Benutzer-Handbuch
Stand Januar 2000

ABB i-bus® EIB
Programmiersoftware für
Speicherkarte: Obelisk V 2.0

zur Erstellung von Schaltprogrammen für die Zeitschaltuhren SW/S 4.5 und FW/S 4.5

310 836

Gebäude-Systemtechnik

SK 9

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ABB STOTZ-KONTAKT

Bestimmungsgemäße Verwendung
Mit der Software können Sie Schaltprogramme ausschließlich für **ABB**-Geräte mit der Bezeichnung Typ **SW/S 4.5 und FW/S 4.5** am PC erstellen.

Intendend Use
With this software you can write switching programs on a PC only for devices of **ABB** with the designation types **SW/S 4.5 und FW/S 4.5.**

Serial number for Demo: ABB-DEMO

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1.0 INSTALLATION

1.1 Software and Accessories

The Software package consists of:

- a CD (CTS)
- a memory card
- a interface
- a user's guide for the software

1.2 Software Installation for Windows 3.1 ... 3.11

1. Close all Windows applications.
2. Insert the CD into your drive, e.g.: **d:**
3. In the program manager open the main menu **File**
4. Select the function **'Run'.**
5. Enter **d:\setup.exe** (or your drive designation).
6. Click **OK.**

1.3 Installation for Windows 95/98/NT

1. Click **'Start'**
2. Click **'Run'**
3. Enter **d:\setup.exe** (or your drive designation).
4. Click **OK.**

☞ Select the language for Setup and then click **OK.**

Follow the instructions for the next installation steps.

After several installation steps the following dialogue appears:

☞ Enter the name, company and serial number of the installation CD.

☞ Click **Next**.

☞ Select the setup type and then click **Next**.

Follow the instructions to complete the installation.

Intended Use
With this software you can write switching programs on a PC. The software allows you:

- to write switching programs
- to program switching programs into a memory card
- to read in switching programs from the memory card
- to print out switching programs in tabular form
- to copy parts from an existing switching program and paste them into a new or already existing switching program
- to determine a new summer/ winter time changeover for your clock
- to filter switching programs in accordance with specific search criteria and to display or print out filtered switching programs
- to produce astronomical switching times (for the astronomical time switch only)

1.4 Installation of the Interface

The Interface - what is its purpose ?

- The switching times produced on the PC can be read out by means of the interface onto a memory card.
- With the memory card program any other time switch can then be programmed within a few seconds.
- Switching times programmed on a time switch can be read out onto a memory card and then via an interface be read into the software.

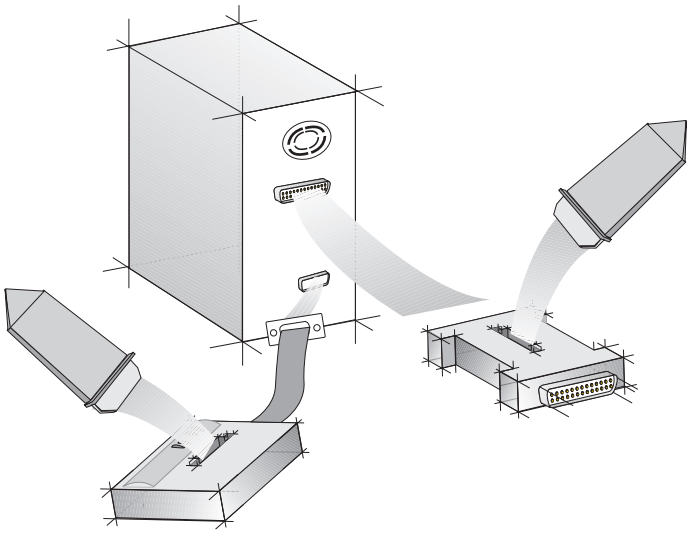
Installation via the parallel port:

Take heed of the designation **PC** on the interface.

☞ Plug the interface (with the designation PC) into the parallel port (printer connection) on your PC.
In the menu **Settings "Device Properties"** select the interface LPT 1, 2 or 3.

You can reconnect your printer to the free side of the interface.
To ensure fault-free operation please take heed of the following instructions:

Under no circumstances are you allowed to print out documents on the printer while switching times derived from the software program are being interchanged between the PC and the memory card !
The length of the printer cable should not exceed 2.5 m.



Installation via the serial port:

☞ Plug the interface for the serial port with the designation PC into the serial port of your PC.
From the menu **Settings "Device Properties"** select the drop-down menu **"Access to Obelisk"**. There, set the serial port: COM 1, COM 2, COM 3 or COM 4.
Ensure that the port is activated in your system settings.

2.0 START MASK

After starting the software or upon selection of the function **"New"** in the menu **File** the start mask appears**.**
On the start mask you can:

- set the language version
- select the device type for which you wish to write a program
- start a demo of the program, if you have installed the standard version

Click **OK** when you have selected the language version and clock type or want to adopt these from your last session.

2.1 Program Start

To start the Software

☞ Move the mouse to the

symbol.

☞ to start the program click the icon.

2.2 Setting the language version

The software always includes the language versions:

German
French
English

By clicking the globe, you can select a language which is filed in Speech.txt.
If your language is not available, please contact us via our hotline.

Selecting the time switch

☞ On the start mask click the list of time switch types that can be programmed with this software.
The time switch type must be in conformity with the inscription on your time switch.

Selecting the language

☞ Click the country icon for the language you would like to use.

If the software is restarted at a later point in time and **no** selection of the country icon is effected, the software will start with the language last selected.

2.3 Selection of the Time Switch

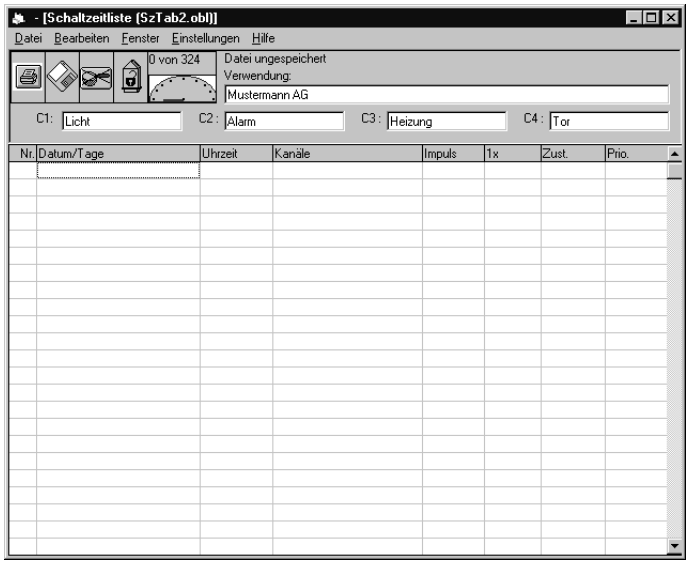
☞ On the start mask click the list of time switch types that can be programmed with this software. Select a time switch.
The exact model type of your time switch is imprinted on the front face of the time switch housing.
When you have selected the language and time switch model, click **OK.**
The list view (see section 3) of the Software is opened.

2.4 Starting the Demo

When you have installed the standard version, you can start a demo of the program. The demo function is missing from the “minimum” installation.

3.0 LIST VIEW AND MAIN MENU

After the start mask you are presented with the following dialogue window in the national language selected by you:



In the dialogue window illustrated above you can select the relevant menu by clicking on the header bar.

The Menu Bar

This places at your disposal five different menus in which all necessary commands are summarized in content order. For example the file menu contains all the necessary editing facilities for file management.

The Symbol Bar

Here you will find the symbols for all those commands that are frequently used.
For example:

Print

Save

Filter

Memory card write protected/open

Memory information

3.1 The Program Menu

Where do you find ...?

