

# RFXtrx

## USB RF transceiver

### User guide



[www.rfxcom.com](http://www.rfxcom.com)

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## 2. RFXtrx general information

The RFXtrx transceivers and RFXrec receivers are communicating over an USB port with the Home Automation application. The RFXtrx/rec is powered by the USB port.

At startup the RFXtrx enters for 2 seconds the boot loader (red LED is on) and after this it starts the receive/transmit firmware. If valid (decode-able) packets are received the yellow LED will blink.

The RFXtrx315 and the RFXrec433 are mainly for use in the US. The RFXtrx315 can receive US X10 lighting and security sensors **or** US Visonic PowerCode sensors at 315MHz.

The RFXrec433 can receive weather sensors of different brands at 433.92MHz.

The RFXtrx433 is a transceiver (transmitter+receiver) and can receive and control a large number of sensors and other devices.

The RFXtrx433E is an extended RFXtrx433 transceiver with the possibility to control Somfy RTS.

Note: the listed protocols and brands are supported!

### 2.1. RFXtrx315 supported protocols

#### 2.1.1. RFXtrx315 configured for 310MHz

Protocol	Enable	receive	transmit
US X10 lighting	X10	Y	Y
US X10 security	X10	Y	Y

#### 2.1.2. RFXtrx315 configured for 315MHz

Protocol	Enable	receive	transmit
Visonic CodeSecure	-	planned	-
Visonic PowerCode	Visonic	Y	Y

### 2.2. RFXrec433, RFXtrx433, RFXtrx433E supported protocols

#### 2.2.1. By function

Curtains, shades, projection screen, awning, gate openers
A-OK blind motors - <a href="http://www.motorisationplus.com/">http://www.motorisationplus.com/</a>
BOFU blind motors - <a href="http://www.bofumotor.com/">http://www.bofumotor.com/</a>
Ematronic - <a href="http://www.ematronic.com/moteurs-volet-roulant/">http://www.ematronic.com/moteurs-volet-roulant/</a>
Forest blind/curtain motors - <a href="http://www.forestgroup.nl/index_nl.html">http://www.forestgroup.nl/index_nl.html</a>
Harrison curtain - <a href="http://www.harrison.nl/home2.htm">http://www.harrison.nl/home2.htm</a>
Hasta blind motors - <a href="http://www.hasta.se/">http://www.hasta.se/</a>
Kingpin KP100 projection screen
Media Mount Projector screen
Proluxx projection screen
RAEX blind motor (YR1326 controlled) - <a href="http://www.beckermotors.co.uk/">http://www.beckermotors.co.uk/</a>
Somfy (RFXtrx433E only) - <a href="http://www.somfy.co.uk/">http://www.somfy.co.uk/</a>
RohrMotor24 RMF blind motors - <a href="http://www.rohrmotor24.eu/rohrmotor24">http://www.rohrmotor24.eu/rohrmotor24</a>
RollerTrol blind motors - <a href="http://rollertrol.com/">http://rollertrol.com/</a>
YOODA blind motors - <a href="http://www.sukcesgroup.pl">http://www.sukcesgroup.pl</a>

Temperature, humidity, weather sensors
Alecto - WS1200
Cresta
Digimax
Hideki weather sensors
Honeywell - TF-ATS34C
La Crosse
Lexibook - SM883
Maverick ET-732 BBQ/Smoke temperature
NEXUS - I008T
Opus XT300 /Imagintronix Soil sensor <a href="http://www.ebay.co.uk/itm/Wireless-Soil-Moisture-Sensor-/251380900939?pt=UK_Home_Garden_Garden_Plants_Fertiliser_CV&amp;hash=item3a8778244b">http://www.ebay.co.uk/itm/Wireless-Soil-Moisture-Sensor-/251380900939?pt=UK_Home_Garden_Garden_Plants_Fertiliser_CV&amp;hash=item3a8778244b</a>
Oregon Scientific / Huger
RFXSensor
RUBiCSON - stektermometer 48659, 48695
Sunvic TLX1206
Sunvic TLX7506
TechnoLine/Proficell <a href="http://www.elv.de/output/controller.aspx?cid=74&amp;detail=10&amp;detail2=27621">http://www.elv.de/output/controller.aspx?cid=74&amp;detail=10&amp;detail2=27621</a> - TX95-TH
TFA
UPM/Esic (very short receiving range)
Viking

Door/window, smoke and other security sensors
Aidebao security
Alecto - SA30 smoke detector
Atlantic security
Chacon KD101 smoke detector
Flamingo KD101 smoke detector
Meiantech security
Visonic CodeSecure
Visonic PowerCode
X10 security

Remotes
ATI Remote Wonder
ATI Remote Wonder Plus
ATI Remote Wonder II
X10 PC Remote

Chimes
Byron SX chime - <a href="http://www.chbyron.eu/Byron/ByronSXRange/68/89/">http://www.chbyron.eu/Byron/ByronSXRange/68/89/</a>
Chacon
HomeEasy
KlikAanKlikUit

