Design

Attachment frame

Power pack unit

Timer
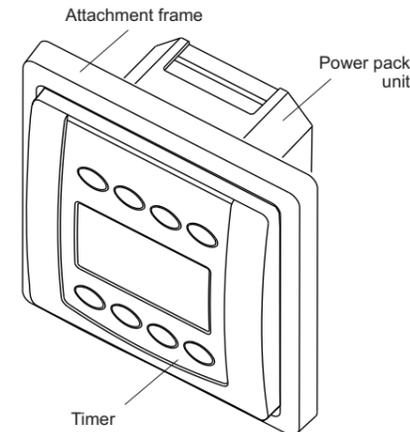
RCJ02E5002E-01   1-channel   868,3 MHz

Scope of Delivery

Junction Box Receiver RCJ02 with Timer, attachment frame, attachment set, operating instructions

Technical Details

Frequency:	868,30 MHz
Modulation:	FSK
Voltage supply:	230 V AC / 50 Hz
Connection value:	4 VA
Power consumption:	1,3 W
Output:	2 potential relay contacts (normally open)
Max. contact load:	
- resistive load cos =1:	4,0 A / 920 VA
- inductive load cos =0,8:	3,2 A / 736 VA
Protective class:	IP20
Operating temperature:	for dry rooms only, 0°C to +50°C
Dimensions:	80 x 80 x 45 mm
Weight:	127 g

Safety Advice
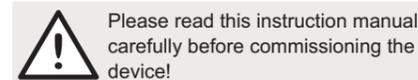
⚠ Please read this instruction manual carefully before commissioning the device!

Attention! Only a qualified electrician may perform the electric installation!

Observe the valid laws, standards and regulations as well as the manufacturer's instructions regarding the devices to be controlled!

Have malfunctioning devices checked by the manufacturer!

Do not modify the device!

The relay contact is only designed for single-phase supply!

Intended Use

The Junction Box Receiver RCJ02 (Easywave radio control) may only be used to control shutter or blind motors.

The manufacturer will not be liable for damage caused by improper or inappropriate use.

Customer Service

If the device does not work properly despite proper handling or in case of damage, please contact your retailer or the following address:

ELDAT GmbH
Im Gewerbepark 14
15711 Königs Wusterhausen
Germany

Phone: + 49 (0) 33 75 / 90 37-0
Fax: + 49 (0) 33 75 / 90 37-90

Internet: www.eldat.de
E-mail: info@eldat.de

Functions

The Junction Box Receiver with Timer allows to control blinds or shutters depending on the time and/or brightness. Brightness control is only possible in connection with the Radio Light Sensor SL01.

In addition, the receiver can also be operated with hand transmitters and wall transmitters included in the Easywave product range. The transmitters must allow the functions UP (A), STOP (C/D) and DOWN (B), 3-button operation). The Easywave transmission code must be memorized by the receiver before-hand.

The following operating modes are available:

Time-Controlled:
Automatic Operation: Blinds are raised and lowered either at the programmed switching times or manually.

Automatic Operation with Partial Manual Operation: The programmed switching times as well as the Sun Protection/Twilight Mode functions are deactivated until 24:00 hrs. After 24:00 hrs, the timer switches to Automatic Mode.

Brightness-Controlled:
(only with Light Sensor SL01)
Solar Protection Mode: If a set brightness value is exceeded, the blinds lower to a desired shade position.

Twilight Mode: If a set brightness value is undercut, the blinds are lowered completely.

Manual M**ode:** Raising and lowering of shutters only via pushing the button on the timer or with additional radio transmitters.

The timer offers the following additional functions:

Holiday Mode: On holidays, you can activate the switching times programmed for Sundays with only one push of a button.
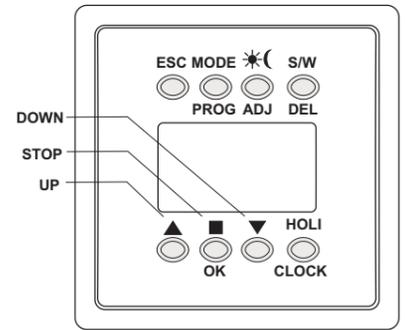
Switching from Normal to Daylight Savings Time: You can switch the timer from normal to daylight savings time with just one push of a button.