File	Edit	View	Settings	Help
New	Switching Program... Crtl + S	Switching Program	Edit Assistant ...	Help for Obelisk 1.0
Open	Priority Program... Crtl + P	Priority Program	Device Properties ...	About
Save	Changeover Tabel... Crtl + W	Changeover Tabel		
Save as...	Delete Del	Sample switching program		
Open sample...	Change Crtl + X	Sample priorities		
Close sample	Copy Crtl + C			
Print	Filter Crtl + F			
Program				
Read				
Exit				

The area with the grey background is described as the so-called main menu.

Click the menu **File** and the function menu is opened:
New, Open, Save, ...

Menu items that end with ... open a further dialogue window.

Activation is effected with the left mouse button or by a combination of keys.

3.2 The Symbol Bar

The symbol bar consists of up to 5 buttons for rapid command input / enquiry.

The 'Printer' button

Click this button and the file currently displayed will be printed out.

Note: If any filters are activated, these may taken into account in the printout.

‘Diskette’ button

The switching time file is stored with its current name by clicking this button.

‘Filter’ button

Switching between filtered (filter not crossed out) and non-filtered data (filter crossed out) is effected by clicking this button.

The filter criteria are defined in the **Edit** menu in the **Filter** function menu.

If a **filter is selected**, for better recognition the symbol has a **coloured** background. Double clicking this button leads to the filter setting being opened.

Button ‘memory card write protected/open’

By clicking this button, write access to the memory card is alternately opened or closed. The symbol alternates between an open and closed lock.

Memory card write protected
Time switch **with** stipulating public holidays
The memory card can no longer be overwritten by mistake.

Time switch **without** stipulating public holidays
Be careful: Memory card can be overwritten by mistake.

Memory card open
Any time switch can overwrite the memory card, if the memory card has been programmed with the setting “Memory card open”.

Caution: When the memory card is overwritten the old data is deleted.

Memory information

A vector diagram shows what proportion of the time switch memory locations is allocated.
The numeric values for free memory locations and the total memory locations are displayed via the vector diagram.
All numeric values relate to switching times and priority times.
The summer time/winter time table and maybe the astro times remain unconsidered.
Upon clicking the vector diagram a detailed message appears about memory allocation.

Information box “Use”

The information box contains information about the storage date of the program that has been written or read in via memory card.
For example, if input, the customer address and the various functions of the individual switch channels are displayed.
To change the use or channel designation simply overwrite the existing inputs.
In the case of tariff-time switches a program number can be input in addition. The program number is a 6-digit figure. It is stored in the time switch and is displayed at 15 sec. intervals instead of the date on the clock display.

4.0 THE FILE MENU

4.1 New File

The program is restarted in the menu **File** and in function menu **New**.
If no stored data is already available, the question is asked automatically:

Save changes in file.obl ?'.

☞ Decide **Yes** or **No**.

A new start mask then appears.

4.2 Open file

In the menu **File** in the function menu **Open** an already written switching time file can be opened for further editing. It is not possible to open several switching time files at the same time.

4.3 Saving a File

Upon program start a name is automatically assigned Sztab XYZ.obl.
Sztab = abbreviation for switching time table, **1, 2, 3, ..** = consecutive no., **.obl** = standard extension for the Software.
We recommend that you store a switching time file under an expressive name.
This will make it easier to retrieve at a later stage.
Use only 8 characters in the file name and no umlauts (ä,ü,ö).

☞ Save your selected name in the menu **File** and in the function menu **Save.**

For example:
Deployment location/customer: Christoph Hauser
Name of the data file: C_Hauser.obl
The extension should always read **.obl**.

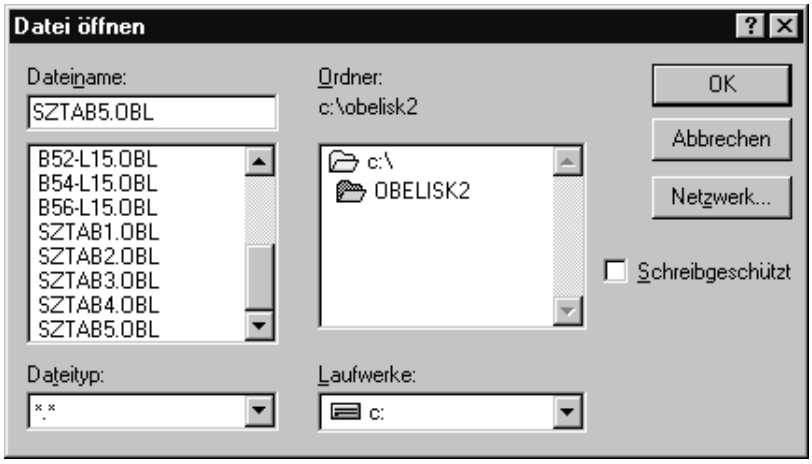
4.4 Saving a File as

In the menu **File** and in the function menu **Save as...** the current switching time file can be stored under another expressive name.
We recommend that you store a switching time file under an expressive name.
This makes it easier to retrieve at a later stage.

For example:
Deployment location / customer: Christoph Hauser
Name of the file: C_Hauser.obl.
The extension should always read **.obl**.

Please do not use any umlauts (ä, ü, ...) and use a maximum of 8 characters for file names.
If you do not observe this, the warning message'Not a valid file name' is displayed.

4.5 Opening a Template File



In the menu **File** and in the function menu **Open template** parts can be copied from an already existing switching time file and be supplemented in an existing program or in a new program which is to be written.

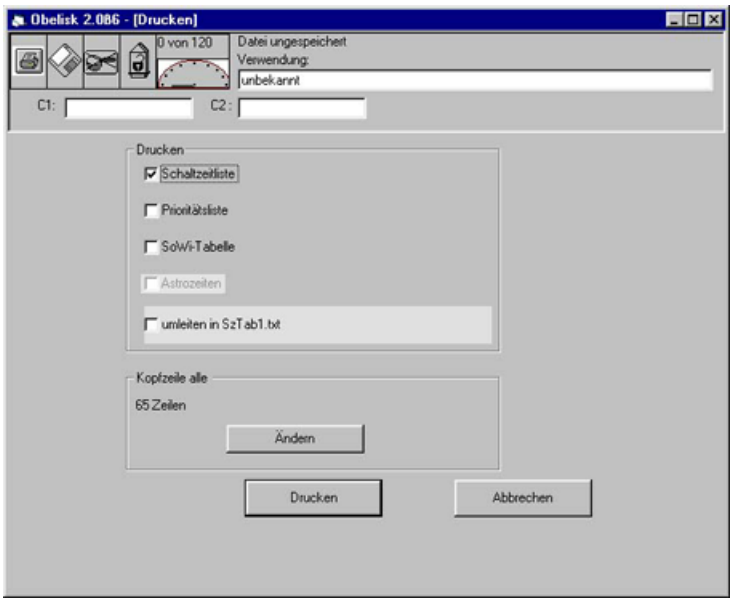
Note:
The data in the templates cannot be changed.
Only one template can be opened at a time.

☞ To open a further template, you must close the 1st template.

4.6 Closing a Template File

With this function you close any copy open template file.

4.7 Printing a File



There are two possible ways of starting printouts.

A. By clicking the printer symbol on the symbol bar you will obtain a printout of the currently displayed list.

Note:
Any filters that are set will be taken into consideration in the printout and on the display.

B. In the menu **File** and in the function menu **Print** the desired lists can be selected and printed out.

Printout of all stored lists

In the above dialogue window you can choose which lists you wish to have printed.
If printed via this dialogue window, any filters that have been set will **not** be taken into consideration.