<b>Appliance modules, dimmers, relays, LED controllers</b>
ANSLUT (learning mode)
ByeByeStandBy
Blyss lighting - <a href="http://www.castorama.fr/store/Prise-telecommandee-et-telecommande-BLYSS---Interieur-prod4470026.html">http://www.castorama.fr/store/Prise-telecommandee-et-telecommande-BLYSS---Interieur-prod4470026.html</a>
Brennenstuhl
Chacon - <a href="http://www.chacon.be/">http://www.chacon.be/</a>
CoCo (learning mode) - <a href="http://www.coco-technology.com/en/home/">http://www.coco-technology.com/en/home/</a>
Conrad RSL2 - <a href="http://www.conrad.com/ce/en/product/640466/FUNK-STECKDOSENSCHALTER-RSLR2">http://www.conrad.com/ce/en/product/640466/FUNK-STECKDOSENSCHALTER-RSLR2</a>
DI.O - <a href="http://www.di-o.be/">http://www.di-o.be/</a>
DomiaLite
Ebode
ELRO AB400/AB600 - <a href="http://www.elro.eu/en/products/cat/home-automation/home-control1">http://www.elro.eu/en/products/cat/home-automation/home-control1</a>
Energenie ENER010 – 429.935, 5-gang 429.950 - <a href="https://energenie4u.co.uk/">https://energenie4u.co.uk/</a>
Everflourish EMW100
Flamingo
HomeEasy EU - <a href="http://www.elro.eu/en/products/cat/home-automation/">http://www.elro.eu/en/products/cat/home-automation/</a>
HomeEasy UK (including HE105 relay) - <a href="http://www.homeeasy.eu/">http://www.homeeasy.eu/</a>
Ikea Koppla
Impuls - NL - Action
Intertechno - <a href="http://www.intertechno.at/">http://www.intertechno.at/</a>
Kambrook RF3672 - <a href="http://www.bunnings.com.au/kambrook-4-piece-indoor-powerpoint-kit-with-remote-control_p7030054">http://www.bunnings.com.au/kambrook-4-piece-indoor-powerpoint-kit-with-remote-control_p7030054</a>
KlikAanKlikUit - <a href="http://www.klikaanklikuit.nl/home/">http://www.klikaanklikuit.nl/home/</a>
LightwaveRF - <a href="http://www.lightwaverf.co.uk/">http://www.lightwaverf.co.uk/</a>
Livolo - <a href="http://nl.aliexpress.com/w/wholesale-livolo-touch-switch.html">http://nl.aliexpress.com/w/wholesale-livolo-touch-switch.html</a>
MDremote LED dimmer - <a href="http://www.ultraleds.co.uk">www.ultraleds.co.uk</a>
Mercury appliance modules - <a href="http://mercury.avsl.com/product?range=ME5124">http://mercury.avsl.com/product?range=ME5124</a>
NEXA - <a href="http://www.nexa.se/">http://www.nexa.se/</a>
Phenix
Philips SBC SP370 series
Proove - <a href="http://proove.se/">http://proove.se/</a>
RGB LED strip driver dx.com - <a href="http://www.dx.com/">http://www.dx.com/</a> order nbr: 130913, 67412
RisingSun
Sartano
Siemens (UK)
Waveman
X10 RTS10 / RFS10
X10 lighting
Xdom

<b>Power, gas water metering</b>
cent-a-meter
Electrisave
OWL CM113, CM180, CM119, CM160, CM180, CM180i - <a href="http://www.theowl.com/">http://www.theowl.com/</a>
Revolt NC5461 - <a href="http://www.pearl.de/a-NC5462-5452.shtml">http://www.pearl.de/a-NC5462-5452.shtml</a>
RFXMeter

<b>Specials</b>
Mertik Maxitrol Fire Place controllers
Oregon Scientific Body weight scales - BWR101, BWR102, GR101
X10 Ninja/Robocam camera motor

## 2.2.2. Alphabetic list

Important note: Ext firmware will not operate in the RFXtrx433.