Vacation Mode: Shutters are raised or lowered with a time delay (at most 15 minutes) to the programmed switching times in automatic mode.
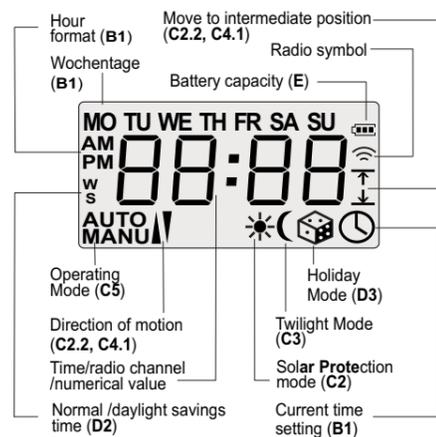
The following settings are available in automatic mode and holiday mode:

- **Day Function:** Switching period 24 hours
or **Week Function:** Switching period one week
- **Individual Switching Times:** Different switching times can be programmed for each weekday or groups of weekdays.
- **Intermediate Position:** Lowering of shutters to a desired shade position.

User Interface

Display Overview

Hour format (**B1**)
Move to intermediate position (**C2.2, C4.1**)
Wochentage (**B1**)
Radio symbol
Battery capacity (**E**)

Operating Mode (**C5**)
Holiday Mode (**D3**)
Direction of motion (**C2.2, C4.1**)
Twilight Mode (**C3**)
Time/radio channel /numerical value
Solar Protection mode (**C2**)
Normal /daylight savings time (**D2**)
Current time setting (**B1**)

Operating the Receiver with Timer

The following settings have to be made to put the receiver into operation and for later modifications:

A Mounting the Receiver

① Turn the power supply off. Connect the cable for the power supply and the blind/shutter motor to the power unit as shown in the connection diagram.

230 V
L
N

N N L ▼ ▲

μ ▼ μ
L 4A
□
● ● ● ●

② Insert the enclosed 4-pole pin strip into the socket on the back of the Timer until it snaps into place.

Multi-pin connector

③ Insert the power pack into the casing and screw it together with the attachment frame. Insert the timer with the 4-pole pin strip straight into the socket of the power pack and snap it into the frame.
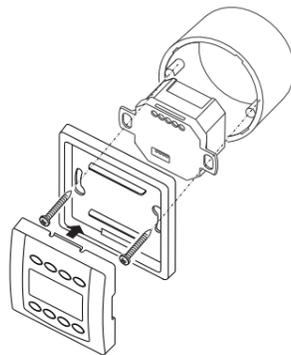
After switching on the supply voltage, the timer is ready for operation and you can start programming.

MO
W 12:00
MANU

After programming the basic settings (chapter B), you can already control your shutters/blinds manually or automatically with the preset values (chapter C1).

If you want to use the additional operating modes of the timer, please make the corresponding settings.

If you additionally want to operate the receiver with radio transmitters, register the transmission codes in the shutter/blind control. You can program up to 36 transmission codes.

B Basic Settings

B1 Setting the Time/Weekday

If you do not press a button within 5 minutes during programming, the timer automatically returns to operating mode.

🤚

ESC

With ESC you can cancel all programming steps at any time and return to operating mode.

In this case the settings are not saved.

TH
W 15:35

Setting/Changing the Time:

HOLI
>3s
CLOCK

Press the CLOCK button for more than 3 seconds. The time on the display starts to blink.

Set the time with the UP or DOWN button.

TH
W 15:32

▲ Advancing the minutes

▼ Resetting the minutes

Setting Daylight Savings Time:

S/W
DEL

Press the S/W button. This way you switch between daylight savings and normal time.

The display switches between **W** and **S**.

TH
W
S 15:32

Setting the Hour Format (12-/24 hours):

MODE
>3s
PROG

Press the MODE button for more than 3 seconds. The hour format switches between **AM** and **PM**.