The following lists are possible: **- List of switching times**
- List of priority times
- List of summer time/winter time table
- List of astro times (astronomical time switch only)
- Diversion of the printout to a text file.

☞ Mark by clicking the boxes of the lists you would like to print out.

Changing the printer settings
In the menu Device Properties and in the function in the frame **'Print Settings'** coordination of the the headings of the individual pages with the paper size can be effected.

Changing the setting

☞ Click **'Change'**.

4.8 Programming a file

In the menu **File** and in the function menu **Program** a stored switching time file can be loaded into the memory card.

Prerequisite:

- The switching time file must be saved
  In the event that the file is not saved, a message is effected:
  "Only saved switching time files can be transferred !"
- The interface must be plugged into the matching port and the memory card into the interface.
- The correct interface for the data transfer must be selected.

Selecting the interface:
In the menu **Settings Device Properties...** the correct port has to be selected in the box "Access to Obelisk".
Interface for parallel port: LPT 1 represents address 378H, LPT 2 represents 278H, LPT 3 represents 3BCH.
Interface for serial port: The software supports COM 1 to 4.

It may be necessary to adjust the speed of the data transfer to your PC. This is effected via the delay factor. To set the delay factor for the parallel port, select from the menu **Settings** the option **Device Properties...** (section 7.3).

Note:
If the parallel data transfer is used, the program changes over to DOS mode. Under no circumstances may any inputs be effected via the keyboard nor may any task changes or printouts be effected via the connected printer during data transfer.

4.9 Reading a File

For the transfer the same prerequisites have to be heeded as in the **"Programming Obelisk"** file.
In the menu **File** and in the function menu **Read** memory card a stored switching time file can be loaded on the PC from a memory card into the Software.

Note:
The function can only be excuted if no unsecured switching time data is present on your PC. Before reading in the memory card we therefore recommend backing up on your PC the switching time data that may not be stored.

4.10 Exiting a File

You leave the program software in the menu **File** and in function menu **Exit**.
If any unsaved data are still present, the following enquiry appears automatically:

"Store changes in file.obl" ?

Decide by clicking **'Yes'** or **'No'**.

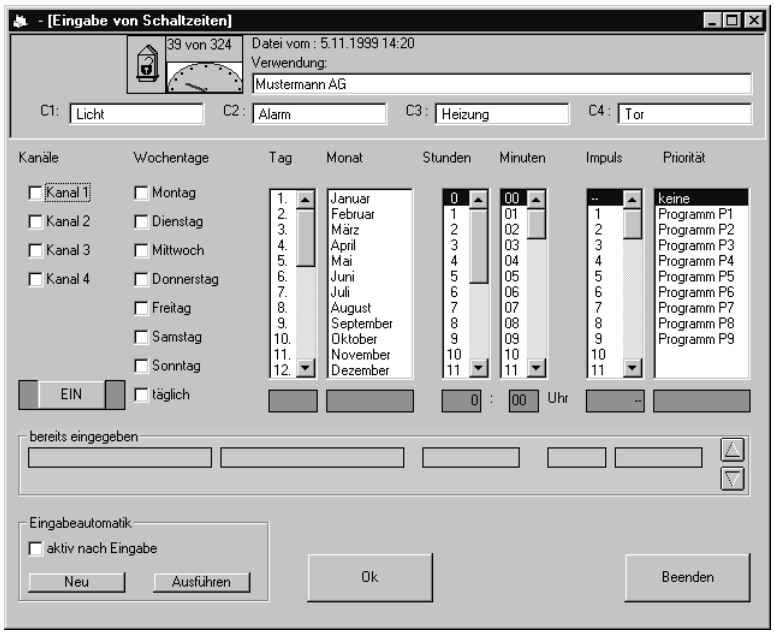
If you wish to save:

Tip: Choose an expressive name. It will help you with later retrieval.

5.0 THE EDIT MENU

5.1 Editing of Input Switching Times

In the menu **"Edit"** and in the function menu **Input switching time** the dialogue window opens.



Overview:
In this dialogue window, the dates of the switching time program can be entered.

7-day switching times:

these are compulsory:
Channel selection consisting of one or several channels (only one channel on the astronomical time switch)
Week day selection consisting of one or more week days
Time entry consisting of hour and minute
Switching status, i.e. On or Off

optional:
Pulse duration for pulse times (not on the astronomical time switch)
Priority level

Date switching times,

these are compulsory:
– Channel selection, consisting of one or several channels
(on the astronomical time switch only one channel)
– Date consisting of day and month
– Input of the time consisting of hour and minute
– Switching status, i. e. On or Off

optional:
Pulse duration for pulse times (not on the astronomical time switch)
1 x function

Tip:
Automatic input can be used to facilitate switching time input.

Example:
A switching time is to be programmed with a regular interval of 1.5 hours.
The switch status should alternate every 1.5 hours between On and Off.

This difficult program input can be solved very easily by using the automatic input.

The switching time assistant can be brought into action with two different effects:

1. Each mouse click on the button 'Run' increases the displayed switching time by the amount specified in the automatic input. However, the data are not stored.

2. If the box is active after input activated:
The displayed switching time is saved and a new switching time generated by clicking **OK**. The settings in automatic input determine the time difference between the new switching time and the previously stored switching time. The new switching time is a suggested one and can still be altered.

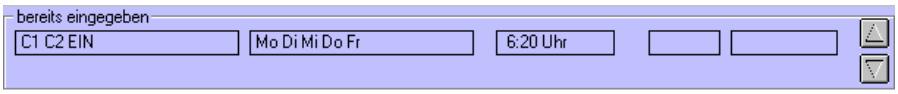
Opening the automatic input

☞ Click **'New'**.

In this dialogue window you can set according to what specifications the displayed time is to be changed. See also the section “Settings Automatic Input”.

5.1.1 Displaying/scrolling Stored Switching Times

In the framed **“already input”** box the stored switching times can be displayed again.



Click the following button to scroll **backwards**.

Click the following button to scroll **forwards**.

To finish the input of switching times:

☞ Click **‘Exit’**.

5.1.2 Setting the Switching Status

To set the switching status:

☞ Set the desired switching status by clicking the **‘On / Off’** button
The switching status as set is depicted on the button.
The option On or Off relates to the position of the operating contact of the time switch.

5.1.3 Channel selection

Switching channels can be programmed individually or by the block
(on the astronomical time switch only one channel).

Advantage:
Switching times, which are effective for several channels, occupy only one memory location.

Disadvantage:
Switching channels that have been programmed in blocks cannot be displayed individually, i.e. if channels C1, C2, C3 have been programmed with the same switching time and the filter for channel C1 is set, channels C2 and C3 are also displayed.

Selection of one or more channels:

☞ Click the box beside Channel 1, Channel 2, ... or the relevant lettering.

A channel is selected, if the box is marked with a cross and the selected channel is on a coloured background.

5.1.4 Selection of Week Days

Selection of one or more **weekdays:**

☞ Click the **box** or the relevant **lettering** of the week day. The selected week day is provided with a coloured background.

Selecting all week days:

☞ Click the box **'daily'** and all week days are selected at the same time.

5.1.5 Input of the date

The complete date consists of the day of the month and the month.

Setting the day of the month

☞ Move the scroll bar and select with the mouse pointer the day of the date.
The selected day is provided with a coloured background.

Selection of the month:

☞ Mark by clicking the desired month.
The desired month is provided with a coloured background.

Or:

☞ Click the blue box under **"Day".**
☞ Enter the date of the desired week day with the buttons **0 ... 9.**

5.1.6 Input of the Time

The complete time consists of the hour and minutes.

Selection of the hour:

- Use the mouse pointer to move the scroll bar in the **“Hours”** box.
- Click the desired hour.

