Item no. 3481 00 60

By purchasing the DuoFern central operating unit you have chosen a quality product manufactured by RADEMACHER. Thank you for the trust you have placed in us.

This product has been developed with the greatest possible convenience in mind. The intuitive menu navigation make it considerably easier to use. Having applied uncompromising quality standards, and carried out thorough testing, we are proud to be able to present you with this innovative product.

It's brought to you by all the highly-qualified personnel here at RADEMACHER.

ℹ **These instructions...**

...describe how to use the DuoFern central operating unit.

Before you begin, please read these instructions through completely and follow all the safety instructions.

Please store these instructions in a safe place and pass them on to any future owners.

Damage resulting from non-compliance with these instructions and safety instructions will void the guarantee. We assume no liability for any consequential damage.

ℹ **CE Mark and Conformity**

The DuoFern central operating unit (item no. 3481 00 60) complies with the requirements of the current European and national directives. The conformity has been verified and the corresponding declarations and documentation are available on file at the manufacturer's premises.

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This concerns your safety

Please pay particular attention and carefully
follow all instructions marked with this symbol.

NOTE / IMPORTANT / WARNING

Safety instructions to draw your attention to additional information that is important
for trouble-free operation.

Please read the operating instructions for the external device (e.g. a DuoFern actua-
tor) described at this point.

ℹ   Proper use

Only use the DuoFern central operating unit ...

... and the associated components of the DuoFern radio system (actuators, sensors,
etc.) for remotely controlling the following equipment:

◆ Roller shutters
◆ Venetian blinds
◆ Awnings
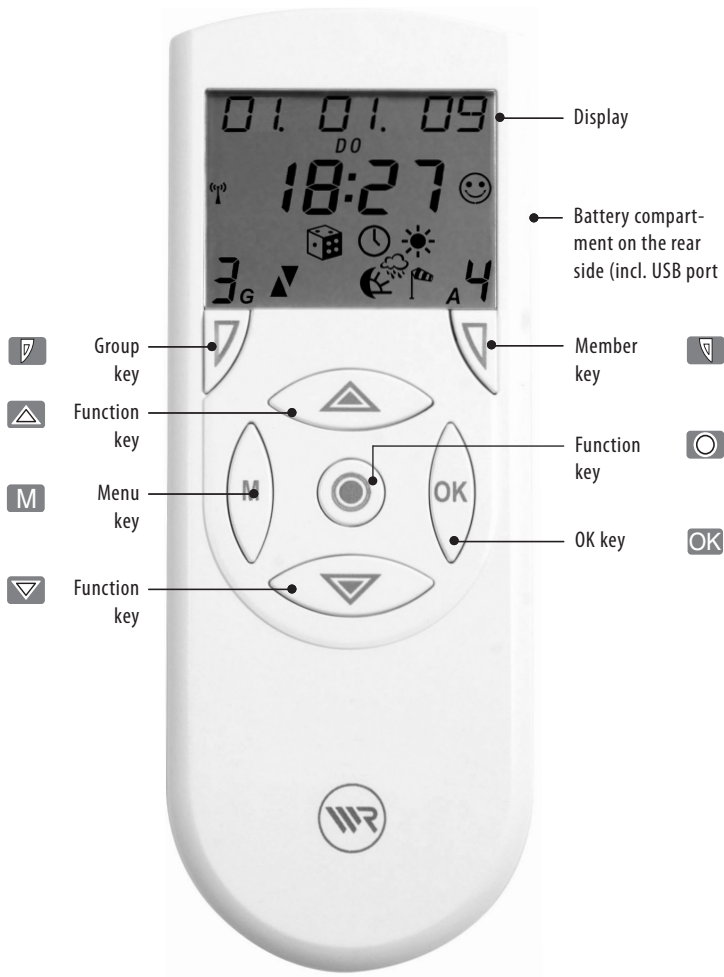◆ Electrical appliances (e.g. lamps)

Operating conditions

◆ The installation and operation of the DuoFern radio system and its components is
    only permitted for those systems and devices where a malfunction in the transmitter
    or receiver would not cause a danger to personnel or property or where this risk
    is already covered by other safety equipment.
◆ Only use the DuoFern central operating unit in dry rooms.

ℹ   Improper use

Never use the DuoFern central operating unit to...

...remote control devices and systems with increased safety-relevant requirements or
where there is an increased risk of accidents. This shall require additional safety equip-
ment. Observe the respective statutory regulations for the installation of such systems.

Display

Battery compart-
ment on the rear
side (incl. USB port

Group key

Member key

Function key

Function key

Menu key

OK key

Function key

The DuoFern central operating unit is the universal input device for the DuoFern radio system. The DuoFern central operating unit makes it possible to configure the functions you require (e.g. connecting and disconnecting actuators and sensors / creating groups / automatic switching times, etc.) The settings are transmitted wirelessly to all of the actuators and connected end units (appliances).

The actuators/sensors must be connected to the central operating unit.

Each DuoFern actuator/sensor has to be assigned to the central operating unit for your settings and manual switching commands to be executed.

Explanation of terms

The following terms are used in this manual: actuators/members and end units. Two members or two end units can be controlled by a two-channel actuator after connection to the central operating unit.

Creating groups

You can collate the logged-on end units together into groups.

Maximum number of groups and members	
Groups:	**9**
Members per group:	**9**
End units (appliances connected to the actuators)	**81**

The following rules apply:

◆ An end unit can only be placed into a group as a member once.

◆ An end unit can be placed in numerous groups.

◆ The central operating unit always suggests the next free group slot. This serves to avoid unintentional changes.

You can assign a name for all end units and groups

An individual name can be assigned to all end units and groups in order to facilitate a better overview (e.g. lounge, kitchen, etc.). A table with preprogrammed suggested names is included on page 63.

Alternative function input using the PC software "WR ConfigTool"

Alternately it is possible to set all functions quickly and clearly on a computer (which must have a USB port) using the configuration software and then to transfer the settings to the central operating unit.

The "WR ConfigTool" PC software offers the following options:

◆ Convenient configuration via computer.

◆ Assignment of individual names for groups and members.

◆ Backup your settings.

NOTE

◆ You can download the latest version of the configuration software at any time from the download area on our website (**www.rademacher.de/download**).

◆ The USB port is located under the battery compartment cover.