Protocol	Type 1	Type 2	Ext	Enable protocol	receive	transmit
A-OK blind motors - <a href="http://www.motorisationplus.com/">http://www.motorisationplus.com/</a>	Y	Y	-	BlindsT1	Y	Y
Aidebao security	Y	Y	Y	Meiantech	Y	Y
Alecto - SA30 smoke detector	Y	Y	Y	Oregon	Y	Y
Alecto - WS1200	Y	Y	Y	LaCrosse	Y	-
ANSLUT (learning mode)	Y	Y	Y	AC	Y	Y
ATI Remote Wonder	Y	-	-	ATI	Y	Y
ATI Remote Wonder Plus	Y	-	-	ATI	Y	Y
ATI Remote Wonder II (only available in hardware version 1.0)	Y	-	-	ATI	Y	-
Atlantic security	Y	Y	Y	Meiantech	Y	Y
ByeByeStandBy	Y	Y	Y	ARC	Y	Y
Byron SX chime - <a href="http://www.chbyron.eu/Byron/ByronSXRRange/68/89/">http://www.chbyron.eu/Byron/ByronSXRRange/68/89/</a>	Y	Y	Y	ByronSX	Y	Y
Blyss lighting - <a href="http://www.castorama.fr/store/Prise-telecommandee-et-telecommande-BLYSS---Interieur-prod4470026.html">http://www.castorama.fr/store/Prise-telecommandee-et-telecommande-BLYSS---Interieur-prod4470026.html</a>	Y	Y	Y	AE	Y	Y
BOFU blind motors - <a href="http://www.bofumotor.com/">http://www.bofumotor.com/</a>	Y	Y	-	BlindsT0	Y*	Y
Brennenstuhl	Y	Y	Y	Lighting4	Y	Y
cent-a-meter	Y	Y	Y	Oregon	Y	-
Chacon (learning mode) - <a href="http://www.chacon.be/">http://www.chacon.be/</a>	Y	Y	Y	AC	Y	Y
Chacon (with address code wheels)	Y	Y	Y	ARC	Y	Y
Chacon EMW200	Y	Y	Y	-	-	Y
Chacon KD101 smoke detector	Y	Y	Y	always on	Y	Y
CoCo (learning mode) - <a href="http://www.coco-technology.com/en/home/">http://www.coco-technology.com/en/home/</a>	Y	Y	Y	AC	Y	Y
CoCo (with address code wheels)	Y	Y	Y	ARC	Y	Y
Conrad RSL2 - <a href="http://www.conrad.com/ce/en/product/640466/FUNK-STECKDOSENSCHALTER-RSLR2">http://www.conrad.com/ce/en/product/640466/FUNK-STECKDOSENSCHALTER-RSLR2</a>	Y	Y	-	RSL	Y	Y
Cresta - TX-320, TS34C, anemometer, UV sensor, rain sensor	Y	Y	Y	Hideki	Y	-
Digimax	Y	Y	Y	X10	Y	-
DI.O (learning mode) - <a href="http://www.di-o.be/">http://www.di-o.be/</a>	Y	Y	Y	AC	Y	Y
DI.O (with address code wheels)	Y	Y	Y	ARC	Y	Y
DomiaLite (with address code wheels)	Y	Y	Y	ARC	Y	Y
Ebode	Y	Y	Y	X10	Y	Y
Electrisave	Y	Y	Y	Oregon	Y	-
ELRO AB400 - <a href="http://www.elro.eu/en/products/cat/home-automation/home-control1">http://www.elro.eu/en/products/cat/home-automation/home-control1</a>	Y	Y	Y	Lighting4	Y	Y
ELRO AB600	Y	Y	Y	ARC	Y	Y
Ematronic - <a href="http://www.ematronic.com/moteurs-volet-roulant/">http://www.ematronic.com/moteurs-volet-roulant/</a>	Y	Y	-	BlindsT1	Y	Y
Energenie - <a href="https://energenie4u.co.uk/">https://energenie4u.co.uk/</a> - ENER010 – 429.935, 5-gang 429.950	Y	Y	Y	-	-	Y
Everflourish EMW100	Y	Y	Y	-	-	Y
Flamingo	Y	Y	Y	Lighting4	Y	Y
Flamingo KD101 smoke detector	Y	Y	Y	always on	Y	Y
Forest blind/curtain motors - <a href="http://www.forestgroup.nl/index_nl.html">http://www.forestgroup.nl/index_nl.html</a>	Y	Y	Y	-	-	Y

Harrison curtain - <a href="http://www.harrison.nl/home2.htm">http://www.harrison.nl/home2.htm</a>	Y	Y	Y	-	-	Y
Hasta new blind motors - <a href="http://www.hasta.se/">http://www.hasta.se/</a>	Y	Y	-	BlindsT0	Y*	Y
Hasta old blind motors	Y	Y	-	BlindsT1	Y	Y
Hideki weather sensors	Y	Y	Y	Hideki	Y	-
HomeEasy EU (learning mode) - <a href="http://www.elro.eu/en/products/cat/home-automation/">http://www.elro.eu/en/products/cat/home-automation/</a>	Y	Y	Y	HE EU	Y	Y
HomeEasy UK – HE105 - <a href="http://www.homeeasy.eu/">http://www.homeeasy.eu/</a>	Y	Y	Y	-	-	Y
HomeEasy UK (learning mode)	Y	Y	Y	AC	Y	Y
HomeEasy UK (with address code wheels)	Y	Y	Y	ARC	Y	Y
Honeywell - TF-ATS34C	Y	Y	Y	Hideki	Y	-
Ikea Koppla	Y	-	-	-	-	Y
Impuls - NL - Action	Y	Y	Y	-	-	Y
Intertechno (learning mode) - <a href="http://www.intertechno.at/">http://www.intertechno.at/</a>	Y	Y	Y	AC	Y	Y
Intertechno (with address code wheels)	Y	Y	Y	ARC	Y	Y
Kambrook RF3672 - <a href="http://www.bunnings.com.au/kambrook-4-piece-indoor-powerpoint-kit-with-remote-control_p7030054">http://www.bunnings.com.au/kambrook-4-piece-indoor-powerpoint-kit-with-remote-control_p7030054</a>	-	Y	-	-	-	Y
Kingpin KP100 projection screen	Y	Y	Y	-	-	Y
KlikAanKlikUit (learning mode) - <a href="http://www.klikaanklikuit.nl/home/">http://www.klikaanklikuit.nl/home/</a>	Y	Y	Y	AC	Y	Y
KlikAanKlikUit (with address code wheels)	Y	Y	Y	ARC	Y	Y
La Crosse - TX2, TX3, TX3P, TX4, TX7, TX17, WS2300	Y	Y	Y	LaCrosse	Y	-
Lexibook - SM883	Y	Y	Y	Hideki	Y	-
LightwaveRF - <a href="http://www.lightwaverf.co.uk/">http://www.lightwaverf.co.uk/</a>	Y	Y	Y	AD	Y	Y
Livolo - <a href="http://nl.aliexpress.com/w/wholesale-livolo-touch-switch.html">http://nl.aliexpress.com/w/wholesale-livolo-touch-switch.html</a>	Y	Y	Y	-	-	Y
Maverick ET-732 BBQ/Smoke temperature	Y	Y	Y	Hideki	Y	-
MDremote LED dimmer - <a href="http://www.ultraleds.co.uk">www.ultraleds.co.uk</a>	Y	Y	Y	-	-	Y
Meiantech security	Y	Y	Y	Meiantech	Y	Y
Media Mount Projector screen	Y	Y	Y	-	-	Y
Mercury appliance modules - <a href="http://mercury.avsl.com/product?range=ME5124">http://mercury.avsl.com/product?range=ME5124</a>	Y	Y	Y	-	-	Y
Mertik Maxitrol Fire Place controllers - G6R-H4T1, G6R-H4T, G6R-H4TB, G6R-H4T21-Z22	Y	Y	Y	Mertik	Y	Y
NEXA (learning mode) - <a href="http://www.nexa.se/">http://www.nexa.se/</a>	Y	Y	Y	AC	Y	Y
NEXA (with address code wheels)	Y	Y	Y	ARC	Y	Y
NEXUS - I008T	Y	Y	Y	Hideki	Y	-
Opus XT300 /Imagintronix Soil sensor <a href="http://www.ebay.co.uk/itm/Wireless-Soil-Moisture-Sensor-/251380900939?pt=UK Home Garden Garden Plants Fertiliser CV&amp;h ash=item3a8778244b">http://www.ebay.co.uk/itm/Wireless-Soil-Moisture-Sensor-/251380900939?pt=UK Home Garden Garden Plants Fertiliser CV&amp;h ash=item3a8778244b</a>	Y	Y	Y	LaCrosse	Y	-
Oregon Scientific / Huger BBQ and weather sensors - AW129, AW131, BTHR918, BTHR918N, BTHR968, PCR800, RGR126, RGR682, RGR918, RGR928, RTGN318, RTGR328N, RTGR328N, RTGR368N, RTGR383, RTHN318, STR918, STR928, TGHN800, TGHN801, THC138, THC238, THC268, THGN122NX, THGN123N, THGN132ES, THGN132N, THGN500, THGR122(N/NX), THGR228(N/NF), THGR238, THGR268, THGR328N, THGR810, THGR918, THGR928, THGRN228NX, THN122N, THN132N, THR128, THR138, THR288(N/NF), THRN122N, THWR288A, THWR800, UV138, UVN128, UVN800, UVR128, WGR800, WGR918, WTGR800, WTGR800	Y	Y	Y	Oregon	Y	-
Oregon Scientific weighting scales - BWR101, BWR102, GR101	Y	-	Y	Oregon	Y	-
OWL - <a href="http://www.theowl.com/">http://www.theowl.com/</a>	Y	Y	Y	Oregon	Y	-

