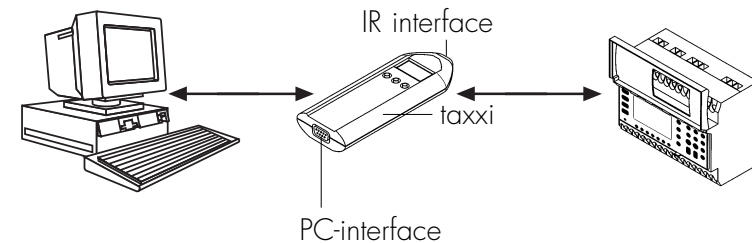
The switching programs and other data are transferred from the PC to the talento taxxi = Manual programming unit and vice versa. Transfer of the switching programs to the relevant time switch and vice versa is performed with the talento taxxi.

At the end of this section you will find the necessary contents of the operating instructions "talento taxxi", also see separate operating instructions.

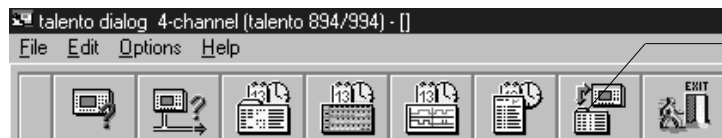
9.1 The transfer principle

The data is transferred via the serial interface COM 1 or COM 2 of your PC.
(Define interface, see Section 11)

Note: Texts (names and notes) are **not** transferred.



- Send data
- Receive data
- Delete data in the talento taxxi



The Transfer
switching
program
button

Figure 54: Transfer switching program

9.2 Enter via:

- The key F10
- The main menu **Edit** → **Transfer switching program**
- Click on the button **Transfer switching program**

The window **Transfer switching program** is opened. The file card **Send data** is active.

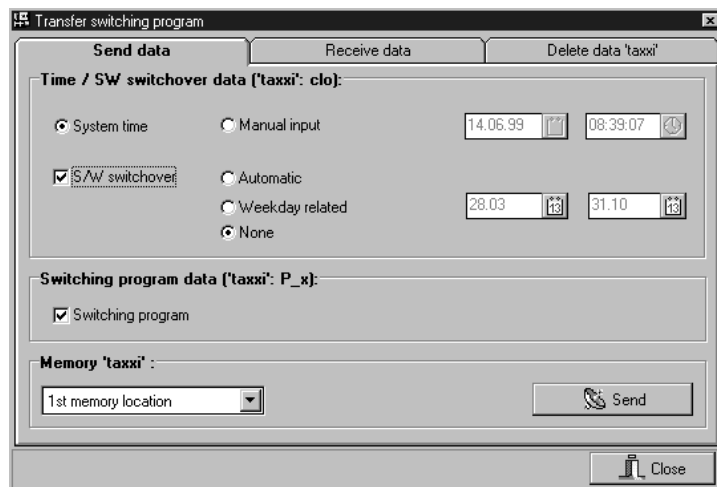


Figure 55: Send data

9.3 Sending data

You can transfer four switching programs in the "talento taxi".

You determine which contents of the switching program are transferred.

9.3.1 System time

If this setting is maintained, the current date (PC date) is transferred.

9.3.2 Manual input

If this preselection is active, open other input fields next to the number fields by clicking once with the mouse:

- For the dates
- For the time

You define the individual date and time (depending on place and which the time switches are used).

9.3.3 S/W (Summer time/winter time switchover)

You have three possible choices:

- **Automatic**

Switchover occurs on the legally defined dates (status 1996).

No inputs/changes are possible.

- **Weekday-related**

You enter the valid data for your location/country.

Example: First Sunday in April
= Start summer time.

Last Sunday in October
= End of summer time

In the subsequent years, changeover always occurs on the correct calendar day and in the correct calendar week.

If this preselection is active, open other input fields next to the numbers field by clicking once with the mouse:

- For the start of summer time
- For the end of summer time

- **None**

No changeover occurs

9.3.4 Switching program

If you deactivate this option, only the above data is transferred.

9.3.5 Memory locations preselection

You define the relevant memory location, to which the switching program/data is transferred.

If the selected program location in the **"talento taxxi"** is occupied, this is overwritten.

Start the transfer with **Send**.

The **Communication status** window is opened.

9.4 Receiving data

You can read out the four switching programs (Program location) of the “**talento taxxi**”.

Note: Texts (Names and notes)
 are **not** transferred during sending.

9.4.1 Activate the file card **Receive data**.

Select the memory location whose switching program you want to export.

Start the transfer with **Receive**.

