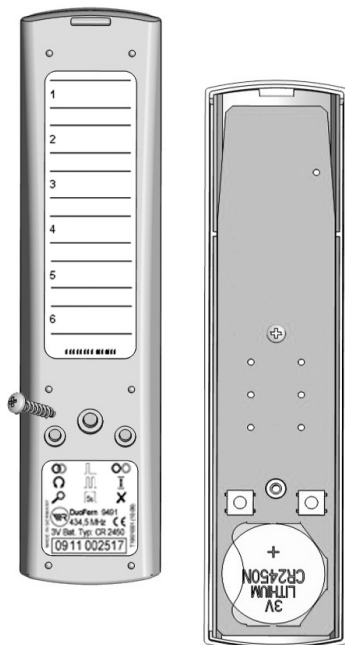


Sendefrequenz:	434,5 MHz
Sendeleistung:	10 mW
Reichweite:	
- Freifeld:	ca. 100 m
- Im Gebäude:	ca. 30 m (Abhängig von der Bausubstanz)
Versorgungsspannung:	3 V
Batterie-Typ:	CR2450
- Lebensdauer 1:	ca. 2 Jahre, bei 5 Betätigungen pro Tag
- Lebensdauer 2:	ca. 5 Jahre, Stand-by
Max. Anzahl Gruppen:	
- Art.-Nr. 9491 / 9491-3:	6
- Art.-Nr. 9491-2/9491-4:	1
Max. Anzahl Geräte:	
- Art.-Nr. 9491 / 9491-2 / 9491-3:	48
- Art.-Nr. 9491-4:	1
Zulässige Umgebungstemperatur:	+ 5 °C bis + 40 °C
Abmessungen (L x B x H):	140 x 43 x 18 mm
Gewicht:	70 g



Batteriewechsel

Bei fast leerer Batterie blinkt die Status-LED orange, wenn Sie den DuoFern Standard Handsender bedienen.

- ◆ Das Batteriefach befindet sich auf der Rückseite des DuoFern Standard Handsenders.
- ◆ Lösen Sie die Rückseite mit einem Schraubendreher.
- ◆ Die Gehäuserückseite vorsichtig nach oben abheben.
- ◆ Die Batterie seitlich herausschieben.
- ◆ Achten Sie beim Einsetzen der Batterie auf die Richtige Polarität. Der Plus-Pol (+) der Batterie muss oben liegen.

HINWEIS

Leere Batterien sind Sondermüll und gehören nicht in den Restmüll.

RADEMACHER Geräte-Elektronik GmbH & Co. KG gibt eine 24-monatige Garantie für Neugeräte, die entsprechend der Einbauanleitung montiert wurden. Von der Garantie abgedeckt sind alle Konstruktionsfehler, Materialfehler und Fabrikationsfehler.

Ausgenommen von der Garantie sind:

- ◆ Fehlerhafter Einbau oder Installation
- ◆ Nichtbeachtung der Einbau- und Bedienungsanleitung
- ◆ Unsachgemäße Bedienung oder Beanspruchung
- ◆ Äußere Einwirkungen wie Stöße, Schläge oder Witterung
- ◆ Reparaturen und Abänderungen von dritten, nicht autorisierten Stellen
- ◆ Verwendung ungeeigneter Zubehörteile
- ◆ Schäden durch unzulässige Überspannungen (z.B. Blitzeinschlag)
- ◆ Funktionsstörungen durch Funkfrequenzüberlagerungen und sonstige Funkstörungen

Innerhalb der Garantiezeit auftretende Mängel beseitigt RADEMACHER kostenlos entweder durch Reparatur oder durch Ersatz der betreffenden Teile oder durch Lieferung eines gleichwertigen oder neuen Ersatzgerätes. Durch Ersatzlieferung oder Reparatur aus Garantiegründen tritt keine generelle Verlängerung der ursprünglichen Garantiezeit ein.