  The selected hour is provided with a coloured background.

  Display of the selected hour is effected in the box directly beneath it.

Selection of the minutes:

- Use the mouse pointer to move the scroll bar in the **“Minutes”** box.
- Click the desired minute.

  The selected minute is provided with a coloured background.

  Display of the selected minutes is effected in the box immediately beneath it.

5.1.7 Input of the Pulse Duration (not on the astronomical time switch)

Example:
For break signals, delayed On and Off switching times.

Selection of the pulse duration:

- Use the mouse pointer to move the scroll bar in the **“Pulse”** box.
- Mark the desired pulse by clicking it.

  The selected pulse duration is provided with a coloured background.

  Display of the selected pulse duration is effected in the box immediately beneath it.

Note:
If **no** pulse is selected, - - is displayed. **No** pulse is effected, but a normal switching time.

5.1.8 Selection of the 1x function

The function **1x** can be used for all date-related switching times and priority time periods. On time switches with stipulating public holidays the function 1x is not used. Instead the year is input for the priority switching times.

Example:
For holiday and national holiday programs.

Once the switching time has been executed, it is automatically cancelled at midnight.

Selection

- Click the text **1x** or the relevant box.

5.1.9 Selection of the Priority Level for a 7-day Program

In the **“Priority”** box an index **P1 ... P9** can be assigned to each 7-day program.
For further information see section 5.2.

5.2 Input of Priority Switching Times

Mode of operation:
With the software up to 9 different 7-day programs can be filed in additon to the normal 7-day program.
A defined 7-day program **P1 ... P9** can be invoked in randomly defined periods of time,

i.e. programming consists of:

1. **Defining the 7-day program**
2. **Defining a starting and ending date**

The same priority must be assigned to the two programming items (P1 .. P9).

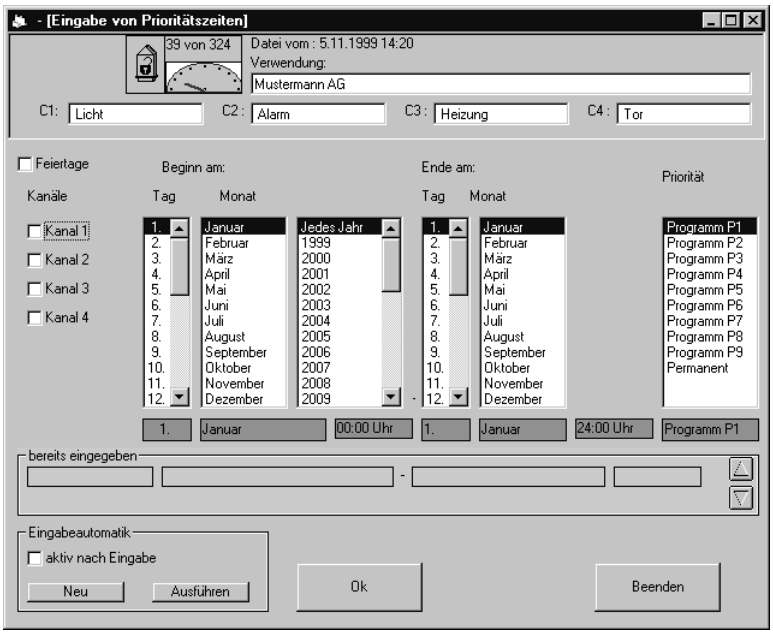
If a change is made between two 7-day programs, the time switch performs a program review, i.e. the affected channels are switched as if the new 7-day program had already been active for a long time.
Date switching times that are to be executed only on a specific date have no priority level. In addition they are executed for all 7-day programs.

To input national holidays, a cross can be put against the box **national holidays**. Instead of a start date, national holiday sets (top drop-down menu) then appear and a list of national holidays.

If the priority level permanent is selected when defining a priority time period, a fixed switch status (ON/OFF) is deposited instead of a 7-day program.

Note:
– If the time periods of several 7-day programs overlap, the program with the highest index is always effective. For example the 7-day programm **P9** suppresses **P3.**

– Priority level permanent has precedence over all other switching times,
i.e. neither 7-day programs nor date switching times are executed.
Manual switchings (switching preselection) are not possible either.



5.2.1 7-day Program with Priority Allocation

☞ Write your desired program as described in sections 5.1.1 to 5.1.5..

☞ Assign a priority P1 ... P9 to the 7-day program by clicking the **"Priority"** box.
If a priority is selected, the selected priority is provided with a coloured background.

Note: If **no** priority switching time is activated, the normal 7-day program is executed.

If the time periods of several 7-day programs overlap, the program with the highest index takes precedence. For example 7-day program P9 suppresses P3.

5.2.2 Input of a Priority Time Period

The following data are necessary:

Compulsory:
- Channel selection consisting of one or several channels (on the astronomical time switch one channel only)
- Starting date consisting of day and month (see 5.1.5)
- Starting year on time switches with stipulating public holidays
- End date consisting of day and month (not for national holidays, these are always valid only on the day of the starting date)
- Priority level (see 5.1.9)

Optional:

- Switching status (ON/OFF) if priority level **"Permanent"** is selected (see 5.1.2)
- 1 x function (only on time switches without stipulating public holidays)

Programming of a priority time period

☞ Open in the edit menu by clicking **Edit** and then the function menu **Input priority times**.

Channel selection

☞ Click the boxes next to the channel numbers to select one or several channels (astronomical time switch one channel only).

Selection of the priority level (prio-level)

☞ Assign the desired priority **P1 ... P9** to a time period by clicking the **"Prio-level"** box.
☞ Define the duration of the priority time period start/end.

Duration of the priority switching time:

Always start at 00.00 hours on the day of the starting date.
Always end at 24.00 hours on the day of the end date.

Automatic input can be used to facilitate entry.
For further information about automatic input, see section 7.1.

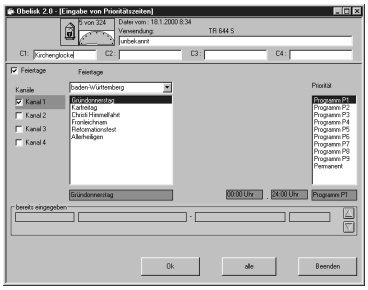
Review of what has already been stored:
In the **"already input"** frame you can have displayed again the stored priority switching

times. By clicking the arrow buttons in this frame you can scroll the priority times already input.

Click the following button to scroll **backwards:**

Click the following button toyou scroll **forwards:**

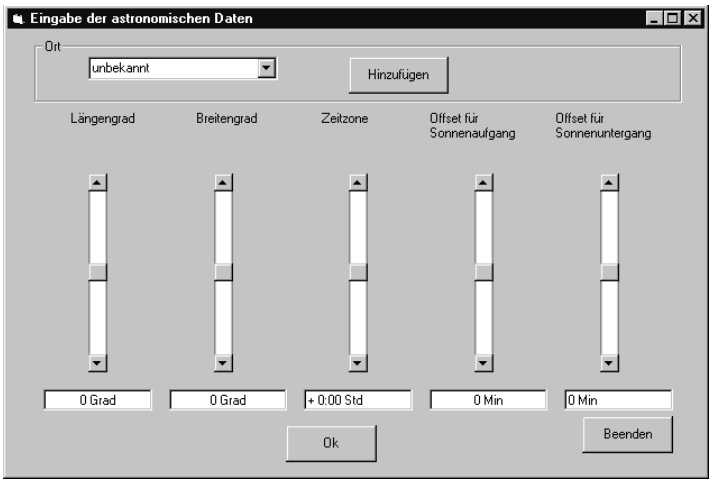
5.2.3 Input of National Holidays



For the programming of new national holidays or national holiday sets see section 7.2.