◆ It is not possible to directly control end units with WR ConfigTool.

i **Functions for DuoFern actuators**

An overview of all central operating unit functions which can be configured for use with the individual DuoFern actuators can be found on our website (rademacher.de/duofern).

Insert batteries (pay attention to the polarity)

Insert the batteries into the battery compartment at the rear of the central operating unit. Please pay attention to the correct polarity when inserting the batteries.

Only use the following battery type: 3 x 1.5 V type AAA (Micro).

NOTE

The central operating unit will not work if the batteries are inserted incorrectly. Incorrectly inserted batteries can cause damage to the central operating unit.
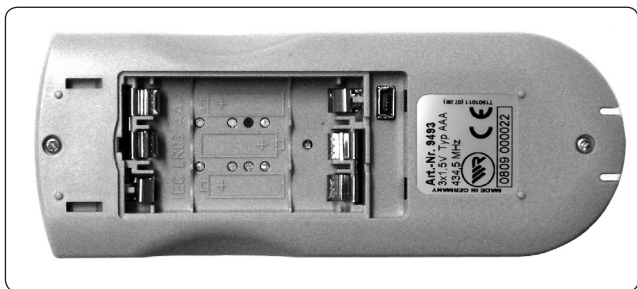
Setting the date and time

After changing the batteries, you will be prompted to set the current time and date; see page 53. If you have DCF signal reception at the site of operation, you can ignore this prompt. Pressing the OK-key multiple times enables you to quit setting mode.

Check DCF signal reception

The central operating unit is equipped with a DCF radio timer. The current date and time will be set automatically once the DCF signal is received.

The DCF signal scan begins:

◆ as soon as the batteries are inserted (commissioning).

◆ the next day at 03:01 AM, in the event that no DCF signal was available at the time of commissioning.

◆ every Sunday at 03:01 AM.

NOTE

Reception of a valid signal can take up to 5 minutes.

Under what circumstances is it possible that no valid / correct DCF signal is received?

◆ If the place of use of the central operating unit is more than 1500 km from Frankfurt am Main / Germany.

◆ If you are operating the central operating unit in another time zone.

◆ If building conditions restrict reception.

◆ If DCF reception is deactivated.

What can I do if the DCF signal is not detected?

◆ Activate the DCF clock, see page 53.

◆ Enter the current time and date manually; see page 53.

Observe the radio clock icon on the display:

Status	Message
A DCF signal is being scanned for.	The icon flashes.
A DCF signal has been received.	The icon lights up.
No DCF signal has been received.	The icon remains off.
DCF reception is deactivated.	The icon remains off.

The controls keys can be used to navigate within the menus and sub-menus of the central operating unit as well as to carry out all of the required programming settings. The various menu views are described from page 14 on.
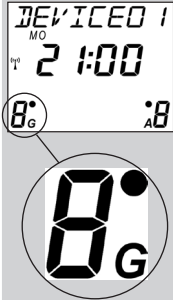
The following section serves to briefly describe the individual keys and their functions. A precise functional description shall follow in the latter part of this manual, as part of the description for the individual settings.

NOTE
For space reasons, the keys are depicted in all of the chapters with substitute icons instead of the original depiction. Observe the corresponding icons in the following key description and on page 5.

Keys	Description		Display
M	**Name:**	**Menu key**	MANUAL 0
	Function:	**a)** Access the main menu.	
		b) Return to the previous menu item.	
		c) When encountering problems, you can return to the normal view by pressing and holding this key (approx. 2 seconds).	
	Symbol:	= M	

Keys	Description		Display
OK	**Name:**	**OK key**	*RANDOM* *On* 6_G $_A 4$
	Function:	**a)** Open the selected menu.	**Example**
		b) Open the selected menu function (e.g. random function).	
		c) Save or confirm the current setting.	
		d) Briefly pressing the key causes the status of the current member to be displayed in the normal view.	
		e) Press and hold = toggles between automatic and manual mode in normal view.	
	Symbol:	= OK	
▲ ▼	**Name:**	**Function keys**	
	Function:	**a)** Navigate back and forth in the main menu and all sub-menus.	
		b) Change the selected value.	
		c) Manual operation (e.g switch on an end unit).	
	Symbol:	= △ / ▽	

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Keys	Description		Display
⦿	**Name:**	**Function key**	
	Function:	**a)** Switch off manual operation (e.g. end unit) or pause a running roller shutter.	
		b) Different functions depending on the menu, e.g. status display.	
	Symbol:	= ◯	
◺	**Name:**	**Group key**	*DEVICE 1* MO ((ᵗ)) *21:00*
	Function:	Select a group.	
	NOTE:	No other group can be selected if a point appears next to the number.	8ᴳ• •ᴀ8
	Symbol:	= ◺	

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Keys	Description		Display

<table>
<tr><td></td><td>Name:</td><td>Member key</td></tr>
<tr><td></td><td>Function:</td><td>Select a member from a group.</td></tr>
<tr><td></td><td>NOTE:</td><td>No other member can be selected if a point appears next to the number.</td></tr>
<tr><td></td><td>Symbol:</td><td>=</td></tr>
<tr><td></td><td>NOTE:</td><td>The following table describes the relationship between the groups and members view as well as the resulting functions.</td></tr>
</table>

13

The respective settings are undertaken in the menus and sub-menus of the DuoFern central operating unit. The menus are grouped according to topics, in order to provide a clearer overview and easier configuration (e.g. manual mode / timer functions / automatic functions / system settings).

NOTE

A complete overview of the menus can be found on page 64.

Various menu views are used depending on the application (**normal mode / main menu settings or system settings**). The following pages serve to briefly describe the menu views and the individual display icons.

Keys	Description		Display
	Name:	**Normal view**	$\begin{array}{l} 01.\ 06.\ 08_{\,SO} \\ {}^{(\!(\!\cdot\!)\!)}\ 16{:}32 \\ 6_G\ \text{⚄}\ \text{🕐}\ \text{☀}\ 4 \end{array}$
			Example
	Function:	Provides information on:	$01.\ 06.\ 08_{\,SO}$
		- The current date	
		- The current time	$16{:}32$
		- The active group	6_G
		- The active actuator	$_A4$
		- DCF signal	$(\!(\!\cdot\!)\!)$
		- The last received status for the selected group or selected actuator:	⚄ 🕐 ☀ 🌙 🌧 💨
		Automatic switching times	▼▲
		Random function	⚄
		Automatic timer	🕐
		Automatic solar function	☀
		Automatic darkness function	🌙
		Rain function	🌧
		Automatic wind function	💨
	NOTE:	The actuator status icons switch off after approx. 30 seconds in order to save the battery. Briefly pressing the OK key causes the status to be shown again.	