RADEMACHER

Geräte-Elektronik GmbH & Co. KG
Buschkamp 7
46414 Rhede
info@rademacher.de

www.rademacher.de

Service:

Hotline 01805 933-171*
Telefax +49 2872 933-253
service@rademacher.de

* 14 ct/Minute aus dem deutschen Festnetz der
DT AG/Mobilfunktarif abweichend



D	Bedienungsanleitung DuoFern Standard Handsender	1
GB	DuoFern Standard manual transmitter Operating instructions	25



Article no. 9491/9491-2/9491-3/9491-4

...in purchasing this **DuoFern Standard manual transmitter**, you have decided on a quality product manufactured by RADEMACHER. We would like to thank you for your confidence.

This **manual transmitter** has been developed with such aspects as optimum operability and convenience in mind, as well as those of solidity and durability. With uncompromising quality requirements and after an extensive test series phase, we are now proud to present you with this innovative product.

All of our highly qualified staff at RADEMACHER stand behind this product.



These operating instructions...

... describe the installation, the electrical connection and the operation of your manual transmitter.



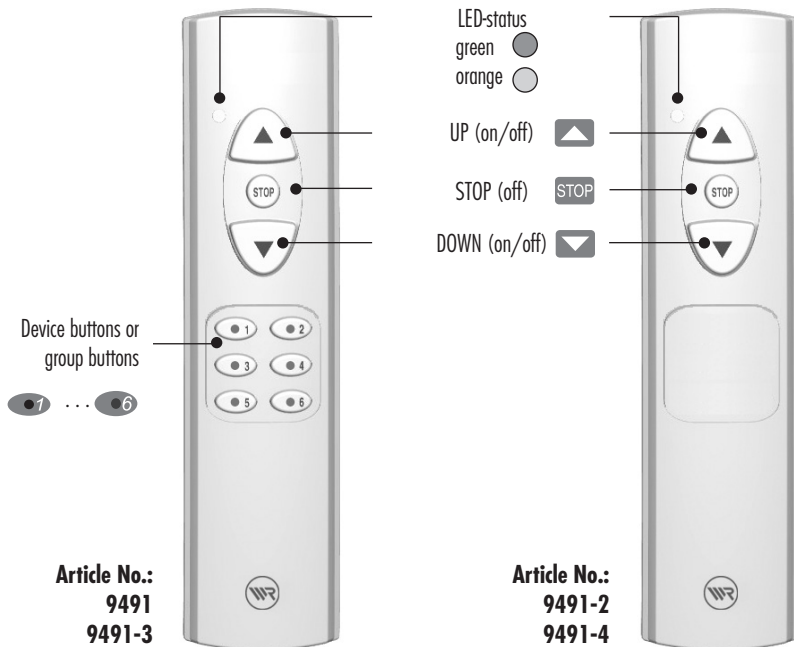
Please read these instructions completely and observe all of the safety instructions before commencing with the installation. Please keep these instructions in a safe place and include them with the device in the event it changes owners.

The warranty becomes null and void in the event of any damage or loss caused by failure to observe these operating and safety instructions. We accept no liability for any consequential losses or damage resulting from non-observance of these instructions.

CE mark and conformity

This present **DuoFern Standard manual transmitter** (art. no. 9491-x) complies with the requirements of the applicable European and national directives. The conformity has been certified and the corresponding declarations and documentation are on file at the manufacturer's premises.

Dear customer/Introduction ...	26	Manual operation of actuators with several channels	44
General view/operating elements	28	Manual operation	44
Rear side of device.....	29	Delete settings	45
Key to symbols.....	30	Technical data	48
General safety advice	30	Warranty conditions	48
Proper use	31		
Operating conditions.....	31		
Incorrect use	31		
Short description of DuoFern Standard manual transmitter	32		
Registering DuoFern end devices (applies to article nos. 9491 / 9491-3) ...	34		
(applies to article nos. 9491-2 / 9491-4)	36		
Delete DuoFern end devices.....	38		
End point setting.....	39		
Reversal of rotational direction	41		
Activate "purge" function.....	43		