This switching program can be processed in exactly the same way as an already existing one.

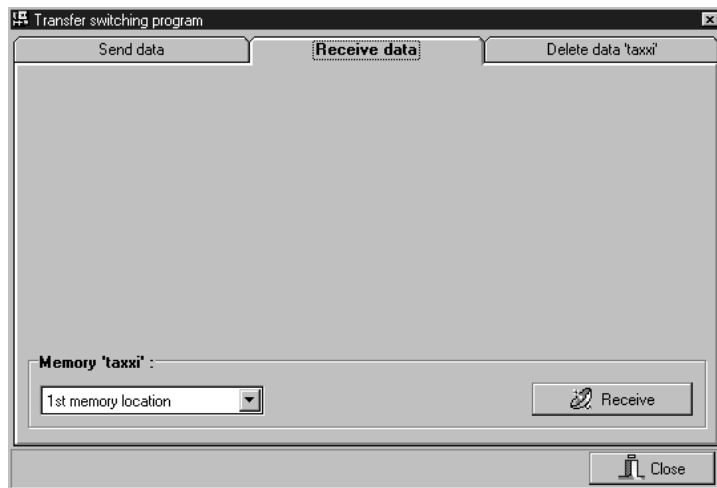


Figure 56: Receive data

9.5 Deleting data in the talento taxxi

The four memory location in the "talento taxxi" can be deleted individually.

9.5.1 Activate the file card **Delete data taxxi**.

Select the memory location whose switching programs you want to delete.

Start the process with **Delete**.

The **Communication status** window is opened.

9.6 Operating instructions "talento taxxi"

9.6.1 General

Send and receive switching programs (data) with the taxxi.

Compile the switching programs:

- On a PC (laptop) with the "talento dialog" software
- Directly at the time switch
Series talento 891 to 894 and talento 991 to 994
See Operating Instructions of the time switches

You can transfer the relevant switching program exclusively to the time switch (Type) for which the switching program was compiled (pay attention to the application name).

The taxxi has 4 program locations.

You can transfer 4 different switching programs and export switching programs.

Memory locations empty = P 1, P 2, P 3, P 4

Memory locations = P _ 1, P _ 2, P _ 3, P _ 4

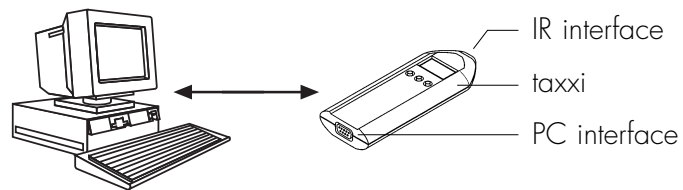
Write

Delete contents, see 9.5

9.6.2 Data transfer principle

9.6.2.1 From the PC to the taxxi and vice versa

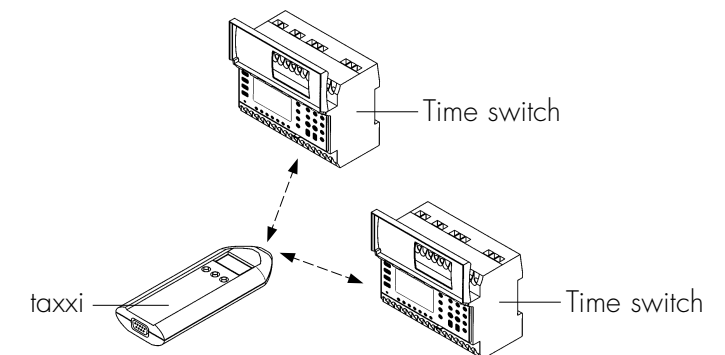
The switching programs are transferred to the taxxi from the PC via the serial interface or are written from the taxxi to the PC.