Keys	Description	Display
	Additional display icons in normal view:	
	- Battery status	
	- Data transfer status	
	Successful data transfer	
	Unsuccessful data transfer	
	- Radio transmission	
	- USB status, the central operating unit is connected to a computer via USB cable.	

From the main menu you can select four sub-menus.

Graphical icons are used for these sub-menus to enable easier orientation. As soon as a sub-menu is selected, the border flashes and the name of the menu is shown at the top of the display in the ticker.

Key	Description		Display
M	**Name:**	**Main menu**	*MANUAL 0*
	Function:	Display and select menus.	
	Key:	- Menu title (as ticker)	*MANUAL 0*
		- Manual mode	
		- Timer functions	
		- Automatic functions	
		- System settings	

The "**system settings**" menu enables you to undertake all important basic settings (see page 43). All of the sub-menus within the system settings menu are designated with a menu number in order to simplify orientation. The function keys △ and ▽ enable you to quickly select the desired sub-menu and function.

NOTE

An overview of the system settings menu is provided on page 65.

Keys	Description		Display
M	**Name:**	**System settings**	*POSTCODE* 13·2·1
△ ▽	**Function:**	Basic settings and individual functions.	
OK			**Beispiel**
	Key:	- Menu title	*POSTCODE*
		- Menu number of the submenu (e.g. 13·2·1 = postcode = set postcode)	13·2·1

The easiest way to familiarise yourself with the menu structure and operation of the central operating unit is to carry out the most important tasks for setting up a DuoFern radio network step-by-step.

In order to do so, the following pages describe several basic examples:

◆ Connecting a DuoFern actuator.

◆ Connecting a DuoFern actuator via a radio code.

◆ Configuring a switching time for a group.

◆ Setting the position of the sun for an end unit (e.g. a tubular motor via tubular motor actuator).

2. 1   **Connecting a DuoFern actuator.**

Each DuoFern device (actuator/sensor) has to be assigned to the central operating unit in order that your settings and manual switching commands can be executed. In doing so, you can combine the DuoFern actuators into groups.

The maximum number of groups and members can be taken from the table on page 6.
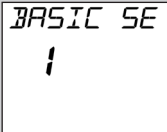
Name assignment when connecting.

An individual name can be assigned to each end unit and group (e.g. lounge, etc.). A table with the default suggested names is included on page 63.

Foregoing considerations

In order to maintain a clear overview of the settings, we suggest that you enter the end unit assignment and desired settings into a table (name / group / member number). A suitable template is available on our website under **www.rademacher.de/download**.
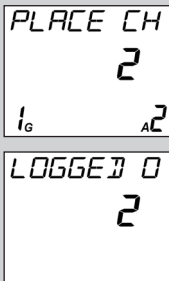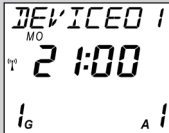
⌐. !   **Connecting a DuoFern actuator.**

		Keys	**Display**
1.	**Activate the actuator's connect mode.**		
	Connect mode remains active for approx. 1 minute.	🕐 **Approx. 1 min.**	
2.	**Call up the main menu.**	M	*MANUAL 0*
3.	**Select the "🔧 system settings menu".**	△ ▽	
4.	**Confirm selection.**	OK	*BASIC SE* **1**
5.	**Select the menu "⌐ radio-settings".**	△ ▽	
6.	**Confirm selection.**	OK	*CONNECT* **2·1**
7.	**Activate function "⌐· ! Connect".**	OK	*LOGGED 0* **1**
	The number of connected actuators is indicated on the display (e.g. [**0**] in the event of initial installation).		

2.1   Examples of application Connecting a DuoFern actuator.

		Keys	Display
8.	**The following describes how to connect a new actuator to the central operating unit.**	△	CONNECT On ☺
9.a	**After the connection, select the following for the new actuator:**		PLACE CH 1 ☺
	a) a group number	▽	
	b) a member number	◁	I_G A 1

NOTE

◆ Each channel is assigned its own member number for multi-channel actuators, see point 11.

◆ The central operating unit always suggests the next free member number automatically.

    or

◆ Alternatively assign **no** member number to a channel.   M

		Keys	Display
9.b	**Confirm the members and groups.**	OK	DEVICE0 1 1 ☺
10.	**Subsequently assign a name for the new actuator and the new end unit.**	△ ▽	I_G A 1

2. 1 Connecting a DuoFern actuator.

		Keys	Display
11.	**Confirm the name of the new end unit.**	OK a)	PLACE CH 2 I_G $_A$2
	The following displays can appear:		
	a) Repeat points 9 to 11 for multi-channel actuators until all of the actuator channels are assigned.*	b)	LOGGED O 2
	b) For single-channel actuators *		
	* Continue at 13.		
12.	**Confirm the previously assigned name.**	OK	LOGGED O 0
	The number of connected actuators is once again indicated on the display.		**Example**
13.	**Back to normal view.**	M	DEVICE0 1 MO 2 1:00 I_G $_A$1
	Press the key repeatedly.		

2.2 **Connecting a DuoFern actuator via a radio code.**

The radio code can be used to directly control DuoFern actuators and connect them to the central operating unit. Once the connection has been successfully established, you can carry out actions such as setting the limit stops for a tubular motor.

This offers a huge advantage for operating and configuring flush-mounted devices, as it is not necessary to dismantle them.

◆ The radio code is located on the bottom of the respective DuoFern actuator and on a label attached to the packaging.

◆ For DuoFern radio tubular motors you will find the radio code on the motor and on a label fitted to the connecting cable.

◆ Example of a radio code label on the back of a DuoFern actuator.
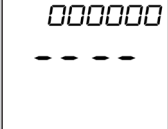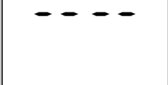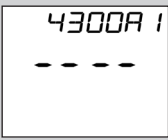
> duofern code
> **43 00 A1**

NOTE

After switching on the power supply, the radio code for the actuator is active for approximately **2 hours**.