AM
PM TH 15:32

Setting the Weekday:

OK

Press the OK button. The weekday blinks on the display.

TH
W 15:32

Now select the respective day with the UP and DOWN buttons.

▲

▼

MO	Monday
TU	Tuesday
WE	Wednesday
TH	Thursday
FR	Friday
SA	Saturday
SU	Sunday

Press the OK button again. The settings are saved and the timer returns to operating mode.

TH
W 15:35

B2 Measuring/Saving the Runtimes

For moving the shutter/blind into a desired shade position, the timer has to measure and save the runtime for raising and lowering the shutters once.

Raise the shutter completely with the UP button.

Set the timer to operating mode (ESC).

>3s
ADJ

Press the ADJ button for more than 3 seconds to change to the setup mode ADJ.

AdJ

OK

Press the OK button. The display shows:

A Ud

Keep the DOWN button depressed until the shutter is completely closed.

The lowering time is measured and saved.

Keep the UP button depressed until the shutter is completely open.

The raising time is measured and saved.

ESC
2x

Press ESC twice to return to operating mode.

TH
15:35

B3 Putting the Light Sensor into Operation

To be able to use solar protection and twilight mode, you have to establish the radio connection between the light sensor and the timer.

For this, read the operating instructions for the Light Sensor SL01.

D Additional Functions

D1 Activating the Holiday Function

On holidays, you can activate the switching times programmed for Sundays with only one push of a button.

Set the Timer to Operating Mode (ESC).

HOLI
CLOCK

Turn the holiday function ON or OFF by pressing the HOLI button.
The weekday SU blinks on the display.

TH
W 15:32

If you have activated the Holiday Function prior to 18:00 hrs, it is automatically deactivated at 24:00 hrs on the same day.

If you have activated the Holiday Function after 18:00 hrs, it is first automatically deactivated at 24:00 hrs on the next day.

D2 Activating **D**aylight **S**avings **T**ime

Set the Timer to Operating Mode (ESC).

S/W
DEL

Briefly press the S/W button. The display changes from **W** to **S** and the clock is moved forwards/backwards one hour.

TH
S 15:32
AUTO

D3 Activating **Vacation Mode**

Shutters are raised or lowered with a time delay (at most 15 minutes) to the programmed switching times in automatic mode.

Set the Timer to Operating Mode (ESC).

MODE
PROG

Press MODE until the dice appears on the display.

TH
W 15:32
AUTO

🤚

In Vacation Mode the Holiday Function is deactivated with a random offset of ±15 minutes.

D4 Deletion of all data (reset) **(Reset)**

ESC S/W
>3s
DEL

Press the ESC and the DEL button at the same time for more than 3 seconds.

All saved data is deleted and the factory settings are restored.

MO
W 12:00
MANU

🤚

After the reset, the transmission codes of the radio transmitters have to be registered again in the control.

E Battery Control Display

If the battery icon blinks on the Timer's display, the battery of the Light Sensor SL01 is weak.

Change the battery of the Light Sensor SL01 according to the operating instructions.

F Troubleshooting

- Blinking 🔋 symbol: Change the battery of the Light Sensor.
- If the receiver does not react to the push of a button on a radio transmitter in Manual Mode: Re-enter the transmitter code into the receiver (chapter C6).
- If the receiver does not react to the programmed switching commands in Automatic Mode: Check whether the Timer is in "Automatic Mode" (see chapter C5). Check the programmed switching times (chapter C4.1).
- Solar Protection/Twilight Mode cannot be activated: Re-establish the connection between the Light Sensor and the Timer. (See the operating instructions for the Light Sensor).
- The receiver does not move the shutter into the intermediate position: set the runtime again (chapter B2).
- After changing the sensor battery, the Light Sensor reception is disrupted and the SUN/MOON icon blinks: Wait approx. 35 minutes until reception is restored automatically.

G General Information

Disposal

Waste electrical products should not be disposed of with household waste!

Dispose of the waste product via a collection point for electronic scrap or via your specialist dealer.