- CM113, CM180, CM119, CM160, CM180, CM180i						
Phenix	Y	Y	Y	Lighting4	Y	Y
Philips SBC SP370 series	Y	-	Y	-	-	Y
Proluxx projection screen	Y	Y	Y	-	-	Y
Proove - <a href="http://proove.se/">http://proove.se/</a>						
RAEX blind motor (YR1326 controlled) - <a href="http://www.beckermotors.co.uk/">http://www.beckermotors.co.uk/</a>	-	Y	-	BlindsT1	Y	Y
Revolt NC5461 - <a href="http://www.pearl.de/a-NC5462-5452.shtml">http://www.pearl.de/a-NC5462-5452.shtml</a>	-	Y	-	RSL	Y	-
RFY - <a href="http://www.somfy.co.uk/">http://www.somfy.co.uk/</a>	-	-	Y	-	-	Y
RFXSensor	Y	Y	Y	X10	Y	-
RFXMeter	Y	Y	Y	X10	Y	-
RGB LED strip driver dx.com - <a href="http://www.dx.com/">http://www.dx.com/</a> order nbr: 130913, 67412 * = receive only in Type2 used to get the RGB remote ID.	y*	Y	y*	AD	y*	Y
RisingSun	Y	Y	Y	Lighting4	Y	Y
RUBiCSON - stektermometer 48659, 48695	Y	-	-	Rubicson	Y	-
RohrMotor24 RMF blind motors - <a href="http://www.rohrmotor24.eu/rohrmotor24">http://www.rohrmotor24.eu/rohrmotor24</a>	Y	Y	-	-	-	Y
RollerTrol blind motors - <a href="http://rollertrol.com/">http://rollertrol.com/</a>	Y	Y	-	BlindsT0	Y*	Y
Sartano	Y	Y	Y	Lighting4	Y	Y
Siemens (UK)	Y	Y	Y	AD	Y	Y
Sunvic TLX1206	Y	Y	Y	X10	Y	-
Sunvic TLX7506	Y	Y	Y	X10	Y	-
TechnoLine/Proficell <a href="http://www.elv.de/output/controller.aspx?cid=74&amp;detail=10&amp;detail2=27621">http://www.elv.de/output/controller.aspx?cid=74&amp;detail=10&amp;detail2=27621</a> 1 - TX95-TH	Y	Y	Y	Hideki	Y	-
TFA - TS15C, TS34C, external temperature sensor 30.3133, anemometer 30.3149, UV sensor, rain sensor 30.3148	Y	Y	Y	Hideki	Y	-
UPM/Esic (very short receiving range) - WT260, WT260H, WT440H, WT450, WT450H, WDS500, RG700	Y	-	-	Hideki	Y	-
Viking - 02035, 02038, 02811	Y	Y	-	FineOffset	Y	-
Visonic CodeSecure	Y	Y	Y	-	-	-
Visonic PowerCode	Y	Y	Y	Visonic	Y	Y
Waveman	Y	Y	Y	-	-	Y
YOODA blind motors - <a href="http://www.sukcesgroup.pl">http://www.sukcesgroup.pl</a>	Y	Y	-	-	-	Y
X10 Ninja/Robocam	Y	-	Y	X10	Y	Y
X10 PC Remote	Y	-	Y	X10	Y	Y
X10 RTS10 / RFS10	Y	Y	Y	X10	Y	Y
X10 lighting	Y	Y	Y	X10	Y	Y
X10 security	Y	Y	Y	X10	Y	Y
Xdom	Y	Y	Y	X10	Y	Y

### 2.3. undec on

This parameter is for internal use by RFXCOM.