- Click the box **National holidays**. A list of national holiday sets with the relevant national holidays appears.
- Select the channel and priority level.
- Select a national holiday set by clicking it. If you wish to select all national holidays, click **all** in the national holiday set.
- Select individual national holidays from the national holiday set by clicking them. If you wish to select all national holidays from the national holiday set, click **all**.
- Click **OK** to confirm your selection.

5.3 Input of Astronomical Data (astronomical time switch only)



The astronomical time switch calculates from the astronomical data the sunrise and sunset times in a year. These times are the switching times of the astronomical time switch.
You can add an offset to the calculated switching times for sunrise and sunset individually. The offset shifts all the astronomical switching times by a maximum of +/- 120 minutes.

☞ From the menu **Edit** select the option **Input astronomical data....**
A dialogue window opens.

There are two possibilities of inputting data:
- Selection of a location in the list box **“Location”** (section 5.3.1)
- Input of longitude, latitude and time zone by means of the scroll box (section 5.3.2).

5.3.1 Editing a Location in the List Box “Location”

Selection of a location in the list box “Location”

☞ Click the downward pointing triangle and select a location.
The astronomical data of the location are loaded from a data base.

☞ Click **OK** to save the setting.

Adding a location to the list box “Location”

☞ Input the data specific to the location by means of the scroll box.

☞ Click Add. You are then asked for the name of the location.

☞ Input a name for the location and click **OK**.
This name appears in the list box

Deleting a location in the list box “Location”

☞ Select a location and click **Delete.**

5.3.2 Input of Astronomical Data by means of the Scroll Box

☞ Using the scroll bars select the longitude, latitude and time zone of your location.

Note: You can find the longitude and latitude in an atlas.
A world map of the time zones is enclosed with the time switch.

5.3.3 Input of an Offset

An offset from the calculated switching times can be useful due to local circumstances, e.g., if a high mountain exists to the east of the location, an offset for sunrise is useful.

A offset is added to all the calculated switching times, i.e. negative offsets provide for an earlier switching time and positive offsets provide for a later switching time.

☞ Using the scroll bars select an offset for sunrise and an offset for sunset.

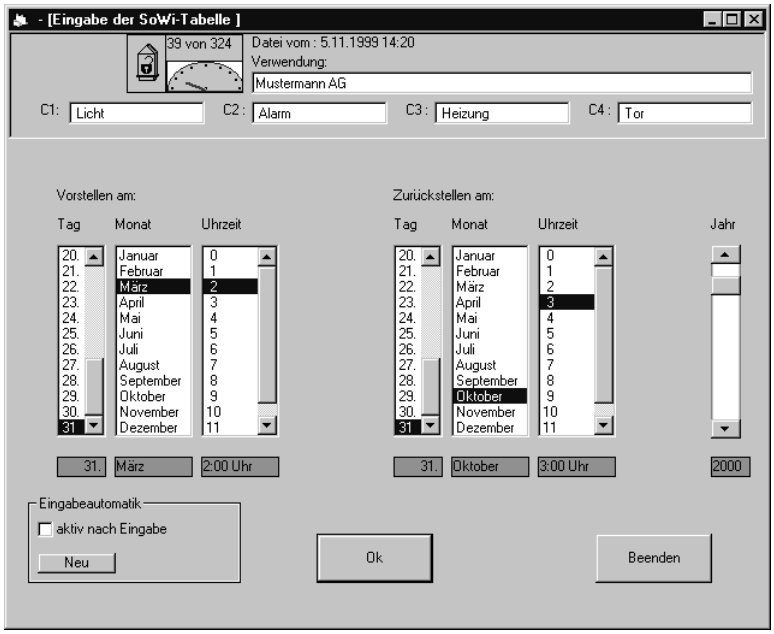
☞ Click **OK** to produce an astro program.
Click **End** if you do not want to produce an astro program.

For the manual adaptation of individually calculated values see section 5.11, “Editing Astro Times”.

5.4 Input of a Summer- / Winter Time Table

Open the dialogue window

In the menu **Edit** click the function menu
Summer/Winter Time Table.
The illustrated dialogue window is opened.



Only with this software are you in a position to be able to define a completely new norm for summer / winter time changeover that deviates from the changeover rulings already integrated into the time switch. The new norm can be input in advance for up to 20 years.

You can define:

- Starting year of the table
- Starting date of the time offset
- Start of the time offset (time)
- End date of the time offset
- End of the time offset (time)

The following are already integrated into the time switches:

dat 0: no summer / winter time changeover

dat 1: European ruling:	last Sunday in March (02 h -> 03 h)
	last Sunday in October (03 h -> 02 h)
dat 2: British ruling:	last Sunday in March (01 h -> 02 h)
	last Sunday in October (02 h -> 01 h)
dat 3: North American ruling:	second Sunday in April and last Sunday in October.

5.4.1 Setting the Time for the Summer / Winter Time Changeover

Start and end of the summer / winter time changeover can be effected only at a full hour between 24 hours and 12 hours.

In the box **“Turn forward on”:**

☞ Use the mouse to move the scroll bar up and down. Mark with the mouse

- on what day
- in what month
- at what time the clocks are to be turned forward

from winter time to summer time

In the box **“reset on”:**

☞ Move the scroll bar with the mouse. With the mouse mark

- on what day
- in what month
- at what time the clocks are to be turned back

from summer time to winter time.

Defining the starting date for the summer/winter time changeover:

- Use the mouse to move the scroll bar in the box **“Year”**
- Mark in which year the summer / winter time changeover is to be effected for **the first time**,

i.e. you can define the starting date for a new clock changeover norm.
If the new changeover norm has been activated, it starts automatically in the defined year.
By means of this option, the years of the following table entries are also defined.

To save the new norm:

- Click **OK.**

Programming with “Automatic Input”

- In the frame **“Automatic Input”** click **‘New’**.

The settings dialogue for the summer/winter time norm will start. (see 7.1.1)

Activate the box **“Active upon input”**

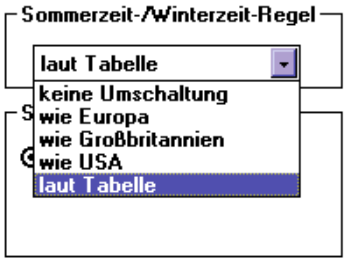
- Click **OK** to save each year individually.
- If you click **All**, all table entries for the next 20 years are immediately produced automatically.

5.4.2 Activation of the Changeover Norm

There are two possibilities for activating the changeover norm.

A. Activation of the new changeover norm immediately after reading it into the time switch:

- In the menu **Settings** select the function menu **Device Properties**
- In the box **“Summer Time/Winter Time Norm** select the input: **”according to table"** (see illustration).



B. Only add the new table to the time switch, but do not activate it.

☞ In the menu Settings select the function menu Device Properties.
☞ In the box **“Summer / Winter Time Norm”** select the input:
e. g., **“as Europe”**.

The changeover norm selected here remains active !
The new table is only a supplement to the changeover norms already available.
It is listed in the time switch as **dat 4** for future selection, but not activated.

On saving the file, the following notice is automatically provided:

“You have input a summer/winter time table, however, it is not activated !”

You can now decide again by clicking:

You would like to activate the changeover norm: **“Yes”** button
You would not like to activate the changeover norm: **“No”** button

5.5 Edit Delete

The lines marked in the displayed list are deleted by the function **Edit Delete**. This can be a switching time list, a priority time list or a summer / winter time table.

To delete one line:

☞ Click the first column of the line to be deleted.

☞ In the menu **Edit** select the function **Delete**, or delete by pressing the key **‘Del‘.**

To delete several lines in a table:

☞ Click the first line to be deleted.