Dispose of used batteries in a recycling bin for batteries or via the specialist trade.

Put the packaging material into the recycling bins for cardboard, paper and plastics. "

Warranty

We will remedy defects on the device based on material or production errors within the statutory warranty period or exchange the device.

In case of unauthorised tampering with the device, the warranty is void.

Conformity

Hereby, ELDAT GmbH declares that the radio equipment type RCJ02 is in compliance with Directive 2014/53/EU.

The full text of the EU declaration of conformity is available at the following internet address: www.eldat.de

CE

C5 Changing the Operating Mode

Automatic Mode

Set the timer to operating mode (ESC).

MODE **PROG** By briefly pressing the MODE button, select the operating mode AUTO (automatic mode) or AUTOMANU (automatic mode with partial manual operation).

Solar Protection/Twilight Mode

Set the timer to operating mode (ESC).

ADJ By briefly pressing the SUN/MOON button, activate/deactivate solar protection, twilight or both modes.
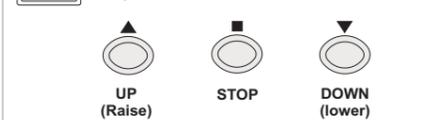
C6 Manual Operation

In manual operation with timer, you can also raise or lower the shutters with a push of a button.

Set the timer to operating mode (ESC).

Press the UP, DOWN or STOP button; the shutter moves in the desired direction or stops.

UP (Raise)   **STOP**   **DOWN (lower)**

If you additionally want to operate your shutter control with radio transmitters, you have to memorize the Easywave transmission code in the receiver.

Operation of the shutter control is only possible with Easywave 3-button transmitters. The buttons have the following function:

· UP (transmitter button A),
· STOP (transmitter button C or D) and
· DOWN (transmitter button B).

To transmit the transmission code, you generally only have to press button A; the function of the individual buttons is then defined automatically by the control.

C6.1 Programming the Transmission Codes

Set the timer to operating mode (ESC).

>3s ADJ Press the ADJ button for more than 3 seconds to change to the setup mode. `AdJ`

Press the UP button briefly to change to programming mode. `Ln`

OK Briefly press the OK button. Ln blinks on the display and the number of free memory slots is displayed. `Ln 36`
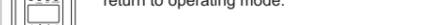
Now repeatedly press the button UP (A) on the transmitter for the key combination whose code you want to transmit. The number of free memory slots decreases on the display and the antenna icon is displayed briefly. `Ln 35`

You can enter at most 36 transmitters in sequence. Once all memory slots are occupied, the display shows FULL. `FULL`

ESC 2x Press ESC twice to save the codes and return to operating mode.

C6.2 Deleting Individual Transmission Codes

Set the timer to operating mode (ESC).

>3s ADJ Press the ADJ button for more than 3 seconds to change to the sSetup mode. `AdJ`

Press the UP button briefly. Now you change to programming mode. `Ln`

OK Briefly press OK and then immediately UP. dE blinks on the display and the number of free memory slots is displayed. `dE 35`

Now repeatedly press the button UP (A) on the transmitter for the key combination whose code you want to delete. The number of free memory slots increases on the display and the antenna icon is displayed briefly. `dE 36`

ESC 2x Press ESC once to save and return to programming mode or twice to return to operating mode immediately.

C6.3 Deleting all Transmission Codes

Set the timer to operating mode (ESC).

>3s ADJ Press the ADJ button for more than 3 seconds to change to the setup mode. `AdJ`

Press the UP button briefly to change to programming mode. `Ln`

OK Briefly press OK and then immediately DOWN. dE ALL blinks on the display. `dEAll`

>3s DEL Press the DEL button for more than 3 seconds. All codes are deleted. The display briefly shows the empty memory slots and then returns to blinking dE ALL. `--:--` `dEAll`

ESC 2x Press ESC once to save and return toprogramming mode or twice to return to operating mode immediately.

C Operating Shutters/Blinds

You can also raise or lower the shutters in all operating modes manually by pressing the button on the timer or with a transmitter.
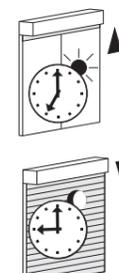
OK If the shutter raises or lowers automatically, you can stop it by briefly pressing the STOP button.