2.2 Connecting a DuoFern actuator via a radio code.
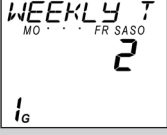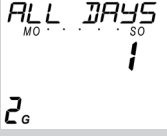
		Keys	Display
1.	Select:	M △ OK	RADIO CO 2.2
	M Main menu		
	🔧 System settings		
	2 Radio settings		
	2.2 Radio code		
2.	Confirm selection.	OK	000000 - - - -
3.	Enter the six-character radio code of the actuator and confirm each digit.	△ ▽ OK	
4.	If necessary you can jump back to the previous figure to correct it.	M △ ▽	
5.	Upon confirmation of the last figure you can activate ...	OK	4300A 1 - - - -
6.	...the actuator's connect mode.	△	CONNECT On ☺
7.	Connect the actuator to the central operating unit. Continue at point 2. on page 21.	OK	

Configuring switching times for a group

You can set individual switching times for each group in order to customise the device to your daily requirements.

This example shows you how to configure the switching times for a group to "ALL DAYS SAME, Mo - Su". This setting causes all of the members of the selected group to react at the same configured switching time every day

		Keys	Display
1.	**Select:**	M △ OK	*MANUAL 0* *On* *6ᴳ* *ₐ4*
	M Main menu		
	Time functions		
	Switching times		
2.	**Confirm selection.**	OK	*WEEKLY T* MO · · · FR SASO *2* *1ᴳ*
3.a	**Select the desired group.**	▽	
3.b	**Select the desired setting, e.g. "ALL DAYS SAME".**	△ ▽	*ALL DAYS* MO · · · SO *1* *2ᴳ*
	Options:		
	1 All days same *		
	2 Weekly program *		
	3 Every day different *		
	* A description of the settings can be found starting on page 33.		

Configuring switching times for a group

		Keys	Display
4.	**Confirm setting mode.**	OK	

UP
MO · · · · · SO
07:00
2:G ▲

Setting order:
◆ Hours
◆ Minutes

Optional:
◆ Hours = OFF

| **5.** | **Set the desired switching time "UP (▲)".** | △ ▽ OK | |

Confirm each entry.

NOTE
You can also deactivate each switching time UP (▲) / DOWN(▼) if necessary by setting the hours to OFF.

| **6.** | **Set the desired switching time "DOWN (▼)".** | △ ▽ OK | |

Confirm each entry.

DOWN
MO · · · · · SO
20:00
2:G ▼

Setting order:
◆ Hours
◆ Minutes

Optional:
◆ Hours = OFF

| **7.** | **Back to the normal view** | M | |

1.1.2.1 **Setting the position of the sun**

NOTE
The end points and running time of the roller shutters must be set prior to configuration of the position of the sun(see page 48/46).
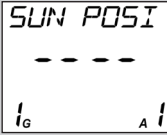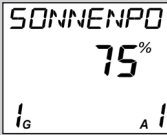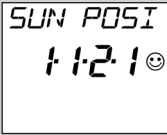
For end units with automatic solar function, the roller shutters will move to the position of the sun as soon as the solar function is activated.

Please additionally read the operating instructions for the corresponding DuoFern actuator.

		Keys	Display
1.	**Select:**	M △ OK	SUN POSI *1.1.2.1*
	M Main menu		
	🔧 System settings		
	1 Basic settings		
	1.1 Actuators		
	1.1.2 Special functions		
	1.1.2.1 Position of the sun		
2.	**Confirm selection.**	OK	SUN POSI 50%
3.	**Select the desired member (end unit).**	▽ / ▼	*IG* *A 1*

1.1.2.1 **Setting the position of the sun**

		Keys	Display
4.	**Move to the required sun position.** The connected tubular motor moves in the corresponding direction.	△ ▽	SUN POSI - - - - I_G $A1$
5.	**The tubular motor stops as soon as the roller shutters have reached the desired position.** **NOTE** The position of the sun is displayed as a percentage of the roller shutter's overall travel.	○	SONNENPO 75% I_G $A1$
6.	**Confirm position of the sun.** The position of the sun is stored on the selected member or end unit.	OK	SUN POSI 1.1.2.1 ☺
7.	**Back to normal view.**	M	

NOTE
Ensure that the automatic solar function is activated for the actuator (see page 37).

The following section serves to briefly describe the various automatic functions in the main menu as well as their setting parameters. A corresponding menu overview of all automatic functions is included on page 64.

It is only possible to carry out these settings if the central operating unit and the corresponding DuoFern actuators are connected to each other and a radio connection has been established between the devices.

	Keys	**Display**

NOTE

If the selected DuoFern actuator is not detected, then dashes appear in the display.

You can query the status of the desired actuator again by pressing the button.

⬤

```
 MANUAL  0
   - - -
 6ᴳ      ᴬ4
```

M (Main menu)

Menu	Description		Display

Name: **Manual operation**

```
MANUAL  0
      On
6ᴳ        ᴬ4
```

Select: M Main menu

🖐 Manual mode

Setting: △ On = switch on

▽ OFF = switch off

Function: Toggles between automatic and manual mode. Safety functions such as "wind" are not influenced by manual mode.

NOTE: You can also toggle between automatic and manual modes in the normal view.

1. ▽ / ▽

Select the desired device.

2. OK approx. 2 sec.

Press and hold the key until the smiley icon is displayed.

IMPORTANT: Manual mode quits automatically as soon as an automatic mode is activated (e.g. automatic timer).

Further important information: 👨‍🏫

```
0 1  06.  08
           SO
ᵇ⁾ 16:32
   🎁🕐☀️
6ᴳ ◣  👆🖐 ᴬ4
```
Automatic operation

```
0 1  06.  08
           SO
ᵇ⁾ 16:32
🖐
6ᴳ        ᴬ4
```
Manuellbetrieb

Menu	Description		Display
1··· **··7**	**Name:**	**Switching times**	PROGRAMM OFF 6ᴳ
	Select:	**M** Main menu	
		🖵🕮 Time functions	
		1··· **··7** Switching times	ALL DAYS MO ····· SO 1 6ᴳ
	Setting:	◆ PROGRAM OFF	
		1 ALL DAYS SAME	
		2 WEEKLY PROGRAM	
		3 EVERY DAY DIFFERENT	WEEKLY T MO ··· FR SA SO 2 6ᴳ
	Function:	◆ Automation of roller shutters and additional switch actuators:	
		– Opening and closing times for roller shutters.	
		– On and off times for additional end units.	EACH DAY MO DI MI DO FR SA SO 3 6ᴳ
		– Set individual switching times per group.	
		◆ Configure a second switching time per group.	
		– Please refer to the information on page 51 to configure a second switching time per group.	
		◆ Individual switching times can be deactivated if:	
		– **Hours** set to **OFF**.	