☞ Drag the mouse pointer across the lines to be marked (1 column at a time).

Release the mouse button when you have marked all the lines you want.
The selected area is marked in colour.

☞ In the menu **Edit** select the function **Delete** or delete by pressing the key **‘Del’.**

Deleting a summer / winter time table

Take heed:
A summer /winter time table can always be deleted **only** if the **last** line is marked.
If this is not done, the following warning appears:

"Deletion only possible, if entries behind this are included".

5.6 Edit Change

Rapid change of a line:

☞ Double click the line of the switching time to be changed.

Or:

☞ Use the mouse to mark the first column (No.) of the line to be deleted.
The selected area is marked in colour.

☞ In the menu **Edit** select the function **Change.**

☞ Change to the desired data (see program input).

☞ Save the change by clicking the button **OK.**

The next switching time to be changed is displayed in the dialogue window.

Changing several lines in a table:

Tip:
If you would like to change several switching times with specific properties, we recommend that you isolate them from the other switching times by means of an appropriate filter (see section 5.8).
You are provided with a better overview for marking the switching times.

For specific applications, the automatic input (see section 7.1) can be a very helpful tool.
For example, if you would like to shift several switching times by the same period of time.

☞ Click the first column (No.) of the line to be changed.

☞ Drag the mouse over the lines still to be marked.

☞ Release the mouse button when you have marked all required lines.
The selected area is marked in colour.

☞ In the menu **Edit** select the function **Change.**
The input window opens. The data to be changed are displayed.

☞ Change to the desired data (see program input).

☞ Save the change by clicking **OK.**

The next switching time to be changed is displayed in the dialogue window.

5.7 Edit Copy

With the function menu **Copy**, data (switching times) can be transferred from a template, (i. e. from another data file).

Open template:

☞ In the **File** menu open the function **"Open template"** by clicking it.

Copying one switching time:

☞ Double click the line to be copied.
This function automatically opens the input window of your output list, filled with the switching time that has been copied into it.

Copying several switching times:

Tip:
If you would like to copy several switching times with specific properties, we recommend that you isolate them from the other switching times previously by means of an appropriate filter (section 5.8). You are provided with a better overview for marking the switching times.

☞ Drag the mouse pointer down over the lines to be copied, Release the mouse button when you have marked all the lines you want.
The selected area is marked in colour.

☞ In the menu **Edit** select the function menu **Copy.**

☞ Assign one or several channels to the copied switching time by clicking them.

The copied switching times can still be randomly changed by selecting them with the mouse pointer or with the keyboard.

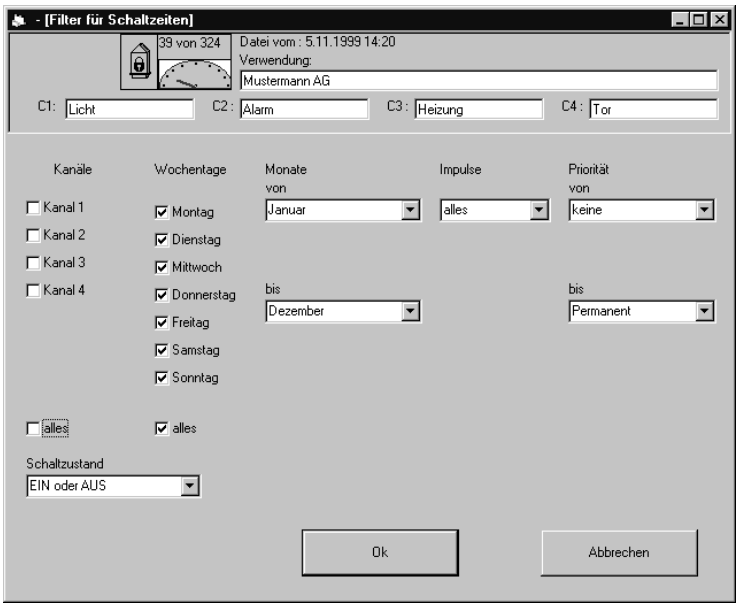
☞ Save by clicking **'OK'**.

The next switching time that is copied in is displayed in the dialogue window until all the required switching times have been copied. Immediately afterwards the switching time/priority time list is displayed. In order to copy switching times again, change with the menu **Window to Template Switching Time / Priority Time List.**

To change and save copied switching times again, see section 5.6.

5.8 Edit Filter

In order to obtain a better general view of the data already stored, with this function you can filter parts out of the input switching times.
With this funcion you can filter parts out of the input switching times.



The following filter criteria can be applied:

To select channels:

Individual filter:

Make your selection in the **“Channels”** box by clicking the appropriate box.

If the **‘All‘** box is activated or deactivated, all channels can be quickly selected or deselected.

Note:

If the channel 2 box is marked, only the switching times of this channel are displayed. If, e.g., channels 2 and 3 have been jointly programmed with the same switching time (block formation), despite the filter property **channel 2 only,** both channels are displayed.

To select weekdays:

If the **‘All’** box is activated or deactivated, all weekdays can be quickly selected or deselected. Each week day can be individually marked.
Make your selection in the **“Week days”** box by clicking.

Note:
If the box, e. g., Wednesday, is marked, only the switching times of this week day are displayed.
If, for example, the week days Monday to Friday have been jointly programmed with the same switching time (block formation), all weekdays from Monday to Friday will be displayed despite the filter condition **Wednesday only**.

To select switching status:

☞ Open the selection list by clicking the arrow ▼ in the box **"Switching Status"**. You can select whether you would like to have only ON or OFF switching times or both displayed.

To select month:

If a period of time **"from - to"** is defined, only date or priority times that are active during this period of time are filtered and displayed.

To set the time range:

☞ Make your selection by clicking the arrow ▼ in the list **'Months from'**.
☞ Make your selection by clicking the arrow ▼ in the list **'to'**.

To list no date times:

☞ By clicking the arrow ▼ in the list **'Months from'** select the line **'7-day programs only'**.

To select the pulse:

Setting:

☞ By clicking the arrow ▼ in the list **'Pulses'** select whether only pulses, only normal switching times or both are to be displayed.

To select priorities:

Setting:

☞ Make your selection by clicking the arrow ▼ in the list **'from'**.
☞ By clicking the arrow ▼ in the list **'to'** select which priority levels are to be displayed.

If the filter criteria are defined, in the menu **View** in the functions **Switching times** or **Priority times** you can quickly switch over between the filtered and unfiltered switching times.

Filter activated:

The symbol is marked in colour.

Filter deactivated.

5.9 Sorting Switching Times

☞ In a switching time list click the heading of the column that you want to sort. Preset is sorting by channel, priority and time.

☞ If the overview provided by sorting is not sufficient, you should define a filter or select **“Program Simulation”** in the menu **Window**.

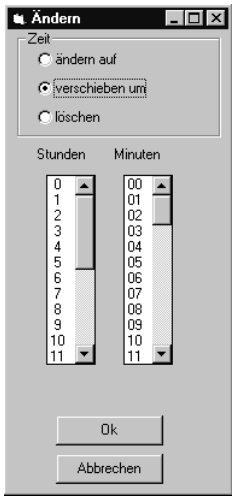
5.10 Displaying Priority Times for the Switching Times

☞ Place the mouse pointer on the switching time priority or priority time and press the left-hand mouse button.

☞ When the mouse button is pressed you are shown the priority times or switching times as long as they are not hidden by a filter property.

5.11 Editing Astro Times (astronomical time switch only)

The astro times of the astronomical time switch consist of one switch-on time and one switch-off time each per day. The astro times always affect channel 1 and optionally channel 2 as well.
Switch-on times and switch-off times can be altered or deleted by means of the software.
The date and switch status cannot be altered.



