

Use RFXCOM in Home Assistant

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1. RFXCOM integration in Home Assistant.

RFXCOM has an out-of-the-box Integration for Home Assistant.

The RFXCOM integration is used to receive remotes, sensors and control devices but the integration does not support all protocols.

How to control a device which is not implemented in the RFXCOM integration is explained in this document.

Home Assistant will detect the RFXCOM integration automatically. If not, add it manually:

Go to Settings -> Devices -> Select Add Integration -> Search for RFXCOM -> Add.

In the RFXCOM Integration, click on Configure:

- Uncheck the Add automatically tick box,
- Do not select any protocols.
- Do not enter an Event code,
- Click the X to close the window.

Home Assistant is now able to send out commands via RFXCOM Transceiver.

2. RFX433 Bi-directional blinds motors

It is possible to control the bi-directional Brel, Dooya, Motionblinds, mhz.de, Gaviota Elite and other Dooya compatible bi-directional motors with the RFX433XL and RFX-433EMC.

Note: the DD27xx remotes are not received because they use a different secret code.

2.1. Pair the motor using Home Assistant

Before you can use commands to control the motor you have to pair the RFX as an additional remote with the motor. This "remote"-code is only stored in the motor.

See the user guide of the motor how to add an additional remote in the motor.

(Note that the limits must be set before you can add an additional remote)

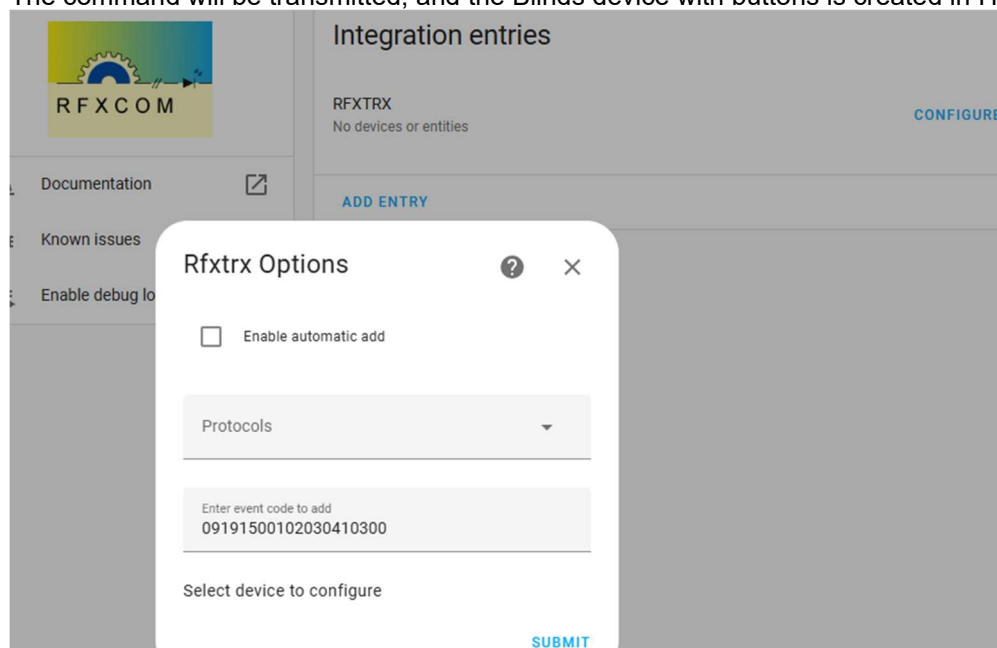
If the motor is already paired with an RFX it is not necessary to pair again with Home Assistant but start using up/down commands.

Use the BlindsT21 in Home Assistant.

Transmit a pair command in the RFXCOM integration.

Click Configure and enter the Confirm/Pair Event code.

The command will be transmitted, and the Blinds device with buttons is created in Home Assistant.