Menu	Description		Display
1⋯ ⋅⋅7	**Name:**	**PROGRAM OFF** All switching times are deactivated. No additional settings can be undertaken for the following functions.	
	Name:	*i* **ALL DAYS SAME**	
	Setting:	**1 x UP/DOWN** The same switching times for every day of the week from Monday to Sunday.	
	Name:	*2* **WEEKLY PROGRAM**	
	Setting:	**2 x UP/DOWN** Same switching times: ◆ from Monday to Friday ◆ for Saturday and Sunday	
	Name:	*3* **EVERY DAY DIFFERENT**	
	Setting:	**7 x UP/DOWN** Individual switching times for every day of the week.	
	NOTE: Individual switching times can be deactivated by setting "**Hours**" to "**OFF**"		

Menu	Description	Display

1··· **··7**

Configure a second switching time.

NOTE

If the "2nd switching time [*t·2:3*]" function is activated (see page 51), it is possible to configure a second switching time for all previously described switching times.

The respective switching time (Time 1/ Time 2) is shown as a ticker and left-hand digit.

Call up the first or second switching time (Time 1/ Time 2) and automatic timer.

1. Open the switching times menu. *

2. △ / ▽
    1st or **2nd** Select switching times.

3. OK Confirm selection.

4. Select desired automatic timer (*t/2* or *3*). *

5. Setting the switching times.
    * see page 33

Display column:

TIME 1
MO · · · · SO
t·   t

6ɢ

1. Switching time

"*t* ALL DAYS SAME"

TIME 2
MO DI MI DO FR SA SO
2·   3

6ɢ
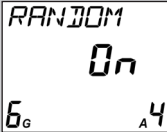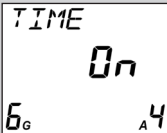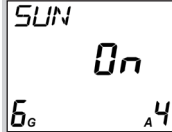
2. Switching time

"*3* EVERY DAY DIFFER-ENT"

35

Menu	Description			Display
🎲	**Name:**	**Random function**		RANDOM
	Select:	M	Main menu	On
			Time functions	6ᴳ ᴬ4
		🎲	Random	
	Function:	This function causes a random delay to the configured switching time between 0 and 30 minutes for the selected actuator.		
	Further important information:			

Menu	Description			Display
🕐	**Name:**	**Automatic timer**		TIME
	Select:	M	Main menu	On
			Automatic functions	6ᴳ ᴬ4
		🕐	Time	
	Function:	Switch the automatic timer for the selected actuator on / off.		
	Further important information:			

Menu	Description			Display

☀ | **Name:** | **Automatic solar function** |

Select: M   Main menu

        🕐 Automatic functions

        ☀ Sun

Function: Switch the automatic solar function for the selected actuator on / off.

NOTE

You can only activate the automatic solar function if the position of the sun has previously been configured for the actuator.

Display:

```
SUN
      On
6ᴳ        ᴬ4
```

M

EN

Menu	Description		Display
🌙	**Main menu**		
	Name:	**Dawn / Dusk**	
	HINWEIS	**Astro function:**	
		The time of the switching command depends on the date and the geographical location of your installation.	
		The settings in menu "*1·3·2* ASTRO" must be checked (see page 54) in order to ensure that the Astro function operates correctly.	
	Select:	▪ M Main menu	
		🕐 Automatic functions	
		🌙 Twilight	
	Setting:	*1* MORNINGS	*MORNINGS* *1*
		2 EVENINGS	
		◆ AUTOMATIC	
		◆ CUSTOMISE	
		◆ EARLIEST / LATEST	*EVENINGS* *2*
		◆ ON DAYS	
		◆ EXECUTE	
	Function:	Selects whether the settings are to be executed at dawn and / or dusk.	

Menu	Description		Display

☾

	IMPORTANT	
	The following applies to actuators which are connected in numerous groups:	
	You can only assign one switching command for dawn and dusk per actuator.	
Further important information:	👤📖	

Configure the desired function.

Name:	◆ **AUTOMATIC**
Function:	Switch the automatic darkness function on/off for the actuator.

Name:	◆ **CUSTOMISE**
Function:	Change the switching time for the automatic darkness function by +/- 60 minutes (increment = 10 minutes).

```
ADAPT
    20
6ᴳ      ₐ4
```

The Astro function of the central operating unit reacts for the selected actuator (xx) minutes...

...earlier	or	later
- 10		10
- 20		20
- 30		30
- 40		40
- 50		50
- 60		60
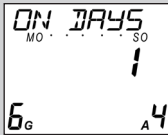
Menu	Description		Display

☾ **Name:** ◆ **EARLIEST / LATEST**

Function: ◆ EARLIEST

– Dawn is not executed before this time.

◆ LATEST

– Dusk is executed at this time, at the latest.

```
AT  THE  E
   7:00
6 G        A 4
```

```
AT  THE  L
  22:00
6 G        A 4
```

Name: ◆ **ON DAYS**

Setting: *1* MON - SUN

2 MON - SUN

3 SAT SUN

4 MON TUES WED THUR FRI SAT SUN

```
ON  DAYS
 MO        SO
     1
6 G        A 4
```

Function: Dusk/dawn is executed on the selected days:

1 MON - SUN
Every day of the week

2 MON - SUN
Monday to Friday.

3 SAT SUN
Saturday and Sunday.

4 MON TUES WED THUR FRI SAT SUN Arbitrary selection of days.

4 Only configurable with "WR-ConfigTool".

Menu	Description	Display

☾

Name: ◆ **EXECUTE**

Function: Once the automatic darkness function has been configured, the switching times for the dawn / dusk automatic darkness function are shown for the current day.

```
CARRY OU
MO · · · · · SO
  8:19
6ᴳ        ᴬ4
```