9.6.2.2 From the taxxi to the time switch and vice versa

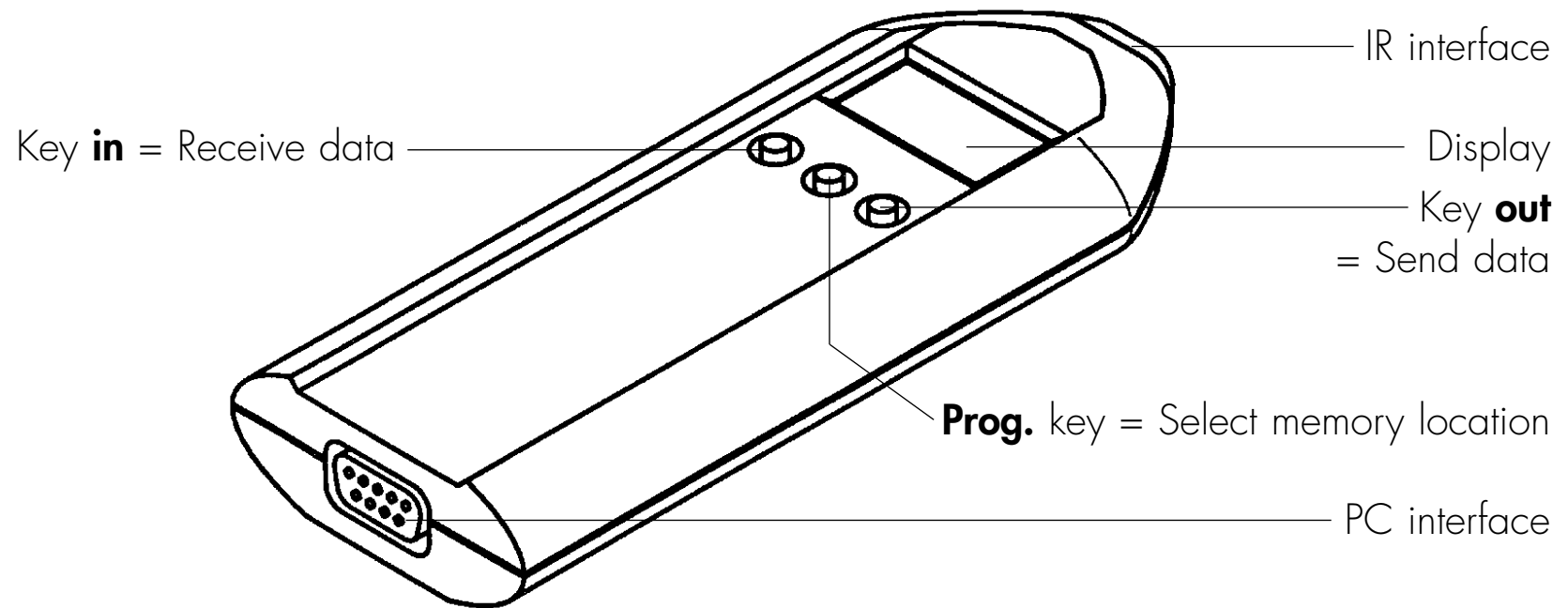
The switching programs are transferred via the infrared interface to the relevant time switch or are read out from the taxxi to the time switch.

In the same way, the switching programs are also transferred from time switch to time switch.



9.6.3 Transferring switching programs

9.6.3.1 Unit functions

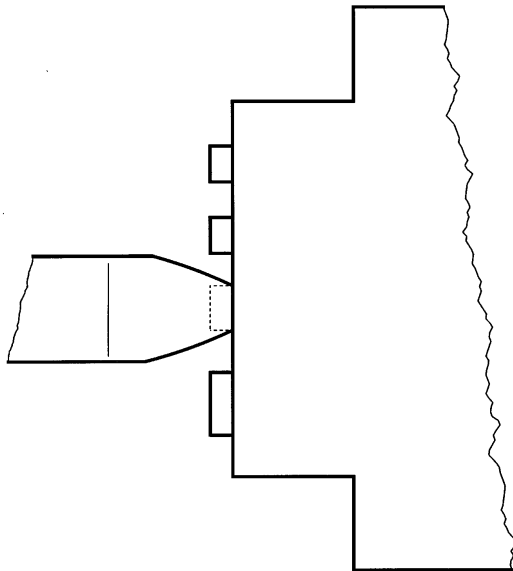



9.6.3.2 Transferring switching programs to the time switch and vice versa

With the Prog. key, select the memory location - P_1 P_4

- Transfer the contents or
- Write the memory location

 Keep the taxxi **directly** at the two IR diodes (keep still)



 Depending on the transfer direction, press the corresponding key twice – **in** and **out**

- Press the key once. Transfer is prepared, the relevant program location and the assignment **in** and **out** flash alternately
- Press the key again. The data is transferred. An audible signal (continuous tone) sounds during the transfer

If the data has been correctly transferred, the No. of the program location is in the display, e.g. P_1

If the data has not been correctly transferred, there is a brief audible signal and the corresponding error message appears in the display, see 9.6.5.

9.6.4 Transferring time

9.6.4.1 From PC to the taxxi

The time is transferred to the taxxi from the PC via the serial interface.

9.6.4.2 From the taxxi to the time switch

The time is transferred to the relevant time switch from the taxxi via the infrared interface or is read out of the time switch by the taxxi.