2.1. Get the HA Event code using RFXmngr

```
=====
25-1-2025 01:33:39:518= Blinds command: 09 19 15 10 10 20 30 01 03 00
```

```
HA code: 09191510102030010300
```

```
=====
Packettype      = BLINDS1
subtype         = T21 DDxxxx bi-directional
Sequence nbr    = 16
id1-4           = 1020300 decimal:16909056
Unit            = 1
Command         = Confirm/Pair
Signal level    = +10 dBm
```

2.2. Packet format for transmit commands

You can use a random ID (00 00 00 0 – FF FF FF F) and Unit (0 – F)

Example: Confirm/Pair with ID 10 20 30 4 Unit 1

09191500 10 20 30 41 03 00

```
-----
|          | | | | || | |= always 00
|          | | | | || |===== command
|          | | | | ||===== unit code 0 to F
|          | | | | |===== ID4 0 to F (ID 0000001 to FFFFFFFF)
|          | | | | |===== ID3 00 to FF
|          | | | | |===== ID2 00 to FF
|          | | | | |===== ID1 00 to FF
|          | | | | |===== header always 09191500
```

Control commands:

Up	0x00
Down	0x01
Stop	0x02
P2 (confirm/pair)	0x03

3. RFX433 Somfy RTS, ASA

It is possible to control up to 40 Somfy RTS or ASA motors with the RFXtrx433E, RFXtrx433XL, RFX433XL, RFX-433 and RFX-433EMC.

Receive of the remotes is not very useful as it requires a dedicated receive frequency of 433.42MHz so that normal 433.92MHz sensors are not received anymore. Do not use the same ID-Unit code with the RFX to control the motors because it will disturb the rolling code and the remote will become useless.

3.1. Pair the motor using Home Assistant

Before you can use commands to control the motor you have to pair the RFX as an additional remote with the motor. This "remote"-code is only stored in the motor.

See the user guide of the motor how to add an additional remote in the motor.

(Note that the limits must be set before you can add an additional remote)

If the motor is already paired with an RFX it is not necessary to pair again with Home Assistant but start using up/down commands.

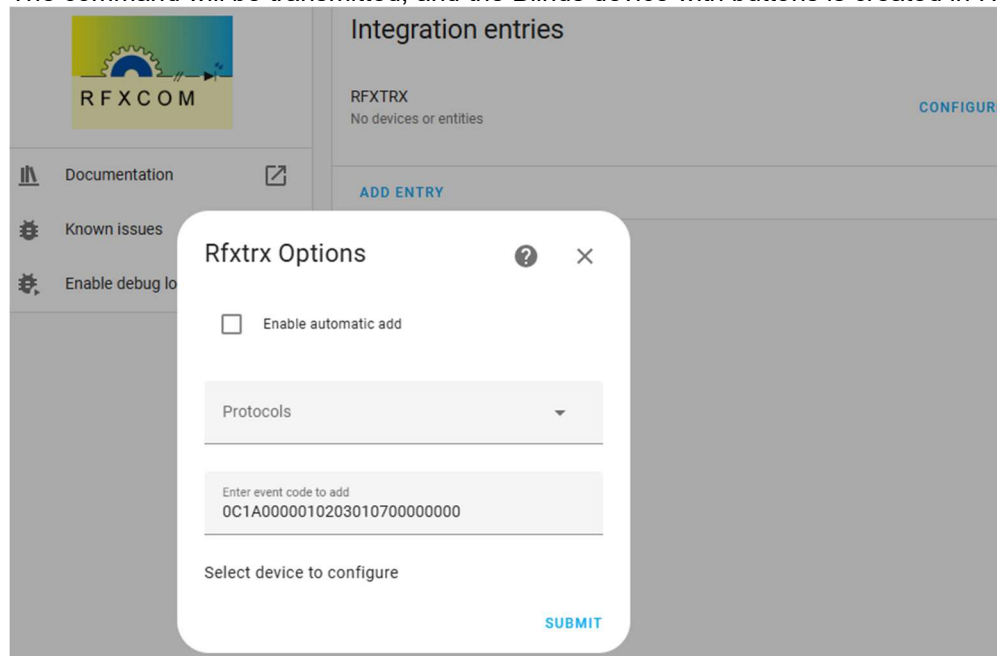
Transmit a pair command in the RFXCOM integration.

Click Configure and enter:

Confirm/Pair Event code (0C1A0000010203010700000000)

Or Stop Event code (0C1A0000010203010000000000)

The command will be transmitted, and the Blinds device with buttons is created in Home Assistant.