Menu	Description		Display
	Name:	**Rain function**	`RAIN` `On` `6ᴳ ᴬ4`
	Select:	M Main menu	
		Automatic functions	
		Rain	
	Function:	Switch the rain function for the selected actuator on / off.	
	Further important information:		

Menu	Description		Display
	Name:	**Automatic wind function**	`WIND` `On` `6ᴳ ᴬ4`
	Select:	M Main menu	
		Automatic functions	
		Wind	
	Function:	Switch the automatic wind function for the selected actuator on/off.	**NOTE:** If the automatic wind function has been activated, it remains active even in manual mode.
	Further important information:		
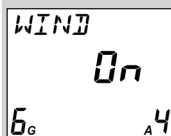
The following section serves to briefly describe the various system settings and their parameters. A brief menu overview of the menus is included on page 64. The structure of the sub-menus is presented to you in the corresponding chapter, for example, page 44.

Please check to see whether your actuator supports the desired function.

NOTE

The previous chapters explained in detail how to navigate through the individual menus. For example, accessing and configuring the function "Position of the sun":

Select:

M	Main menu
⚒	System settings
1	Basic settings
1·1	Actuators
1·1·2	Special functions
1·1·2·1	Position of the sun

You can select and call all menus and functions in the system setting according to this schematic.

🔧 (System settings)

* All of the settings undertaken here are stored directly in the selected DuoFern actuators and influence all actions of the DuoFern transmitters.

The actuator must be connected to the DuoFern central operating unit and must be in the immediate vicinity in order to set the respective option.

👆 In doing so, observe the information provided in the operating manual for the respective actuator.

Menu	Description	
¦· ¦·¦	**Name:**	**Name**
	Function:	Enter a name for the current actuator. A table with the default suggested names is included on page 63.
		NOTE You can customise the names using the WR ConfigTool software.

Menu	Description	
¦· ¦·2·¦	**Name:**	**Sun position**
	Function:	Setting the position of the sun for the current actuator. For key function and order, see page 28.

Menu	Description	
¦· ¦·2·2	**Name:**	**Ventilation / intermediate position**
	Function:	◆ Switch the ventilation position on / off.
		◆ Set the ventilation position. The ventilation position setting corresponds to the settings for the position of the sun from point 2 on page 28. Repeat these settings for the ventilation position.

Menu	Description

I. I.2.3	**Name:**	**Remote log on / off**
	Function:	Activate connect / disconnect mode for an actuator.
		Subsequently, you can connect a DuoFern flush-mounted actuator with another DuoFern manual transmitter, for example.
		△ Connect
		○ Quit connect / disconnect mode
		▽ Disconnect

Menu	Description

I. I.2.4	**Name:**	**Stairway / impulse function**
	Function:	Switch the stairway / impulse function on / off for the selected actuator.
		Additional configuration options are available with the "WR ConfigTool" software.
		If the stairway counter is set very low, then the actuator will generate a corresponding impulse.

Menu	Description

I. I.2.5	**Name:**	**Running time**
	Function:	Configures the running time for opening a roller shutter.
		If the roller shutter drive is configured to move to specific positions (e.g. position of the sun / ventilation position), then the running time for opening and closing the roller shutter should be determined and entered in advance.
		Proceed as follows:
		1. Measure the opening time of the roller shutter.
		2. Select the actuator which is connected to the roller shutter drive.
		3. Enter the measured opening time plus 2 seconds.

Menu	Description

𝟣· 𝟣·𝟤·𝟨	**Name:**	**Change direction of rotation / function**
	Function:	Reverse the direction of rotation for an actuator to control roller shutters
		or
		Change the function of an actuator.

Menu	Description

𝟣· 𝟣·𝟤·𝟩	**Name:**	**Wind direction of travel**
	Function:	Set the direction of travel for an actuator in the event that "wind" is detected for an active automatic wind function.

Menu	Description

𝟣· 𝟣·𝟤·𝟪	**Name:**	**Rain direction of travel**
	Function:	Set the direction of travel for an actuator in the event that "rain" is detected for an active automatic wind function.

Menu	Description

𝟣· 𝟣·𝟤·𝟫	**Name:**	**Venetian blinds function**
	Function:	Switch the Venetian blinds function on/off for the selected actuator.
		Additional configuration options are available with the "WR ConfigTool" software.

Menu	Description	
I· I·2·A	**Name:**	**End points**
	Function:	Set the upper and lower end point for the currently selected drive.
		Proceed as follows:
		1. △ / ▽ Move the roller shutters to the centre position.
		2. Call up the menu "*I·I·2·A*".
		3. △ / ▽ Press and hold the required key; the roller shutter moves up or down..
		4. Release the button as soon as the desired end point is reached.
		IMPORTANT
		Release the key promptly and never allow it to extend beyond the respective limit stop. Failure to do so can cause overloading and may damage the drive.
		5. The roller shutter stops and the upper / lower end point is stored.
		Adjusting the end points:
		6. Repeat the above steps.

Menu	Description	
I· I·2·b	**Name:**	**Software version**
	Function:	Displays the software version for the currently selected actuator.

🔧 (**System settings**)

Menu	Description

1·2·1	**Name:**	**Name**
	Function:	Select a name for the current group.
		A table with the default suggested names is included on page 63.
		Additional configuration options are available with the "WR ConfigTool" software.

Menu	Description

1·2·2	**Name:**	**Members**
	Function:	Assign a connected DuoFern actuator as a member of a group.

NOTE
◆ The actuator may not already be a member of this group.
◆ If the desired member number is already assigned, then the original member will be removed from the group.

Proceed as follows:

1. Select the desired group and the member number for the new actuator.

2. Select the actuator that you wish to assign.

How to remove a member from a group:

1. Select group and member.

2. Select "FREE".

NOTE
The actuator has now been removed from the group, but is still connected to the central operating unit.

Menu	Description

1·2·3	**Name:**	**2nd switching time**
	Function:	Switch the second switching time for a group on / off. Instructions on how to configure a second switching time are given on page 35.