If new sensor types are released they will most probably not be decoded by the RFXtrx firmware. For this reason we have added the option to enable receive of undecoded messages. This function is only to enable RFXCOM to add this new sensor type in the firmware if possible.

If “undec on” is enabled in normal use the application will receive a lot of undecoded messages mostly as a result of RF noise or disturbed RF packets.

**Important:** For normal use “undec on” should be disabled!



## 2.4. Sensitivity influenced by enabled protocols

The sensitivity of the receiver part is highly influenced by the number of protocols enabled. Lesser protocols enabled will make the receiver more sensitive for the enabled protocols.

There are a few protocols that will reduce or even eliminate receiving of other protocols if enabled.

For example:

If the AD (LightwaveRF, Siemens) protocol is enabled it can stop receiving of Meiantech / Atlantic, Oregon 3.0, Visonic and Mertik.

All other protocols are disabled if BlindsT0 is enabled.

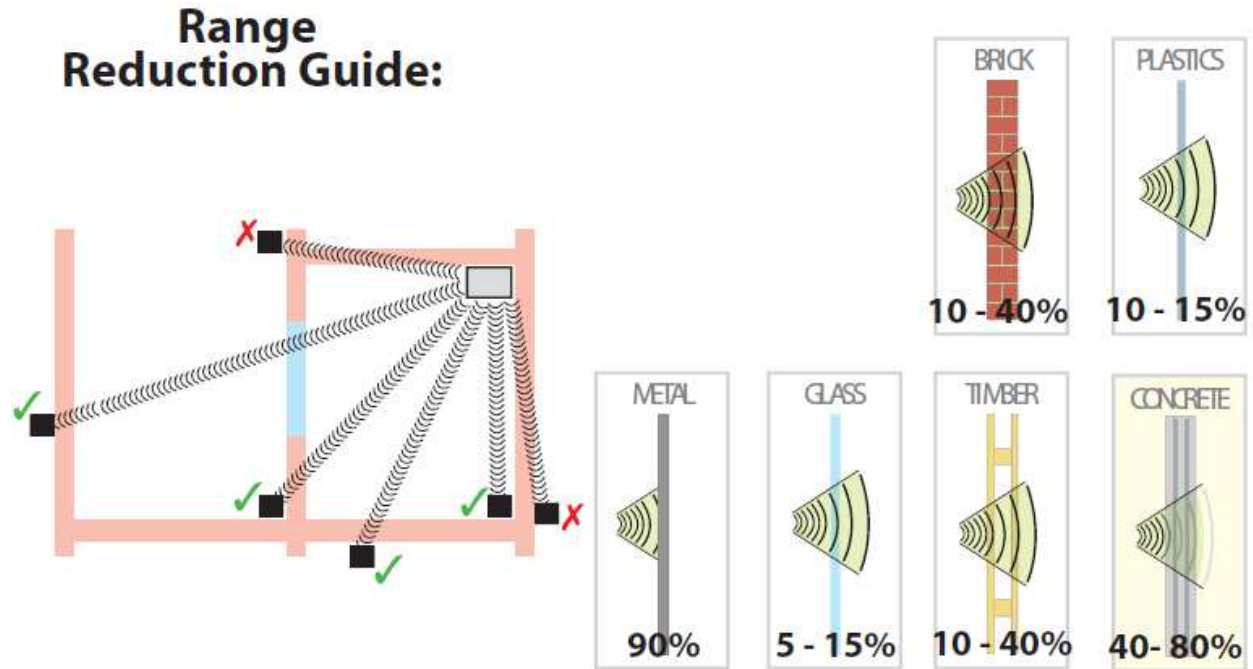
ARC is disabled if Lighting4 is enabled.

	X10	ARC	AC	HomeEasy EU	Meiantech/Atlantic	Oregon 1.0	Oregon 2.1	Oregon 3.0 / OWL	ATI	Visonic	Mertik	AD (LWRF)	Hideki/UPM	La Crosse	FS20	ProGuard	BlindsT0	BlindsT1/T2/T3	AE (Blyss)	Rubicson	FineOffset/Viking	Lighting4	RSL	Byron SX	RFU6
X10																									
ARC																									
AC																									
HomeEasy EU																									
Meiantech/Atlantic																									
Oregon																									
ATI																									
Visonic																									
Mertik																									
AD (LWRF)																									
Hideki/UPM																									
La Crosse																									
FS20																									
ProGuard																									
BlindsT0																									
BlindsT1/T2/T3																									
AE (Blyss)																									
Rubicson																									
FineOffset/Viking																									
Lighting4																									
RSL																									
Byron SX																									
RFU6																									

Green = enabled by default

## 2.5. RF range reduction

The RF signals operating distance is reduced when the signal has to pass through walls.



## 2.6. Home Automation software

For the list of Home Automation software that supports for the RFXtrx see the web site [www.rfxcom.com](http://www.rfxcom.com)

## 2.7. Dimensions

The dimensions of the RFXtrx/RFXrec are: 83.5 x 42 x 15 mm  
Total height from bottom to antenna top is 122mm

The dimensions of the RFXtrx433E are: 83 x 59 x 22 mm  
Total height from bottom to antenna top is 130mm

## 2.8. Electrical

The RFXtrx is powered by the 5 Volt of the USB interface.