3.2. Get the HA Event code using RFXmngnr

```
=====
25-1-2025 01:09:06:819= RFY command: 0C 1A 00 0C 01 02 03 01 07 00 00 00 00
HA code: 0C1A0000010203010700000000
=====
```

```
Packettype      = RFY
subtype         = RFY
Sequence nbr    = 0
id1-3          = 010203 decimal:66051
Unit           = 1
Command        = program
rfu1           = 00
rfu2           = 00
rfu3           = 00
Signal level   = +10 dBm
```

3.1. Packet format for transmit commands

0C1A 00 00 010203 01 07 00000000

```

-----
|   |   |   |   |   |   |   |   | = 8 x zero
|   |   |   |   |   |   |   |   | ===== command
|   |   |   |   |   |   |   |   | ===== unit code 0 to F
|   |   |   |   |   |   |   |   | ===== ID1-3 (00001 to FFFFF)
|   |   |   |   |   |   |   |   | ===== 00
|   |   |   |   |   |   |   |   | ===== 00=Somfy RTS, 03=ASA
|   |   |   |   |   |   |   |   | ===== header always 0C1A

```

Command	Somfy	ASA
stop	0x00	0x00
up	0x01	0x01
down	0x03	0x03
Program	0x07	0x07
Up < 0.5 seconds (venetian US mode – Open)	0x0F	
Down < 0.5 seconds (venetian US mode – Close)	0x10	
Up > 2 seconds (venetian US mode – change angle +)	0x11	
Down > 2 seconds (venetian US mode – change angle -)	0x12	
Up < 0.5 seconds (venetian European mode – change angle +)	0x0F	
Down < 0.5 seconds (venetian European mode – change angle -)	0x10	
Up > 2 seconds (venetian European mode – Open)	0x11	
Down > 2 seconds (venetian European mode – Close)	0x12	
Enable sun+wind detector	0x13	0x13
Disable sun detector	0x14	0x14
stop + down >2 seconds (Confirm new mode US/EU)	0x15	
up + stop + down		0x15

4. RFX433 Cherubini

It is possible to control up to 40 Cherubini motors with the RFX433XL and RFX-433EMC.
Receive of the remotes is not implemented.

4.1. Pair the motor using Home Assistant

Before you can use commands to control the motor you have to pair the RFX as an additional remote with the motor. This "remote"-code is only stored in the motor.

See the user guide of the motor how to add an additional remote in the motor.

If the motor is already paired with an RFX it is not necessary to pair again with Home Assistant but start using up/down commands.

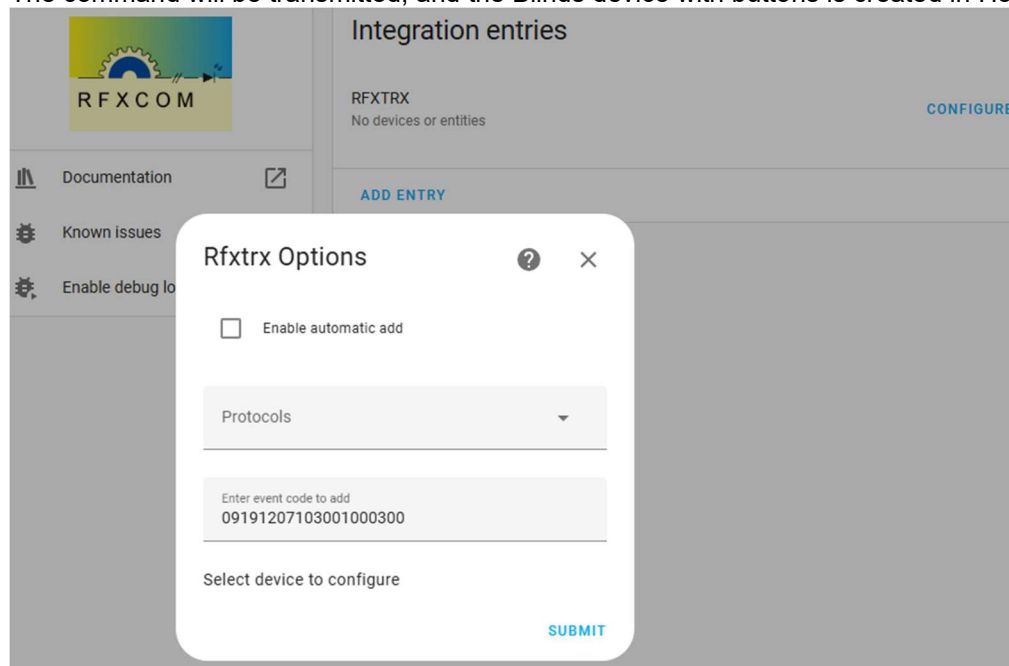
Transmit a pair or open command in the RFXCOM integration.