Article No.:

9491

9491-2

9491-3

9491-4

Example of identification plate
for article no. 9491

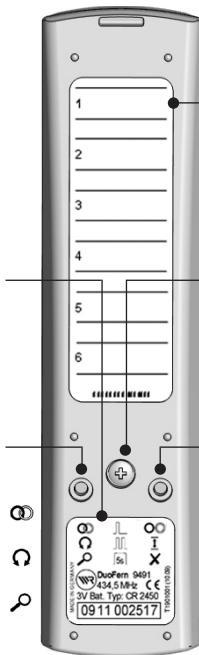
Connect
button



Registering mode 1 x

Reversal of rotational direction 2 x

Purge function Hold for 5 s



Space for notes

Fixing screw

Disconnect
button

1 x Disconnect mode

2 x End point setting

Hold for 5 s Reset

MADE IN GERMANY
DuoFern 9491
434.5 MHz CE
3V Bat. Typ: CR 2450
T19020110309
09 11 002517

**This concerns your safety.**

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



This symbol advises of malpractices that may cause damage to people and property.

NOTE NOTE/IMPORTANT/CAUTION

This heading indicates information that is important to the proper functioning of the device.

**Improper use increases risk of injury.**

- ◆ Children must not be allowed to play with the DuoFern Standard manual transmitter.
- ◆ Please store the DuoFern Standard manual transmitter in such a way that it cannot unintentionally be operated by playing children, for example.

Use the DuoFern Standard manual transmitter only for the remote control of:

- ◆ Roller shutters
- ◆ Electrical consumers (e.g. lighting)

Operating conditions

- ◆ The DuoFern radio system may only be operated with and installed in systems and devices in which transmitter or receiver faults do not present any danger to persons or property or for which these hazards are removed by the use of other safety equipment.
- ◆ Use the DuoFern Standard manual transmitter only in dry rooms.



Never use controls with DuoFern radio technology (e. g. RolloTron Pro Comfort DuoFern and DuoFern Standard manual transmitter) for remote operation of devices and equipment with increased safety requirements or increased risk of accident. Additional safety equipment is required to do so. Please observe the relevant legal regulations for setting up such systems.

The DuoFern wireless system enables bidirectional data exchange between the various participants of a wireless network. All switching commands from a DuoFern transmitter will be confirmed by the DuoFern receivers.

Using the DuoFern Standard manual transmitter you can manually remotely control various DuoFern devices (e.g. RolloTron Pro Comfort/Standard DuoFern or DuoFern actuators for lighting).

Command buttons

With the aid of the three command buttons, UP (on/off)/STOP (off) / DOWN (on/off), see page 28, you can transmit manual switching commands to the registered DuoFern end devices.

Device buttons or group buttons (only for article nos. 9491 and 9491-3)

DuoFern Standard manual transmitters 9491 and 9491-3 have 6 device or group buttons (see page 28) which you can allocate to any DuoFern end device (see table on page 33). In this way it is possible to have an individual as well as a group control of various devices (see page 35).

Connect button

You can call up the following functions with the connect button:

- ◆ Registering mode Register DuoFern end device on manual transmitter.
- ◆ Reversal of rotational direction. Reverse rotational direction of tubular motor or switchover between the devices and the lighting function.
- ◆ Purge Delete the connection between manual transmitter and actuators that no longer exist.

Disconnect button

You can call up the following functions with the disconnect button:

- ◆ Disconnect mode Disconnect DuoFern end devices from manual transmitter.
- ◆ End point setting Set the end points of RADEMACHER electronic tubular motors.
- ◆ Reset Resetting to factory settings.

Status LED

The two-coloured status LED shows whether all DuoFern end devices have received and confirmed the switch signal.

List of models with number of controllable groups and DuoFern end devices.