Select "**c lo**" with the Prog. key



Keep the taxxi directly on the IR diodes (keep still)



Depending on the transfer direction, press the corresponding key twice – **in** and **out**

- Press the key once. The transfer is prepared, **c lo** the assignment **in** and **out** flash alternately

- Press the key again, the time is transferred.
An audible signal (continuous tone) sounds during the transfer

If the time was correctly transferred, **c lo** is in the display.

If the time was not correctly transferred, there is a brief audible message and the corresponding error message appears in the display see 9.6.5.

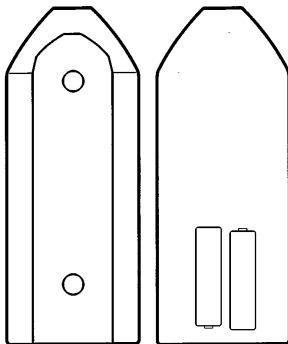
9.6.5 Error message

When working with the taxxi, it can happen that an error message appears in the display.

- Er 2 = time switch not recognised (application name incorrect)
- Er 1 = data not correctly transferred, repeat the transfer
- Er 0 = Batteries not delivering sufficient voltage

9.6.6 Changing batteries

- Undo the screws
- Replace the batteries
- 2 x Type LR 6 alkaline (1.5 Volt)
- Close the taxxi again



9.6.7 Technical data

- Voltage supply 2 x 1.5 Volt
(Reverse polarity protected)
- Battery type LR 6 alkaline
- Running reserve minimum 1 year
(approx. 1000 transfer operations)
- Protection class III
- Protection type IP 20
- Ambient temperature - 10 °C ... + 55 °C
- Interface to the PC RS 232, 9 pole.
SUB - D - socket
- Interface to the time switch IR interface

10. Converting a switching program

Downwards conversion: For a time switch with less channels than the selected switching program

Upwards conversion: For a time switch with more channels than the selected switching program

Example: You have compiled a switching program for a 4-channel time switch – talento 894 or talento 994.

You want to transfer this switching program to a time switch of the type talento 891.

Or You have compiled a switching program for 1-channel time switch – talento 891 or talento 991.

You want to transfer this switching program to a time switch of the type talento 892, 893 etc.

The switching program which you want to convert is opened.

Enter via:

- The main menu **File** → **Convert** switching program. The window **Select application** is opened.

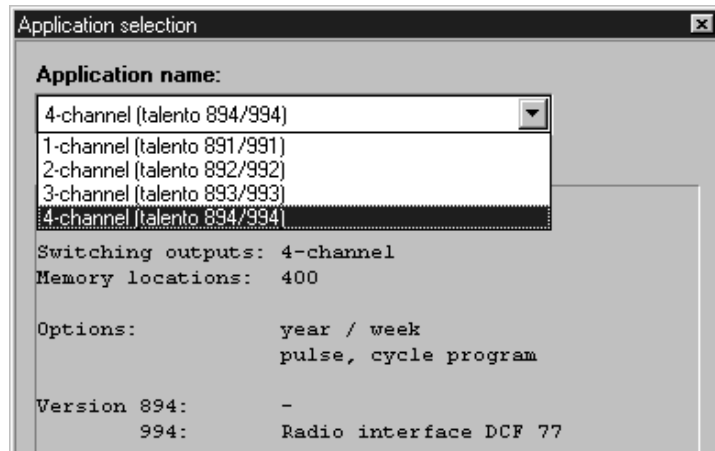


Figure 57: Convert switching programs

10.1 Downwards conversion

You define the “new” time switch. Irrespective of the type you defined, the assignments of the switching outputs are all allocated to the switching output 1.

For example, if you have converted your switching program for a 2-channel time switch, you can then individually change the assignment of the switching outputs, see Section 3.3.2.

A safety question is asked.

10.2 Upwards conversion

You define the “new” time switch. If you have selected a switching program of a 2-channel time switch which you want to convert to a 4-channel time switch, the assignments of channel 1 and channel 2 are maintained. You can individually change the assignment of the switching outputs, see Section 3.3.2.

A safety question is asked.

11. Options

You select different settings, which support you when compiling the switching programs.

Enter via:

- The main menu **Options** → **Settings**.

The **Settings** window is opened.