Click Configure and enter:

Confirm/Pair Event code (09191207103001000300)

Or Open Event code (09191207103001000000)

The command will be transmitted, and the Blinds device with buttons is created in Home Assistant.



4.2. Get the HA Event code using RFXmngnr

```
=====
26-1-2025 01:09:54:260= Blinds command: 09 19 12 00 10 30 01 00 03 00
HA code: 09191207103001000300
=====
```

```
Packettype    = BLINDS1
subtype       = T18 Cherubini
Sequence nbr   = 0
id1-3         = 103001 decimal:1060865
Command       = Confirm/Pair
Signal level   = +10 dBm
```

4.3. Packet format for transmit commands

09191200 103001 00 03 00

```
-----
|           |           | | | == 00
|           |           | |===== command
|           |           |===== 00
|           |===== ID1-3 (103000 to 1030FF)
|===== header always 0919120x
```

open	0x00
close	0x01
stop	0x02
Confirm/Pair	0x03

5. RFX868 Orcon Fan / Ventilation / WTW HRC-EcoMax

With the RFX-868 Transceiver, it's possible to control your Orcon Ventilation System or WTW-system.

In order to do so, you'll need a working 15RF Remote Control to clone the Radio Commands. See Figure 1 below. Optional: Consult the Orcon Manual to (re)add a 15RF Remote Control to the Orcon Unit.

The manual below is tested on a HRC-300 EcoMax and it should also work on other Orcon Systems that use the 15RF Remote Control.