☞ If you want to edit the astro time:
start by double clicking the time.
The dialogue window **“Change”** is opened.

☞ If you want to edit several astro times, drag the mouse with the left-hand mouse button pressed over the desired times and click the right-hand mouse button.
The dialogue window **“Change”** is opened.

☞ If you want to input a new hour and minute for all the marked times, select **change to** in the dialogue window.

☞ Input the new time.
Click **OK.**
All marked times are changed to the new time.

☞ If you want to shift all the marked times by the same time interval, select **shift by** in the dialogue window.
Input the time interval for the shift.
Click **OK.**
All the marked times are changed.

☞ If you want to delete all marked times, select **Delete** in the dialogue window.
Click **OK.**
All the marked times are deleted.

6.0 THE WINDOW MENU

☞ Open the **Window** menu by clicking.

You will find the following functions:

Switching Times
Priority Times
Summer/Winter Table
Astro Times (astronomical time switch only)
Switching Times Template
Priority Times Template
Program Simulation.

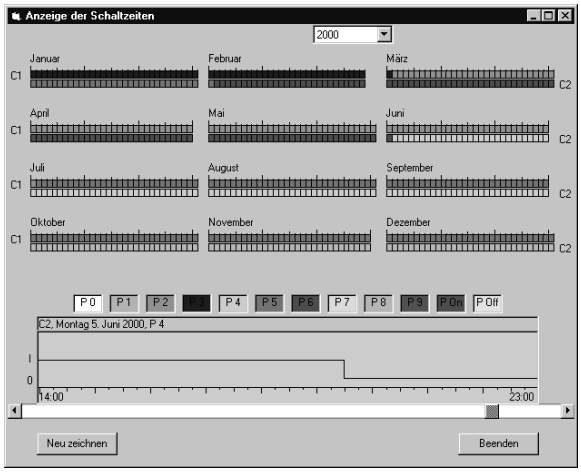
☞ Mark one of these functions with the mouse pointer.
Except in the case of **“Program Simulation”** a list is displayed.

6.1 Program simulation

☞ Save your switch program.

☞ In the menu **Window** click **Program Simulation.**

The window **“Display of Switching Times”** is opened. A graphical overview of the switch program is shown (see illustration).



The simulation year for which the overview is valid is set in a list box.

The overview consists of two parts:

1. Year overview for the priority switching times
2. Day overview for the selected channel

We do not guarantee the correctness of the simulation. No indemnity claims are derivable from the simulation results.

Year overview for the priority switching times

The year overview consists of 12 month blocks. Each box in a month block symbolizes a channel on one day. The days are arranged adjacently and the channels one above the other. The box colour marks the priority of the switching program. The colour can be altered by clicking a colour scale box.

Day overview for the selected channel

The day overview is the line diagram at the bottom of the window.
It shows a switching diagram of a day. For the simulation it is assumed that all switching times have been processed once already.

The switch status ON/OFF is a black line; pulses are shown as vertical lines. As the diagram resolution is 1 minute, pulses are not shown exactly to the second. The superimposed scale has a grid of 15 minutes.
The background colour represents the colour for the priority switching time.

Selection of a day from the year overview

Drag the mouse pointer with the left-hand key pressed over the year overview.

On the header of the day overview you will see the date and channel number of the box in which the mouse pointer is positioned.

Release the mouse button when you have reached the day and channel you are looking for.

The switching program is shown in detail in the day program.

Display of the time in the day overview

☞ Position the mouse pointer on the line diagram and press the left-hand mouse button.

The time is superimposed on the header of the day overview. The time can be determined to a precision of +/-1 minute.

Scrolling through the day overview

☞ Under the day overview click the arrow to the right or left.

The time period display on the diagram will run forwards or backwards.

Graphic chart "Draw New"

☞ Click **"Draw new"**, if the graphic chart is not fully set up.

7.0 SETTINGS MENU

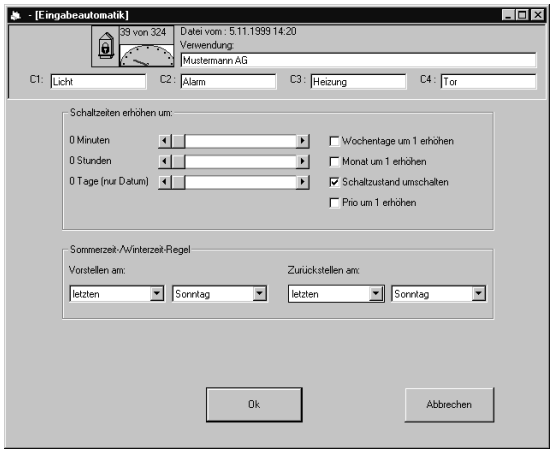
The settings menu consists of the options:

- Automatic input... (section 7.1)
- National holidays... (section 7.2)
- Device properties... (section 7.3)

7.1 Automatic Input

☞ In the menu **Settings** click **"Automatic Input..."**.

The window **"Automatic Input"** is opened.



This tool facilitates and speeds up the programming of On / Off, date and priority switching times which are to be effected with a specific regularity.
Similarly, the programming of a new norm for summer / winter time changeover can be implemented very simply and quickly.

Automatic input increases a switching time by a preset value.

Setting is effected in the **Automatic Input** menu in the **'Increase switching times by'** box.

With the mouse move the appropriate scroll bar.

or

click the buttons left or right.

Here the values for:

- **minutes (0 .. 59)**
- **hours (0 .. 23)**
- **and days (0 .. 364)** can be set.

The days are valid only for date and priority times. Balances carried over are included.

Example: 31 December 20:30 hours + 1 day, 4 hours and 50 minutes = 2 January 1:20 hours.

Set:

– whether the week day is to be shifted, (only for 7-day switching times)

Depending on the setting Monday is turned into Tuesday, Tuesday is turned into Wednesday etc.
The function can also be applied to week day blocks.

– whether the month is to be increased (only for date and priority switching times)

Depending on the setting January becomes February, February becomes March etc.

– whether the switching status can be changed (only for 7-day and date switching times)

Depending on the setting ON changes to OFF and vice versa.

– whether the priority is to be increased by 1 (for 7-day switching times and priority switching times only)

Depending on the setting prio-level 1 becomes prio-level 2 and so forth to prio-level 9.
Note: prio-level 9 is no longer increased.

7.1.1 Automatic Input of Summer/Winter Time

Summer/winter time calculates the new changeover dates on the basis of the fixed norm. Setting is effected in the **"Summer/Winter Time"** box

Example: In Great Britain the currently valid changeover norm is:
Clocks are put forward by one hour on the last Sunday in March at 1.00 a.m.
Clocks are put back by one hour on the last Sunday in October at 2.00 a.m.

☞ Select in the **"Summer/Winter Time Norm" box.**

for:

'Put forward on:' last Sunday

and **for**:

'Put back on:' last Sunday

Input possibility for month and time of changeover

In the menu **"Edit"** in the function menu **Input summer/winter time table**, the date and time of changeover can be defined.

Example: The inputs March, 1.00 hours and October 2.00 hours and the current year.

Define each time individually:

☞ In the menu **Edit** open the function menu **Input summer/winter time table.**

☞ Select the desired data such as day, month, time and year when the summer/winter time is to be put forward or back.

☞ Save each setting by clicking **OK.**

Defining automatically all 20 inputs for changeover:

☞ Select beforehand by clicking in the framed box Automatic Input
"active upon input"
After that, the button **"all"** appears.

☞ Mark the button "all" and the switching standard is immediately programmed automatically for 20 years.

7.2 National Holidays

☞ In the menu Settings click **“National holidays...”.**
The window **“National Holiday Settings”** is opened.