- Editor
- Graphic, day(s)
- Interface
- Public holidays

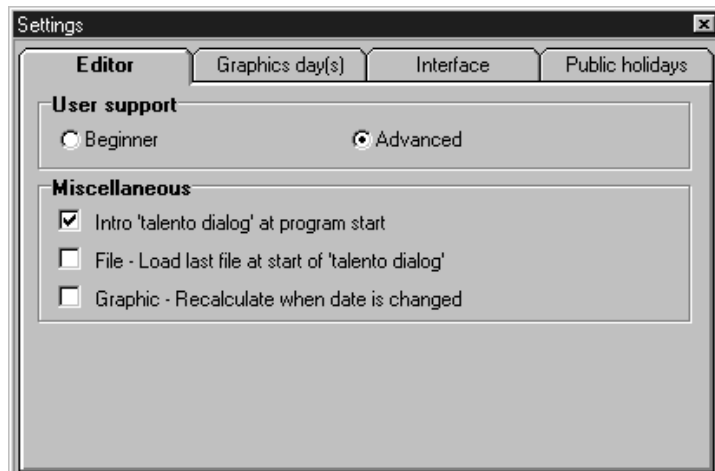


Figure 58: Options – Editor

11.1 Editor

User support

- **Beginners**
An assistant supports you in detailed steps when compiling the switching programs.
- **Advanced**
You should be familiar with the programming steps. The respective windows for entering the data are called up directly, see Section 3.9.

Miscellaneous

- **Intro** – “talento dialog” is introduced when the program starts.
- **File** – The last file used is loaded when you start „talento dialog”.
- **Graphic** – The graphic is automatically updated after every change in the switching program.

Note: Deactive this option in the case of large switching programs.
The result can be waiting times until the new graphic is constructed.
You can update the relevant graphic – year or day(s) – directly in the corresponding window with **Calculate**.

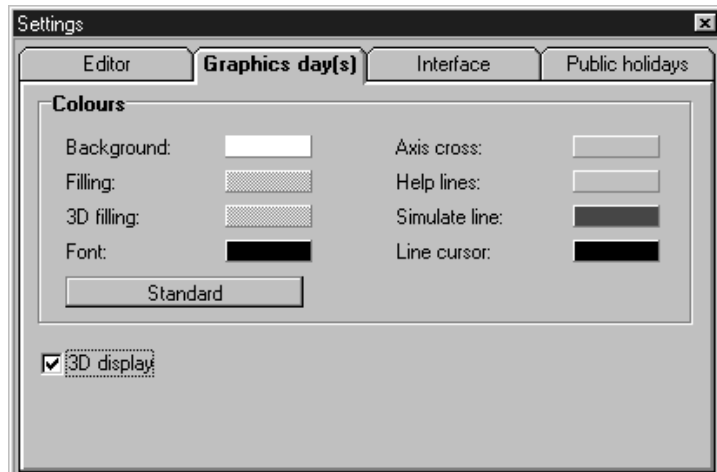


Figure 59: Options – graphic

11.2 Graphic, day(s)

You can freely select the individual colours for the graphic representation.

- Colours
Activate the relevant colour area with a double click. The colour selection is opened.
- Standard
All colours correspond to the Grässlin standard settings.
- 3D representation
The graphic is shown in 3-D.

11.3 Interface

You select your PC interface for transferring the switching programs.

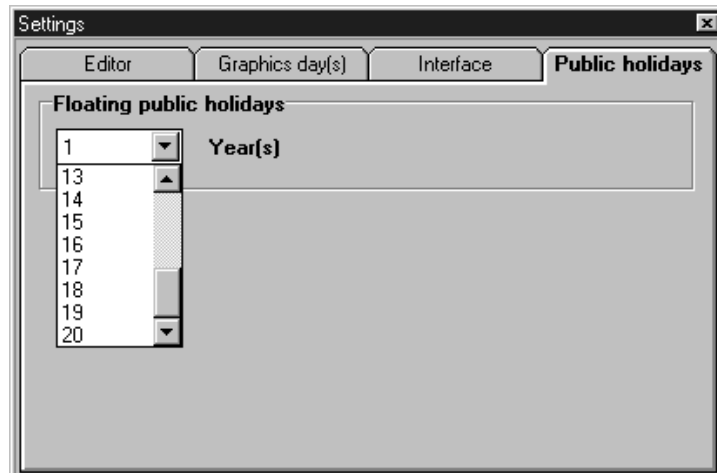


Figure 60: Option – public holidays

11.4 Public holidays

You select the number of the years for which your switching program should execute the floating public holiday.

Note: If you defined more than one year for your switching program, not all memory locations which were calculated by the "talento dialog" are displayed in the window

Edit switching programs.

However, the switching program is correctly transferred to the corresponding time switch and you can individually read all date assignments.

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