Figure 1: Orcon 15RF Remote Control

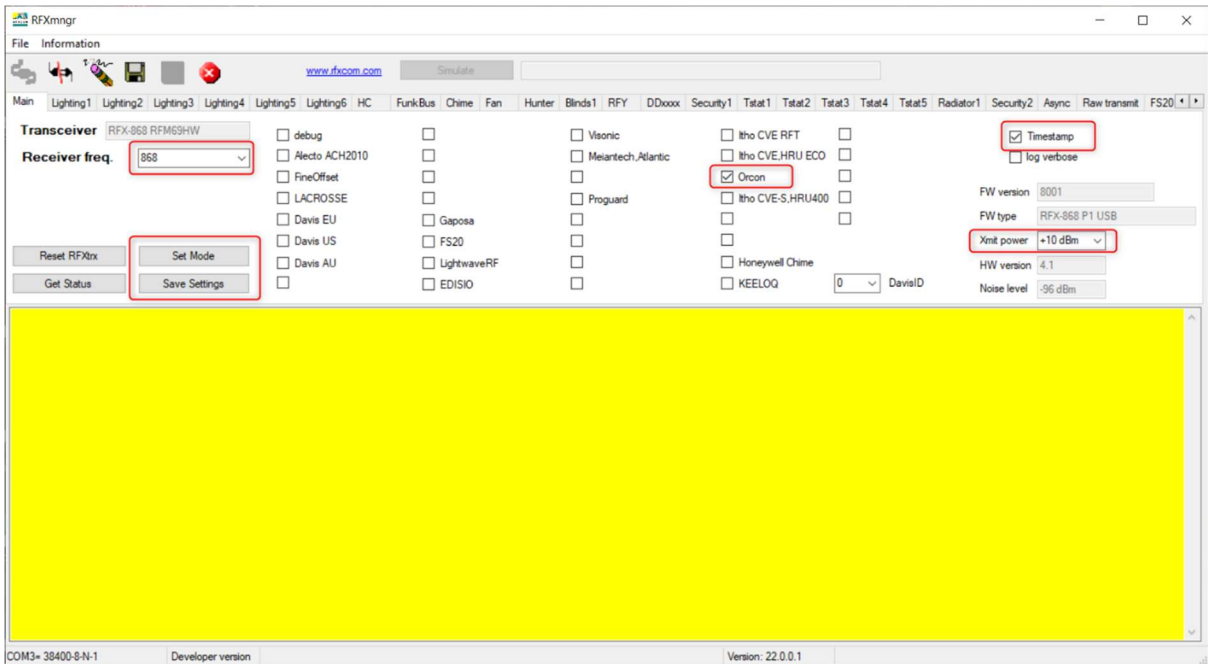
5.1. Setup RFXmngr for ORCON

The 15RF Remote Control sends out different codes for each of the 6 buttons. The Timer Button has different codes for pressing it once, quickly twice or quickly three times. The codes include the Remote ID (15RF) as well as the Destination ID (Orcon Ventilation Unit). You'll receive the codes using RFXmngr.

Install the RFXmngr (MS Windows only) and start the program. Connect the RFX-868 Transceiver with the supplied USB-cable to your computer running RFXmngr. Configure RFXmngr as follows:

1. Select TAB Main:
 - Set the Receiver freq. to: 868
 - Check the box: Orcon
 - Check the box: Timestamp
 - Set Xmit power to: +10dBm
2. Select the Set Mode-button
3. Select the SAVE-button. RFXmngr will save the configuration in the RFX-868 Transceiver.

This is supported by the RFX868XL, RFXusb-RFX868, RFX868XL, RFX-868



5.2. Get the ORCON RF15 Remote Control codes

In RFXmngR, first clear the logscreen. Then press a button on the 15RF Remote Control and check if it displays into the yellow logscreen. Repeat for the other buttons. Beware: the Timer-button has 3 functions: 1 press = 15 minutes, 2 quick presses = 30 minutes, 3 quick presses = 60 minutes.

In the logscreen you should find received information for all commands: Low, Medium, High, Timer 15 minutes, Timer 30 minutes, Timer 60 minutes, Auto and Away (this Away is/could be presented as UNKNOWN). You can save this logfile (or copy the contents to another document).

Example of a received Orcon remote "High" command (Button with number 3):

```

-----
25-1-2025 11:09:49:641= 11170C0A764077037082347D000000000000
Packettype      = FAN2
subtype        =
Orcon Sequence nbr
= 10
ID              = 764077 decimal:7749788 ← 764077 is the Remote ID (15RF)
Destination ID= 82347D
decimal:8533117
Command        = High
Signal level   = 7 -64dBm
  
```

Tip: For use in Home Assistant, prepare a list of all Packets (commands) you would like to use:

Low	
Medium	
High	11170C0A764077037082347D000000000000
Timer 15 minutes	
Etcetera ...	

5.3. Packet format for transmit commands

```
11170C00 764077 03 00 82347D 000000000000
```

```
-----  
|           |           | | |           |= 12 x zero  
|           |           | | |===== destination ID  
|           |           | |===== 2 x zero  
|           |           |===== control command  
|           |===== remote ID  
|===== header always 11170C0x
```

Control commands:

Low	0x01
Medium	0x02
High	0x03
Timer1	0x04
Timer2	0x05
Timer3	0x06
Auto	0x07
Away	0x08

5.4. Testing from RFXmngnr

To test the correct communication between RFXmngnr and Orcon Ventilation Unit:

Note: select values, do not enter values!

1. Select TAB Fan:
Select the Type: Orcon
Select the ID (= Remote ID): i.e. 764077
Select the Destination ID: i.e. 82347D
Select the command: Try the different options low, medium, timer etc.
2. Press the Transmit-button. The Ventilation Unit should respond.

5.5. Basics: rfxtrx.send command

In basic, the Home Assistant YAML Actions-command is used to transmit RFX-868 commands with Home Assistant.

YAML-Example:

```
actions:  
- action: rfxtrx.send  
  data:  
    event: 11170C04764077030082347D000000000000
```