Menu	Description

1·2·4	**Name:**	**Venetian blinds function / jog mode**
	Function:	If jog mode is active, a corresponding movement command is transmitted in normal mode by briefly pressing "△ or ▽". The drive moves gradually in the desired direction.
		Travel command with jog mode deactivated.
		If one of the two keys is held down with jog mode deactivated, then the command "up" or "down" is transmitted.
		Jog mode for dimming or adjusting the position of Venetian blinds.
		Switch on jog mode for the group if you want to gradually adjust a dimmer in steps or the slat position for Venetian blinds.

🔧 **System settings**

Menu	Description	
1.3.1.1	**Name:**	**Settings (time)**
	Function:	Manual settings for time and date. The setting is undertaken automatically one after the other.
		NOTE
		This function is only accessible if:
		◆ No DCF signal has been received.
		◆ DCF reception is deactivated.
		◆ Directly after inserting the batteries.

Menu	Description	
1.3.1.2	**Name:**	**DCF clock**
	Function:	Switch DCF signal reception on/off.
		NOTE
		Additional information about the DCF radio timer is given on page 9.

Menu	Description	
1.3.1.3	**Name:**	**DCF quality**
	Function:	Checks the quality of the received DCF signal.
		$\Box$ No DCF reception
		5 good DCF reception

Menu	Description	
$1.3.1.4$	**Name:**	**SU-WI time**
	Function:	Switches automatic daylight saving time switch-over on / off.
		Proceed as follows to activate automatic switch-over:
		1. Activate Su-Wi switch-over.
		2. Set the desired broadcasting time.
		NOTE
		If you set a broadcasting time prior to the actual switch-over, the new time will be broadcast immediately once the switch-over is reached.

Menu	Description	
$1.3.2.1$	**Name:**	**Postcode**
	Function:	Enables input of your postcode.
		The postcode is required for execution of the Astro function. Once the postcode has been entered, the program can calculate the switching times for automatic darkness function.
		$0 - 99$ German postcodes This enables you to enter the first two digits of your postcode.
		$100 - 255$ code for various European cities (see table on page 61).

Menu	Description

$\iota \cdot \mathbf{\exists} \cdot \mathbf{\mathcal{Z}} \cdot \mathbf{\mathcal{Z}}$	**Name:**	**Astro times**
	Function:	Enables you to view the calculated twilight times for the selected postcode.

Menu	Description

$\iota \cdot \mathbf{\exists} \cdot \mathbf{\mathcal{Z}} \cdot \mathbf{\exists}$	**Name:**	**Twilight**
	Function:	Switches the twilight time calculation function on / off on the central operating unit.

Menu	Description

$\iota \cdot \mathbf{\exists} \cdot \mathbf{\exists}$	**Name:**	**Key lock**
	Function:	Activate / deactivate key lock or menu lock.

This enables you to prevent unintentional operation of the central operating unit.

$\mathbf{\mathcal{O}FF}$ no key lock

ι The main menu cannot be accessed from the normal view.

$\mathbf{\mathcal{Z}}$ All key presses are ignored.

NOTE

The selected lock is activated in normal view if no key input is made within 2 minutes.

M + **OK**   **This temporarily deactivates the key lock.**

Menu	Description
$l \cdot \exists \cdot \sqcup$	**Name:** **Contrast**
	Function: Enables the display contract to be set.
	l low contrast
	5 high contrast

Menu	Description
$l \cdot \exists \cdot 5$	**Name:** **Ticker**
	Function: Setting the ticker speed.
	l slow
	$\mathcal{B}$ fast

Menu	Description
$l \cdot \exists \cdot 6$	**Name:** **Language**
	Function: Set the desired language.
	l German
	$\mathcal{Z}$ English
	$\exists$ Spanish
	$\sqcup$ French
	5 Dutch

Menu	Description
$l \cdot \exists \cdot 7$	**Name:** **Version**
	Function: Displays the current version number for the software on the central operating unit.

🔧 | **System settings**

DuoFern sensors offer an interface to our environment.

If you have selected a function from the menu "*1.4* Sensors" and none of the sensors connected to the central operating unit support this function, the message "**Not Possible**" appears in the display. This message also appears if you have still not connected any sensor to the central operating unit.

> Please refer to the operating manual for the respective DuoFern sensor for information about how to configure and operate your sensor with the DuoFern central operating unit.

🔧   **System settings**

Menu	Description	
⊇·1	**Name:**	**Connect / disconnect**
	Function: nect	Connect a DuoFern actuator to the central operating unit or discon- from the central operating unit.

	△	Start connect mode on the central operating unit
	◯	Quit connect / disconnect mode on the central operating unit
	▽	Start disconnect mode on the central operating unit.

Menu	Description	
2.2	**Name:**	**Radio code**
	Function:	Switches a DuoFern device to connect or disconnect mode with the radio code (see application example on page 24).

          △   Connect

          ○   Quit connect / disconnect mode

          ▽   Disconnect

          NOTE
          For security reasons, this function is only available for the
          first two hours after switching on the power supply.

**Further
important
information:**

Menu	Description	
2.3	**Name:**	**Clear**
	Function:	Disconnect all DuoFern devices from the central operating unit which are no longer accessible via radio.

          ○   Start the "Clear" function.

          The central operating unit attempts to contact all of the
          connected DuoFern devices. All DuoFern devices which fail
          to provide a return signal are disconnected from the central
          operating unit.

          NOTE
          a) Battery operated DuoFern devices are not checked.
          b) Only start this function when in the immediate
               vicinity of all connected DuoFern devices.

Supply voltage:	4.5 V
Battery type:	3 x 1.5 V type AAA (micro)
Battery life:	approx. 2 years
Transmission frequency:	434.5 MHz
Transmission power:	10 mW
Range:	100 m (outdoors)
Clock:	DCF radio timer
DCF reception (range):	approx. 1500 km from Frankfurt am Main / Germany
Max. number of groups:	9
Max. number of members per group:	9
Number of end units:	81 (total)
Ambient conditions:	Device may only be used in dry rooms.
Dimensions (W x L x H)	54 x 142 x 24 mm

TD   **Battery replacement**

The battery icon flashes in the normal view when the battery is nearly empty. We recommend exchanging the battery at this time. The battery compartment is located on the back of the central programming unit.

NOTE
Ensure that the batteries are inserted in accordance with their polarity. This is indicated on the bottom of the battery compartment. Only use the following battery type: 3 x 1.5 V type AAA (Micro).