C1 Factory Settings

The default switching times for automatic mode are as follows:

- Shutter rises completely Monday through Sunday at 7:00 hrs

- Shutter closes completely Monday through Sunday at 21:00 hrs

Practical preset values are also programmed for solar protection and twilight mode.

C2 Solar Protection Mode

Solar protection mode can only be activated when the shutter is completely raised either manually with the timer or automatically. Do not interrupt the raising procedure with the STOP button.

The radio connection between the light sensor and the timer must also be established.

If you want to move your shutter to a certain shade position, please program the intermediate position.

C2.1 Setting the Brightness Value

Here you can program the value for the brightness at which your shutter is to move to the desired shadow position.

We recommend initially using the factory settings.

Set the Timer to Operating Mode (ESC).

>3s ADJ Press the ADJ button for more than 3 seconds to change to the setup mode. `AdJ`

Press the UP button briefly to change to programming mode. `Ln`

Press the UP button again afterwards. The display shows two brightness values.
The left figure is the currently measured value, the right one the default value or an already programmed value. `10 20`

OK Press the OK button. The right value starts to blink on the display. `10 20`

Select a new value with UP or DOWN in a range between 0 and 29.

Program the brightness value for a time of day at which the sun is so intense that you want to lower the shutters or orient yourself on the currently measured value.
If you want to update the measured value once again beforehand, briefly press the connection button on the light sensor.

ESC 2. 1. OK Press OK to save the value and then ESC to return to operating mode.

C2.2 Setting the Intermediate Position

Here you can define how far the shutters are to lower for solar protection.

If an intermediate position is programmed, the shutter first moves to the top end position and then into the desired intermediate position.

When making your setting, make sure that the shutter does not obscure the sun sensor in the shade position.

Set the timer to operating mode (ESC).

>3s ADJ Press the ADJ button for more than 3 seconds to change to the Setup Mode. `AdJ`

Press the UP button briefly to change to programming mode. `Ln`

2x Press the UP button twice afterwards. The display shows the current value for the intermediate position as well as the symbols for the direction and the intermediate position. `50`

OK Press the OK button. The value starts to blink on the display and symbols for the direction. `50`

Select a new value in 5% steps with UP or DOWN.

0%   **25%**   **75%**   **100%**

ESC 2. 1. OK Press OK to save the value and then ESC to return to operating mode.

C2.3 Activating Solar Protection Mode

If the timer is in operating mode, you can activate the solar protection mode.

Briefly press the SUN/MOON button; the display shows the sun icon.

`15:32`

Now the solar protection function is ready for operation.

If the measured brightness value is approx. 12 minutes equal or larger than the set value, the shutter lowers to the shade position.

If the measured value falls below half of the set value for approx. 30 minutes, the shutter opens completely again.

☞ **The sun icon blinks if the radio reception between the Timer and the light sensor is disrupted (see also operating instruction of the Light Sensor SL01).**

C3.1   Setting the Twilight Value

Here you can program the value for the brightness at which your shutter is to be closed.

We recommend initially using the factory settings.

Set the timer to operating mode (ESC).

>3s Press the ADJ button for more than 3 seconds to change to the setup mode.

`AdJ`
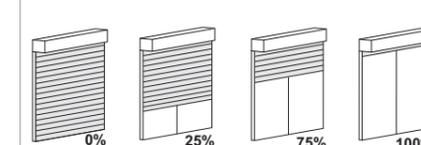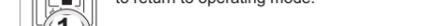
Press the UP button briefly to change to Programming Mode.

`Ln`

3x Press the UP button three times afterwards. The display shows two brightness values and the moon icon.

`29 20`

The left figure is the currently measured value, the right one the default value or an already programmed value.

Press the OK button. The right value starts to blink on the display.

`29 20`

Select a new value with UP or DOWN in a range between 0 and 29.