Operating current;

Receive mode: 28 mA (0.14Watt)  
Transmit mode: 45 mA

## 2.9. Environmental conditions

Normal operating: 15°C to 35°C  
Absolute min-max temperature: -10°C to 55°C

### 3. Install the USB driver

The RFXtrx has the FTDI FT232R USB interface chip installed.

The USB drivers are available at <http://www.ftdichip.com/Drivers/VCP.htm>

### 4. Run RFXmngr or RFXflash on Linux under Mono

Open a Terminal screen in Linux (Ctrl-Alt-T)

Execute once:

*Install Mono:*

```
[sudo] apt-get install mono-runtime
```

*Install VisualBasic support under Mono:*

```
[sudo] apt-get install libmono-microsoft-visualbasic8.0-cil
```

If the USB device is created as ttyACMx you will need to create a link between /dev/ttyACMx and a serial port /dev/ttySx.

This is not necessary if the device is created as /dev/ttyUSBx !!

```
[sudo] ln -sf /dev/ttyACM1 /dev/ttyS3
```

Note: sudo must be entered without brackets [ ]. sudo is required if not running as super user.

*Launch the RFXflash.exe program.*

```
[sudo] mono RFXflash.exe
```

**OR**

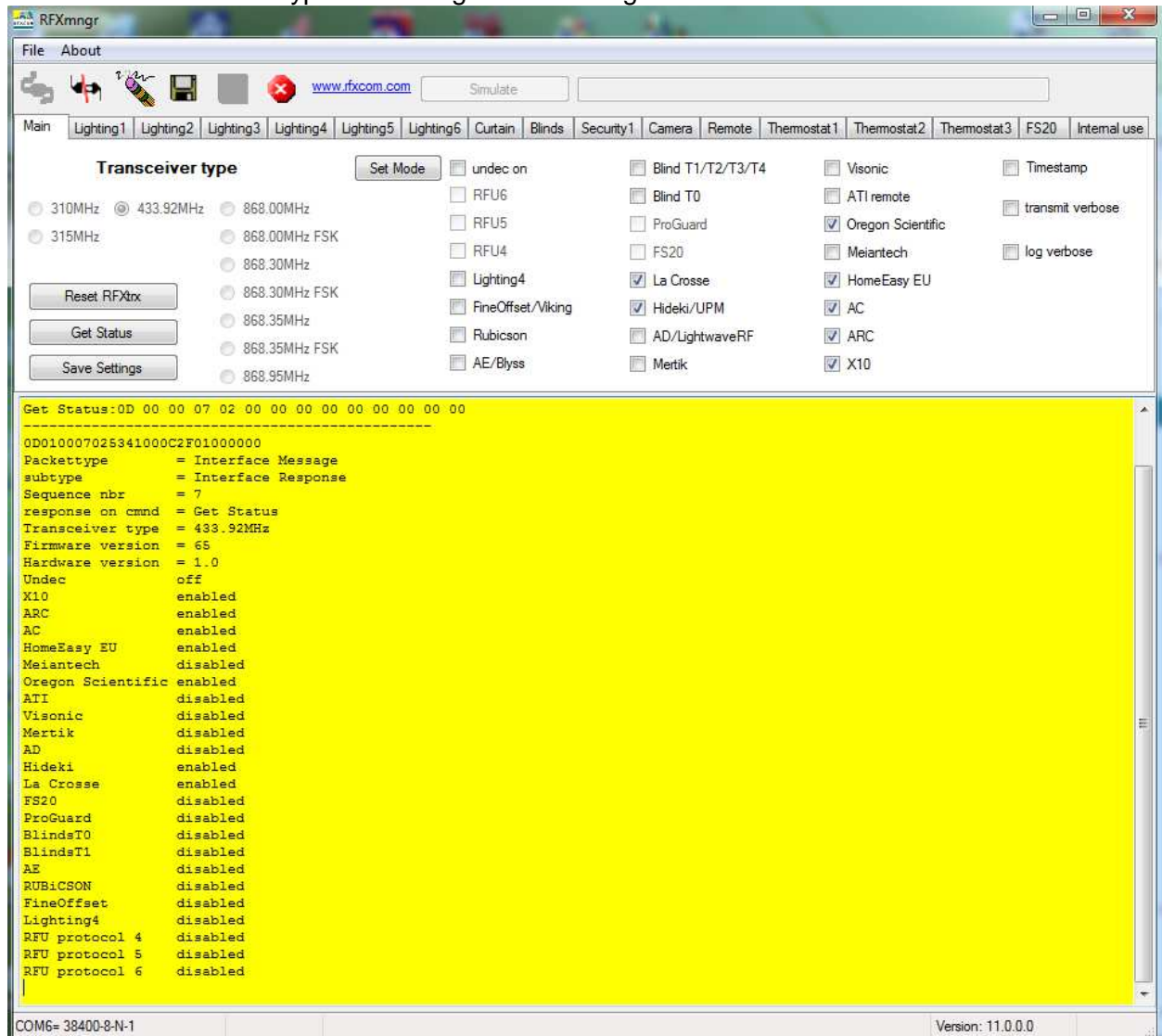
*Launch the RFXmngr.exe program.*

```
[sudo] mono RFXmngr.exe
```

## 5. RFXmngnr test program

The RFXmngnr program supports decoding of received data and allows you to transmit commands.