Article No.:	Number of groups	Number of end devices for each group	Maximum number of end devices
9491	6	8	48
9491-2	1	48	48
9491-3	6	1	6
9491-4	1	1	1



Register DuoFern end devices (applies to article nos. 9491 / 9491-3)

GB

In order to be able to operate a DuoFern end device with the **DuoFern Standard manual transmitter**, this must be registered with the DuoFern end device concerned.

TIP

Use a thin, not too sharp object to press the connect button.

1.

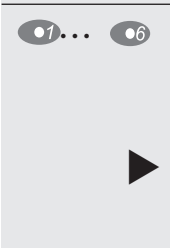
Switch the desired DuoFern end device or DuoFern actuator to registering mode.

(see corresponding operating instructions)

2.**1 x**

Switch the DuoFern Standard manual transmitter to registering mode.

In order to do so, briefly press the "connect" button.

3. **60 seconds**

The LED's from all device buttons or group buttons light up.

NOTE

- ◆ A fully allocated group button does not light up.
- ◆ The register mode remains active for 60 seconds.



Register DuoFern end devices (applies to article nos. 9491 / 9491-3)

GB**4.**

Press the desired device button that you wish to use later to select the device.

Observe the status LED



Green: The registration was successful.

Orange: The button is already fully allocated.

5.**1. ... 4.**

Repeat points 1 to 4 in order to register the next device or the next actuator.

ADVICE 1

- ◆ If a device has several channels (e.g. 2-channel actuator art.-no. 9470), you must select a group button for each channel.
- ◆ In the case of devices with several channels, it will jump automatically to point 3 until all of these channels have been worked through.
- ◆ If a channel should not be allocated or should be skipped over, you must press the stop button.

ADVICE 2

You can also register a device several times, e.g. to realise an individual control and a group control:

- RolloTron Pro DuoFern 1 on button 1
- RolloTron Pro DuoFern 2 on button 2
- RolloTron Pro DuoFern 3 on button 3
- RolloTron Pro DuoFern 1/2/3 on button 4

Please observe the maximum possible number of devices per button (see page 33).



Register DuoFern end devices (applies to article nos. 9491-2 / 9491-4)

GB

No devices or group buttons can be selected or pressed for DuoFern Standard manual transmitters 9491-2 and 9491-4. The registered actuators (only one actuator can be registered for article number 9491-4) are automatically allocated to the only existing group.

NOTE

- ◆ When registering actuators with several channels, all channels are always registered in the group for DuoFern Standard manual transmitters 9491-2 and 9491-4 (1 group).
- ◆ Please note that for DuoFern Standard manual transmitters 9491-4 (1 group / 1 actuator), an already existing device is deleted automatically every time a new one is registered. You therefore do not need to delete a previously registered device.



Register DuoFern end devices (applies to article nos. 9491-2 / 9491-4)

GB**1.**

Switch the desired DuoFern end device or DuoFern actuator to registering mode.
(see corresponding operating instructions)

2.**1 x**

Switch the DuoFern Standard manual transmitter to registering mode.

In order to do so, briefly press the "connect" button.

3.

Observe the status LED

Green: The registration was successful.

Orange: The button is already fully allocated.

4.

Points 1 and 2 must be repeated for each actuator.



Delete DuoFern end devices

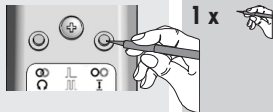
GB

1.



Switch desired DuoFern end devices to delete mode.
(see corresponding operating instructions)

2.



Switch the DuoFern Standard manual transmitter to delete mode.

In order to do so, briefly press the "disconnect" button.

3.



If the deletion is successful the green status LED lights up.

NOTE

The DuoFern end device has been deleted from all device buttons or group buttons.

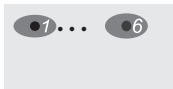


You can subsequently set or correct the end points of connected tubular motors using this function.