In the national holiday settings you can:
- Define and delete national holidays (section 7.2.1)
- Define and delete national holiday sets (section 7.2.2).

7.2.1 Defining and Deleting National Holidays

☞ Enter the name of the new national holiday in the text box **“Name of National Holiday”**.

☞ Under “**Type of National Holiday”**: **select fixed, random** or **related to Easter.**

The following actions are dependent on the type of national holiday.

Fixed national holidays
A fixed national holiday on the same date each year; e.g., New Year’s Day on 1st January.

☞ If you have selected **“fixed”** as the type of national holiday, enter the day and month.

☞ Click **“>>”** to adopt the national holiday in the list.

Random national holidays
Random national holidays are always on a specific day of the week before or after a fixed date. For example, the day of prayer and repentance is on the Wednesday before 23rd November.

With this function each day of the week in a month can be defined:
- the first Monday in April is the Monday after 31st March
- the second Sunday is the Sunday after 7th June
- the last Friday in May is the Friday before 1st June

☞ Click the day of the week that is related to the date.

☞ Enter the day and month of the date to which the day of the week relates.

☞ Click **“>>”** to adopt the national holiday in the list.

National holidays that relate to Easter
National holidays that relate to Easter have a fixed time difference to Easter; e.g. Whitsun: 49 days after Easter.

☞ With the scroll box select the time difference to Easter.

☞ Click **“>>”** to adopt the national holiday in the list.

Note: If there is an input error, the national holiday can be removed from the list by **“<<”**. Upon clicking a national holiday the rule that provides the basis appears under the list.

Deleting a national holiday

☞ Mark the national holiday in the list.

☞ Click **“Delete”.**

☞ Confirm the deletion with **OK.**

7.2.2 Defining and Deleting National Holiday Sets

A national holiday set is a group of national holidays. To differentiate between the regionally different national holidays of a country, the national holidays can be grouped into national holiday sets. In addition you can define your own national holiday sets in order to switch special programs for Saturdays with late opening hours or other such repetitive dates.

Defining national holiday sets

☞ In the menu Settings click **“National holidays”** and in the dialogue window **“Add set”.**

A dialogue box appears.

☞ Enter a name for the new national holiday set.

Confirm the name with **OK.**
An empty national holiday set appers.

☞ Mark a national holiday in the list.

☞ Click **“>>”** on the right next to the national holiday list to copy the national holiday to the national holiday set.

The marking and copying is repeated until all desired national holidays are in the national holiday set.

Note: When the maximum number of national holidays per national holiday set is reached, the button **“>>” disappears.**

☞ Click **“Exit”,** to terminate national holiday setting.

Deleting a national holiday from a national holiday set

☞ Mark the national holiday by clicking in the national holiday list of the national holiday set.

☞ Click **“<<”** to the left of the dialogue frame **“National Holiday Set”.**

☞ Confirm the deletion with **OK.**

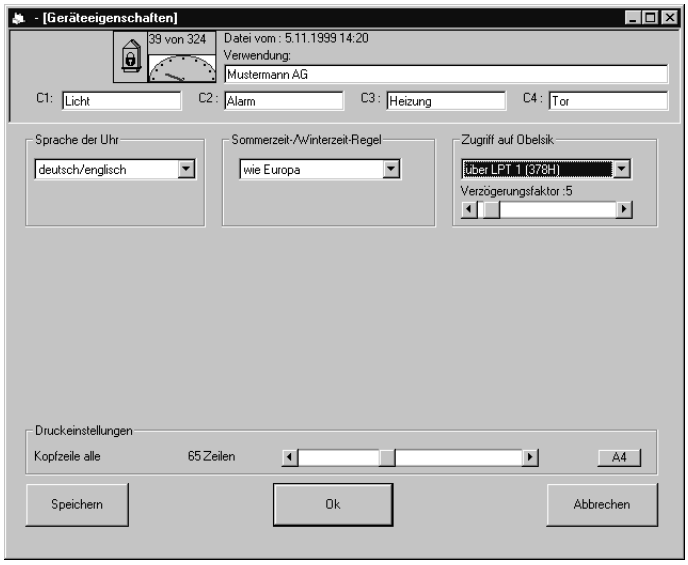
Deleting a national holiday set

☞ Mark a **“National Holiday Set”.**

☞ Click **“Delete set”.**

☞ Confirm the deletion with **OK.**

7.3 Device Properties



Important settings via the programming environment can be effected here.

Saving settings:

For this session only, save
Note:
If the program is terminated, the basic data of the device properties (see illustration) are reset automatically.

☞ Activate by clicking **OK.**

Saving the settings for all ensuing sessions

☞ Activate the button **'Save'** and then **OK.**

The following settings are possible in the function menu **Device properties**.

Language of the clock (not for the astronomical time switch)

In the framed box **'Language of the Clock'** it is defined in what language the time switch messages reports are to be effected. This means that after reading in the program with the memory card, the time switch display reports in, e.g., French (Fin instead of End).

Channels for astro times (astronomical time switch only)

In the frame **"Astro times affect"** it is set whether the astro times should affect only channel 1 or channel 1 and channel 2.

Summer/winter time norm

In the framed box **'Summer/Winter Time Norm'** it is defined what changeover norm is to be used after reading the memory card into the time switch.
See also Input summer/winter table

Access to Obelisk

In the dialogue frame **"Access to Obelisk"** it is defined via which Obelisk interface the programming is to be effected.

To transfer the switching times produced with the software the interface must be plugged into the parallel or serial port and the memory card must be plugged into the interface.

Prerequisite for successful data transfer via the **parallel port:**
The parallel printer port must have the following connection:
LPT 1 represents address 378H, LPT 2 represents 278H, LPT 3 represents 3BCH.

If your PC is too fast for the data transfer, you can adapt the delay factor.
In our experience the following factors are useful:

Processor 386 delay between 1...5
Processor 486 delay between 3...10
Processor 586 delay between 5...20

If you have connected an interface for a **serial port** to the PC, select one of the connections COM1 to COM4. The scroll bar for setting the delay factor is not available for serial interfaces.

Measuring pulse (for tariff time-switch)

With time tariff time-switch a channel can be programmed as a pulse output.
The pulse is defined in the **"Measuring Pulse"** dialogue box. The pulses are always synchronous with the start of the hour.

Print settings

In the framed box **'Print Settings'** the number of lines per sheet can be entered. This is intended to ensure that a header with information about the switching time file is provided on each page. The printouts are effected with a Windows system printer. Setting is effected in Windows system control

8.0 HELP MENU

8.1 Help

☞ Click the menu **Help.**

or

☞ Press the **F1** button. You will be provided with help on your current window.

8.2 The Info Window Hotline

☞ In the help menu click the function menu **Info.**
You are then provided with information about the software version and the software producer

9.0 MISCELLANEOUS

9.1 Setting for Windows

- When transferring a switching time file to the memory card and when reading a memory card via the parallel interface the DOS program **cardio.exe** is started. If Windows 95/98/NT is being used as the operating system, the property **"Close at end"** should be selected for cardio.exe.
  If the letters are not correctly displayed, we recommend:

☞ Changing the letters in the system control of your PC or in Cardio.exe.
In cardio.exe. this takes place via the list at the top left of the screen.

- The colour depth of your PC must not be more than 24 bit (16 million colours).
  If graphics are not correctly displayed, a high colour depth can be the cause.

Setting the colour depth for Windows

☞ Select from the menu **Start, Settings, System Control.**
The window **"System Control"** is opened.

☞ Click **Display.**
The window **"Display Properties"** is opened.

☞ Click **Settings.**

You can set the colour depth in the dialogue area **"Colour Palette"**.

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