After the connection the RFXmngnr program transmits a Reset and Get Status command so that it will know the RFXtrx type and configuration settings:



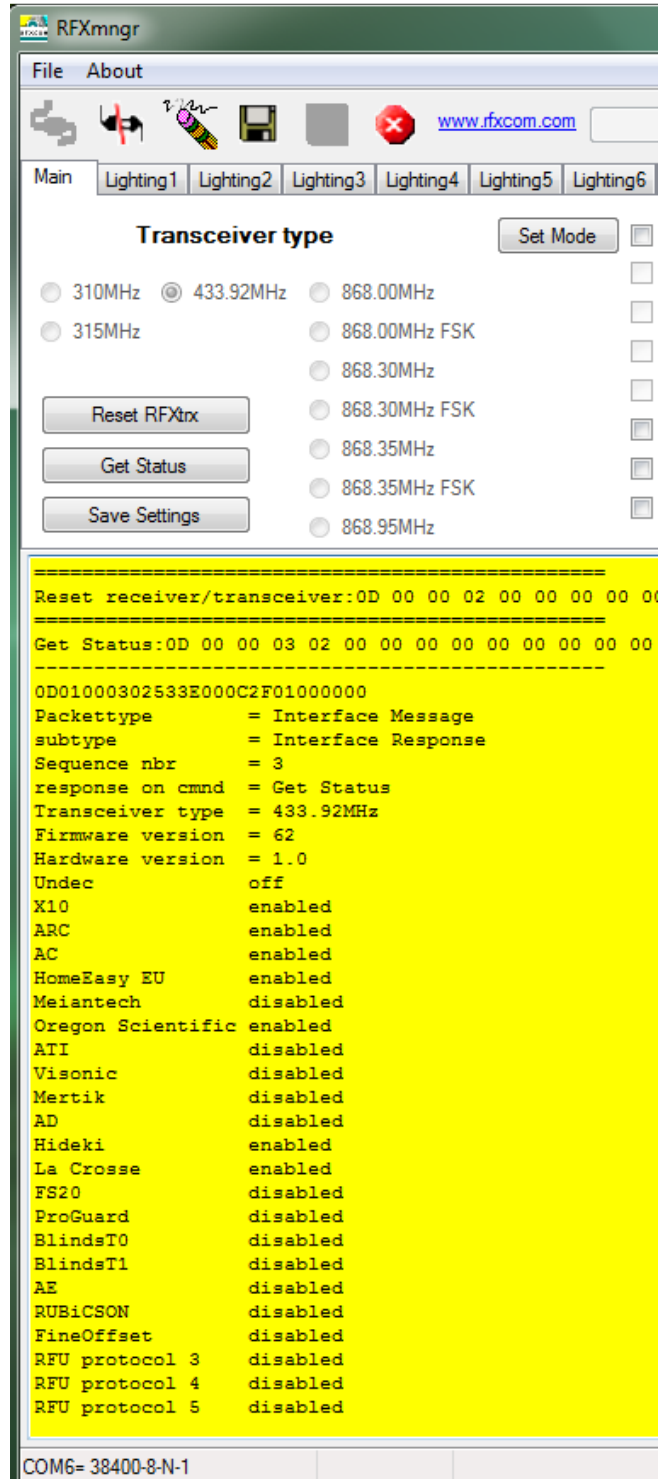
Transmitter protocols are always enabled but receiver protocols can be disabled. This is very useful because the receiver will become more sensitive when protocols not used are disabled. So select only the protocols to be used, click **Set mode** and click **Save Settings**.

Note that these settings are lost after a firmware update and need to be set again.

## 5.1. Receiver

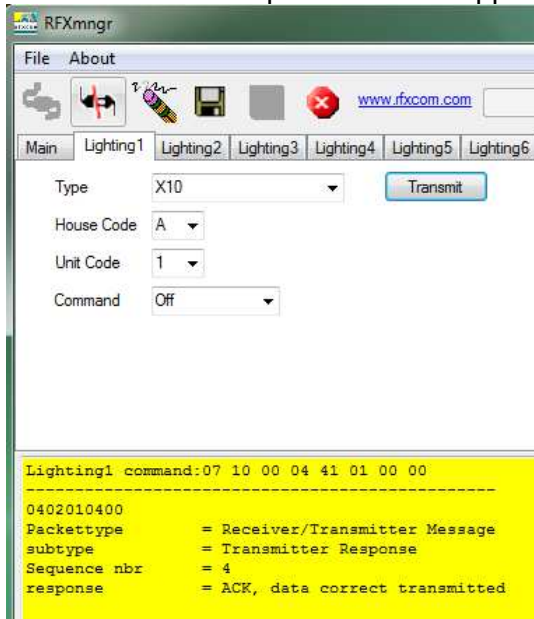
The RF protocols to be received can be configured on the Main tab at **Set Mode**. Click **Save Settings** to save the selected protocols in non-volatile memory of the RFXtrx. This configuration is now restored every time after a power up. Note that these settings are lost after a firmware update and need to be set again.

The received RF data is decoded and displayed in the yellow window.



## 5.2. Transmitter

The tabs after the Main tab are used to send commands to the transmitter. For example Lighting1 is used to send X10, ARC and some more. See the SDK which protocols are supported on the different tabs.



The transmitted commands are displayed in the yellow window including the acknowledge send by the RFXtrx, in the example above the 0402010400 = ACK, data correct transmitted.