Germany

0 - 99 postcode

Belgium

100 Arlon
101 Antwerp
102 Bruges
103 Brussels
104 Liège
105 Mechelen
106 Mons
107 Ostend

Denmark

108 Aalborg
109 Ringsted
110 Esbjerg
111 Horsens
112 Kolding
113 Copenhagen
114 Svendborg
115 Randers

England

116 Aberdeen
117 Birmingham
118 Bristol
119 Glasgow
120 London
121 Manchester
122 Newcastle

Estonia

123 Tallinn

Finland

124 Helsinki
125 Jyyäskylä
126 Oulu
127 Tampere
128 Turku
129 Vasa

France

130 Bordeaux
131 Brest
132 Dijon
133 Le Havre
134 Lyon
135 Montepellier
136 Nantes
137 Nice
138 Paris
139 Reims
140 Strasbourg
141 Toulon

Italy

142 Bologna
143 Bolzano
144 Florence
145 Genoa
146 Milan
147 Naples
148 Palermo
149 Rome
150 Turin
151 Venice

Ireland

152 Cork
153 Dublin
154 Belfast

Latvia

155 Riga

Liechtenstein

156 Vaduz

Lithuania

157 Vilnius

Luxembourg

158 Luxembourg

The Netherlands

159 Amsterdam
160 Eindhoven
161 Enschede
162 Groningen
163 Maastricht
164 Rotterdam
165 Utrecht

Norway

166 Oslo
167 Stavanger
168 Bergen
169 Trondheim

Austria

170 Amstetten
171 Baden
172 Braunau
173 Brixen
174 Bruck/mur
175 Eisenstadt
176 Graz
177 Innsbruck
178 Klagenfurt
179 Landeck
180 Linz
181 Nenzing
182 Salzburg
183 Vienna

Poland

184 Wrocław
185 Bromberg
186 Danzig
187 Kattowitz
188 Krakow
189 Lodz
190 Lublin
191 Posen
192 Stettin
193 Warsaw

Portugal

194 Faro
195 Lisbon
196 Porto

Switzerland

197 Basel
198 Bern
199 Andermatt
200 Chur
201 Lausanne
202 Lucerne
203 Zurich

Sweden

204 Boras
205 Gävle
206 Gothenburg
207 Helsingborg
208 Jönköping
209 Östersund
210 Malmö
211 Stockholm
212 Sundsvall
213 Umea

Spain

214 Almería
215 Alicante
216 Barcelona
217 Bilbao
218 Badajoz
219 Burgos
220 Cáceres
221 Castellón
222 Granada
223 Guadalajara
224 La Coruña
225 Lérida
226 León
227 Madrid
228 Murcia
229 Oviedo
230 Palma
231 Pamplona
232 San Sebastián
233 Seville
234 Santander
235 Valencia
236 Valladolid
237 Vitoria
238 Zaragoza
239 La Palma
240 Tenerife
241 Grand Canaria
242 Fuerteventura

South-East Europe

243 Athens
244 Belgrade
245 Bratislava
246 Bucharest
247 Budapest
248 Istanbul
249 Maribor
250 Prague
251 Sarajevo
252 Sofia
253 Skopje
254 Thessaloniki
255 Zagreb

No.	Name	No.	Name
1	DEVICE XX / GROUP Y	28	FAN
2	STORE ROOM	29	AWNING
3	WORKROOM	30	MEDIA ROOM
4	BATHROOM	31	MOTOR
5	SURGERY	32	NORTH
6	LIBRARY	33	UPPER FLOOR
7	IRONING ROOM	34	EAST
8	OFFICE	35	PUMP
9	ATTIC	36	ROLLER SHUTTERS
10	ROOF LIGHT	37	BEDROOM
11	ENTRANCE	38	STANDARD LAMP
12	MASTER BEDROOM	39	SOUTH
13	GROUND FLOOR	40	PATIO
14	DINING ROOM	41	TOILET
15	FLOOR	42	STAIRWAY
16	LOUNGE	43	CURTAINS
17	HALL	44	STORE ROOM
18	FOYER	45	ANTEROOM
19	SPARE ROOM	46	WAITING ROOM
20	GARDEN	47	WC LADIES
21	HOBBY ROOM	48	WC GUESTS
22	VENETIAN BLINDS	49	WC GENTLEMEN
23	FIREPLACE ROOM	50	CRAFT ROOM
24	CELLER	51	WORKSHOP
25	NURSERY	52	WEST
26	KITCHEN	53	LIVING ROOM
27	LAMP		

`01 06 08`
`16:32`
`6ᴳ`
	Normal view (example)

`MANUAL 0`	**Main menu**

✋	**Manual operation**

Time functions

`1···` `··7`	Switching times
🎲	Random

Automatic functions

🕐	Time
☀	Sun
☾	Twilight
☁	Rain
🚩	Wind

System settings (see next page)

1	Basic settings (*1·1 – 1·4*)
2	Radio settings (*2·1 – 2·3*)

System settings

The **DuoFern Central Operating Unit** (Item no. 3481 00 60) complies with the requirements of the current European and national directives.

$\mathsf{C}\,\mathsf{E}$ | **1999/5/EC**
R&TTE directive

Conformity has been verified. The corresponding declarations and documentation are available on file at the manufacturer's premises.

RADEMACHER Geräte-Elektronik GmbH

Buschkamp 7

46414 Rhede

RADEMACHER Geräte-Elektronik GmbH provides a 24-month warranty for new systems that have been installed in compliance with the installation instructions. All construction faults, material defects and manufacturing defects are covered by the warranty.

The following are not covered by the warranty:

◆ Incorrect fitting or installation

◆ Non-observance of the installation and operating instructions

◆ Improper operation or wear and tear

◆ External influences, such as impacts, knocks or weathering

◆ Repairs and modifications by third party, unauthorised persons

◆ Use of unsuitable accessories

◆ Damage caused by unacceptable excess voltage (e.g. stroke of lightning)

◆ Operational malfunctions caused by radio frequency overlapping and other such radio interference

RADEMACHER shall remedy any defects, which occur within the warranty period free of charge either by repair or by replacement of the affected parts or by supply of a new replacement unit or one to the same value. There is no general extension of the original warranty period by delivery of a replacement or by repair as per the terms of the warranty.