Program the twilight value for a time of day at which the brightness has the value at which you want to lower the shutters or orient yourself on the currently measured value.

☝ If you want to update the measured value once again beforehand, briefly press the connection button on the light sensor.

ESC Press OK to save the value and then ESC to return to operating mode.

C3.2   Activating Twilight Mode

If the timer is in operating mode, you can activate twilight mode.

Briefly press the SUN/MOON button; the display shows the moon icon.

`15:35`

Twilight mode is now functioning. The shutter lowers completely when the measured brightness is less than the set value for approx. 6 minutes. However, beforehand the brightness level must be higher than the set value for more than one hour.

The shutter is not raised again automatically in twilight mode. Open the shutter manually or use a switching time programmed for automatic mode.

☞ **The moon icon blinks if the radio reception between the timer and the light sensor is disrupted (see also operating instruction of the Light Sensor SL01).**

In order to be able to use the automatic operation modes, you have to program the switching times and - if required - the intermediate positions for the shade position.

To do so, change to programming mode. If you do not press a button in programming mode within 5 minutes, the timer automatically returns to operating mode.

The switching times programmed for automatic mode take precedence over the settings for solar protection or twilight mode. You can program altogether 50 switching times.

If the timer is set to 12-hour display, the switching times are also displayed in 12-hour format.

C4.1   Programming Switching Times and Intermediate Positions

Set the timer to operating mode (ESC).

MODE >3s PROG Press the PROG button for more than 3 seconds to change to programming mode. The display shows the free memory slots on the right.

`--:48`

Briefly press the OK button. The switching time starts to blink on the display.

`12:00`

If the display shows FULL, the memory for the switching times is full. Delete a time before programming.

`FULL`

Set a new switching time with UP or DOWN.

Press OK again and the weekdays blink on the display.

`19:30`

Select the weekday or a combination of weekdays with UP or DOWN.

MO	Monday
TU	Tuesday
WE	Wednesday
TH	Thursday
FR	Friday
SA	Saturday
SU	Sunday

MO-FR	Monday to Friday
SA-SU	Saturday and Sunday
MO-SU	daily (day function)

Press OK again. The direction of the shutter motion blinks on the display.

`19:30`

With UP or DOWN, select for which direction the changed switching time is supposed to apply.

↑ RAISE   ↓ LOWER

Press UP and DOWN at the same time. The intermediate position blinks on the display.

Select a new value in 5% steps with UP or DOWN. (Also see chapter B.1.2)

The intermediate position is programmed and indicated with the two direction arrows.

`60`

Briefly press the OK button. The saved switching time is displayed.

`21:00`

ESC Press ESC to return to operating mode.

C4.2   Deleting Switching Times

Set the timer to operating mode (ESC).

MODE >3s PROG Press the PROG button for more than 3 seconds. The display shows the free memory slots.

`--:48`

Select the switching time to be deleted with UP or DOWN.

HOLI >3s S/W DEL Press the DEL button for more than 3 seconds. The switching time is deleted and the display shows the memory slots again. Return to operating mode with ESC.

C4.3   Changing Switching Times and Intermediate Positions

Set the timer to operating mode (ESC).

MODE >3s PROG Press the PROG button for more than 3 seconds. The display shows the free memory slots.

`--:48`

Select the switching time you want to change with UP or DOWN.

Briefly press the OK button. The switching time starts to blink on the display.

`19:30`

Set a new switching time with UP or DOWN.

Press OK again and the weekday blinks on the display.

`21:00`

Select a new weekday with UP or DOWN.

Intermediate position not yet programed:

Press OK briefly. The direction of the shutter motion blinks on the display.

`21:00`

With UP or DOWN, select for which direction the changed switching time is supposed to apply.

Press UP and DOWN at the same time. The intermediate position blinks on the display.

Select a new value in 5% steps with UP or DOWN. (Also see chapter B.1.2)

OR

Intermediate position was already programmed:

The intermediate position blinks on the display.

`60`

Enter a new value with UP or DOWN.

Briefly press the OK button. The saved switching time is displayed.

`21:00`

ESC Press ESC to return to operating mode.