NOTE

- ◆ The end point setting can only be adjusted when only one device (actuator) is registered within the selected group (this is always the case for article numbers 9491-3 and 9491-4, see page 33); if more than one component is registered within the selected group then the function is blocked.
- ◆ The end point setting can only be made for RADEMACHER electronic tubular motors from 2000 onwards that are controlled with a correctly installed DuoFern actuator.
- ◆ The end point setting cannot be adjusted for tubular motors connected in parallel.
- ◆ The function is automatically cancelled if no button is pressed for approx. 30 seconds.

1.



Select the desired DuoFern end device.

2.



2 x / second










Activate the „end point setting“ function.

In order to do so, press the “disconnect” button twice in short succession within one second (similar to the double-click of a computer mouse).



End point setting

GB

3.			The status LED flashes (approx. twice per second) on successful activation.
4.			Set the upper end point. Keep the button pressed until the desired end point is reached.
5.			Release the button as soon as the upper end point is reached.
6.			Set the lower end point.
7.			Release the button as soon as the lower end point is reached.
8.			Cancel end point setting. The manual transmitter returns to normal operating mode (regular flashing of the status LED is cancelled).



You can subsequently set or correct the rotational direction of connected tubular motors using this function.

Alternative use for reversal of directional rotation:

Switch over between lighting function and device function

In case of universal actuators for lighting or for devices (e.g. universal actuator 9470 or socket actuator 9472), reversing the rotational direction switches over between the lighting function and the device function.

NOTE

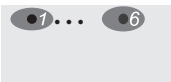
- ◆ Reversal of rotational direction or switching over between the lighting function and the device function can only be carried out when **only one device (actuator)** is registered within the selected group (this is always the case for article numbers 9491-3 and 9491-4, see page 33); if more than one component is registered within the selected group then the function is blocked.
- ◆ Not all devices support the reversal of rotational direction function or switchover between the lighting and device function. You should therefore check in the operating instructions of the respective device whether this function is available.
- ◆ **The following applies for manual transmitters 9491-2 and 9491-4:**
If a multichannel actuator is registered (e.g. universal actuator 9470) then the reversal of rotational direction or switchover between the lighting and the device function is always applied to both channels.



Reversal of rotational direction

GB

1.

**Select the desired DuoFern end device.**

2.



2 x / second

**Activate the “reversal of rotational direction” function.**

In order to do so, press the “connect” button twice in short succession within one second (similar to the double-click of a computer mouse).

3.

If successfully activated, the tubular motor connected to the actuator confirms this by starting up for a short time.**In case of universal actuators, the lighting / device switches on or off briefly to confirm activation.**

i)



> the actuator switches off.



> the actuator switches on.

How to determine whether the lighting function or the device function is active:

The lighting function is activated.

The device function is activated.



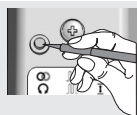
Activate “purge” function

GB

This function deletes all DuoFern end devices that are registered but that no longer react. This could be necessary, for example, in the case of a faulty device which can no longer be deleted as described above.

- NOTE**
- ◆ All battery powered DuoFern devices are **not** to be/cannot be deleted in this way.
 - ◆ To delete **all** DuoFer end devices from the DuoFern Standard manual transmitter, you must perform the function “Reset delete settings” (see page 45).

1.



Press the “connect” button for approx. 5 seconds until the green status LED lights up.

The DuoFern Standard manual transmitter now sends a control signal to all registered DuoFern end devices. The devices which do not confirm the signal will be automatically deleted.

Observe the status LED

- Green: The purge was successful
- Orange flashing: The purge mode is still active





Manual operation of actuators with several channels

GB

When registering actuators with several channels, all channels in the group are always registered for DuoFern Standard manual transmitters 9491-2 and 9491-4 (1 group). Operation of single channels is therefore not possible using these manual transmitters.



Manual operation

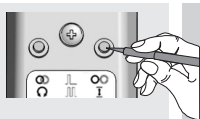
- | | | | |
|----|--|--|--|
| 1. | | | Press the desired device or group button (where applicable). |
| 2. | | | Open the roller shutter or switch electrical consumer on/off |
| 3. | | | Stop the roller shutter or switch off electrical consumer |
| 4. | | | Close the roller shutter or switch electrical consumer on/off |
| | | | Observe the status LED |
| | | | Orange: Switch signal is being transmitted |
| | | | Green: Confirmation received |



Delete settings (Reset)

GB

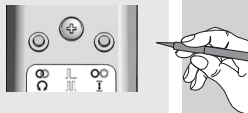
1.



Press the “disconnect” button for approx. 5 seconds until the orange status LED flashes.

The status LED flashes orange

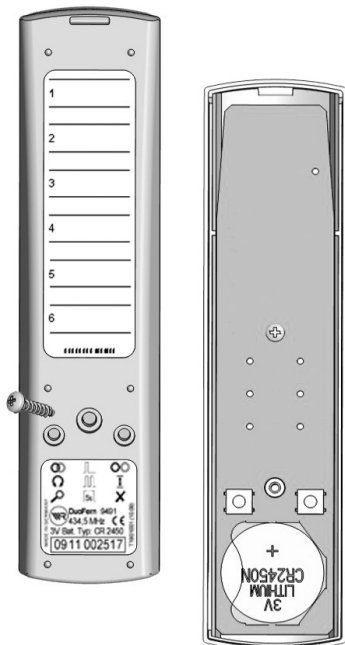
2.



Let go of the „disconnect button“ as soon as the orange status LED is permanently lit up

All settings on the DuoFern Standard manual transmitter are deleted.

Transmission frequency:	434,5 MHz
Transmitting power:	10 mW
Range:	
- Free field:	approx. 100 m
- Indoors:	approx. 30 m (depending upon the building fabric)
Supply voltage:	3 V
Battery type:	CR2450
- Service life 1:	approx. 2 years, if actuated 5 times per day
- Service life 2:	approx. 5 years, Stand-by
Max. number of groups:	
- Art.-Nr. 9491 / 9491-3:	6
- Art.-Nr. 9491-2/9491-4:	1
Max. Anzahl Geräte:	
- Article no. 9491 / 9491-2 / 9491-3:	48
- Article no. 9491-4:	1
Permissible ambient temperature:	+ 5 °C bis + 40 °C
Dimensions L x W x H:	140 x 43 x 18 mm
Weight:	70 g



Battery change

If the battery is almost empty, the status LED flashes orange when you operate the DuoFern Standard manual transmitter.

- ◆ The battery can be found in the battery compartment on the rear of the DuoFern Standard manual transmitter.
- ◆ Unfasten the rear housing with a screwdriver.
- ◆ Carefully lift off the rear housing.
- ◆ Push the battery out from the side.
- ◆ When you insert the battery ensure that the polarity is correct. The plus connector (+) of the battery must be at the top.

NOTE

Empty batteries are hazardous waste and must not be disposed of with non-recyclable refuse.

RADEMACHER Geräte-Elektronik GmbH&Co. KG offers a 24 month guarantee for new devices that have been installed in accordance with the installation manual. The guarantee covers all design faults, material faults and fabrication faults.

The guarantee does not cover:

- ◆ Incorrect mounting or installation
- ◆ Non-observance of the installation and operation manual
- ◆ Improper operation or utilisation
- ◆ External influences such as knocks, blows or weather
- ◆ Repairs and modifications made by unauthorised third parties
- ◆ Use of unsuitable accessory parts
- ◆ Damage due to inadmissible voltage surges (e.g. caused by lightning)
- ◆ Dysfunction due to superimposed radio frequencies and other radio disturbances.

Any defects occurring within the period of guarantee will be rectified by RADEMACHER at no cost either by repairing or replacing the parts concerned or by delivery of a device of the same value or a new replacement. Generally the original guarantee period will not be extended because of replacement delivery or repair resulting from the guarantee.

RADEMACHER

Geräte-Elektronik GmbH & Co. KG

Buschkamp 7

46414 Rhede

info@rademacher.de

www.rademacher.de

Service:

Telefax +49 2872 933-253

service@rademacher.de