## 6. Flash update of the RFXtrx

### 6.1. Update firmware in the RFXtrx

Firmware is flashed in the RFXtrx using this procedure:

1. Depending on the RFXtrx type download the latest RFXtrx315\_yy.hex, RFXrec433\_yy.hex or RFXtrx433\_yy.hex firmware file.
2. Connect the RFXtrx to a Windows system or Linux under MONO
3. Stop any program that is connected to the RFXtrx.
4. Start the RFXflash program (version 4.0.0.0 or higher)
5. Select the USB RFXtrx COM port and click the CONNECT button, (the red LED should switch on now)
6. Load the correct .hex firmware file for your RFXtrx,
7. Click the WRITE button,
8. Click the Normal Execution mode button.

#### IMPORTANT:

1. Do not interrupt the flash procedure when started.
2. It can happen that the flash procedure ends with a pop-up screen indicating errors. Just disconnect the RFXtrx and start again at step 5 until the flash procedure is finished without errors.

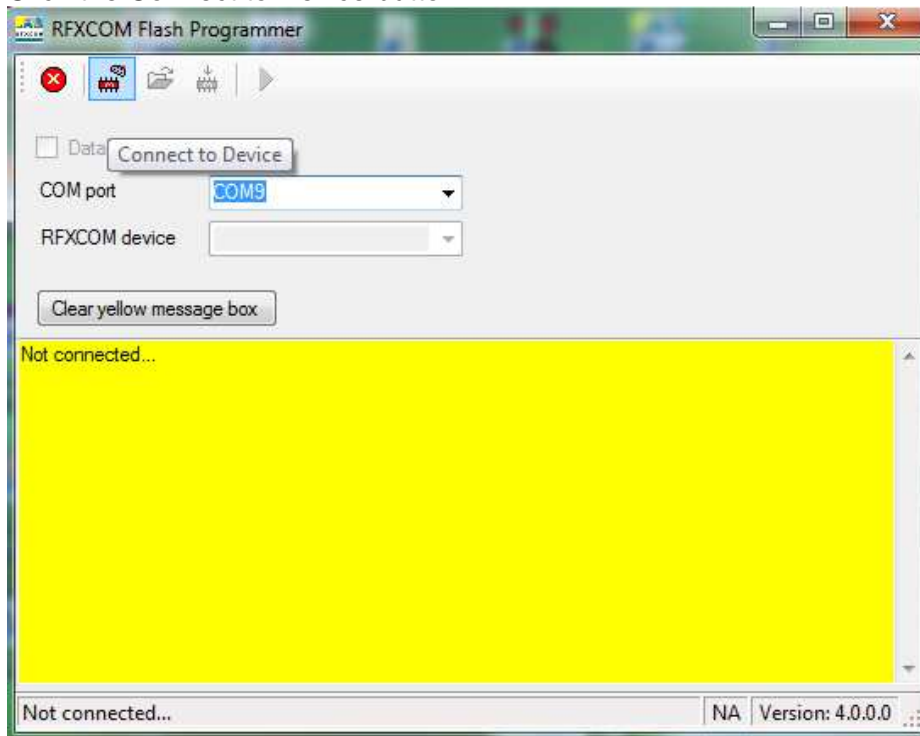
If the red LED does not switch on if you click the CONNECT button:

1. Check if you have selected the correct USB COM port.
2. If you have flashed the RFXtrx before and interrupted the flash procedure it is possible that the RFXtrx does not enter the flash state. Contact [support@rfxcom.com](mailto:support@rfxcom.com) for help.

**Note:** Receiver Settings are lost after a firmware update and have to be set again.

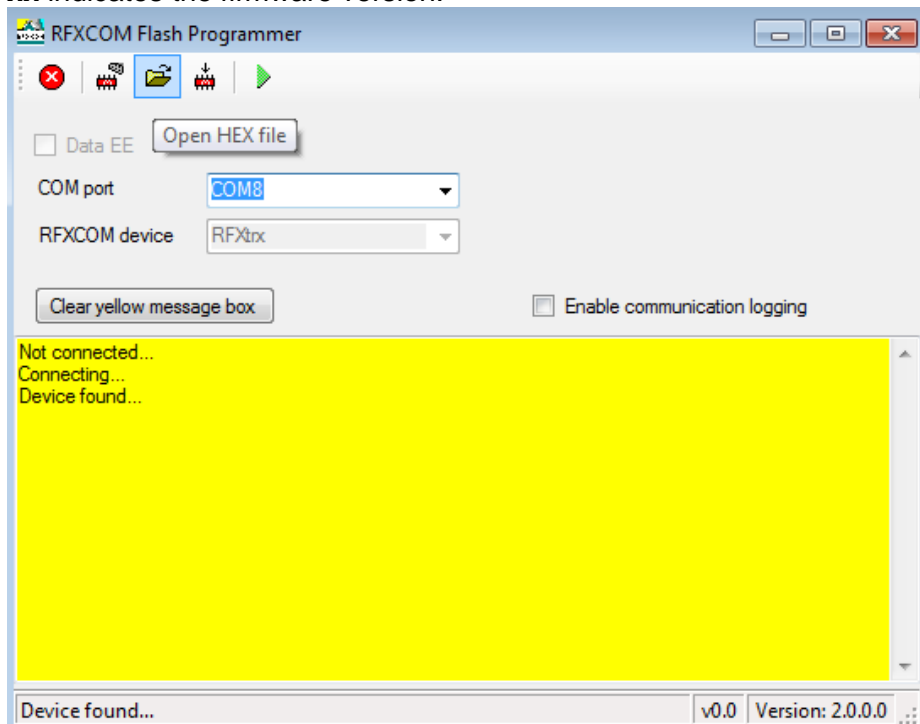
## 6.2. Update firmware in the RFXtrx step by step

- Click the Connect to Device button.



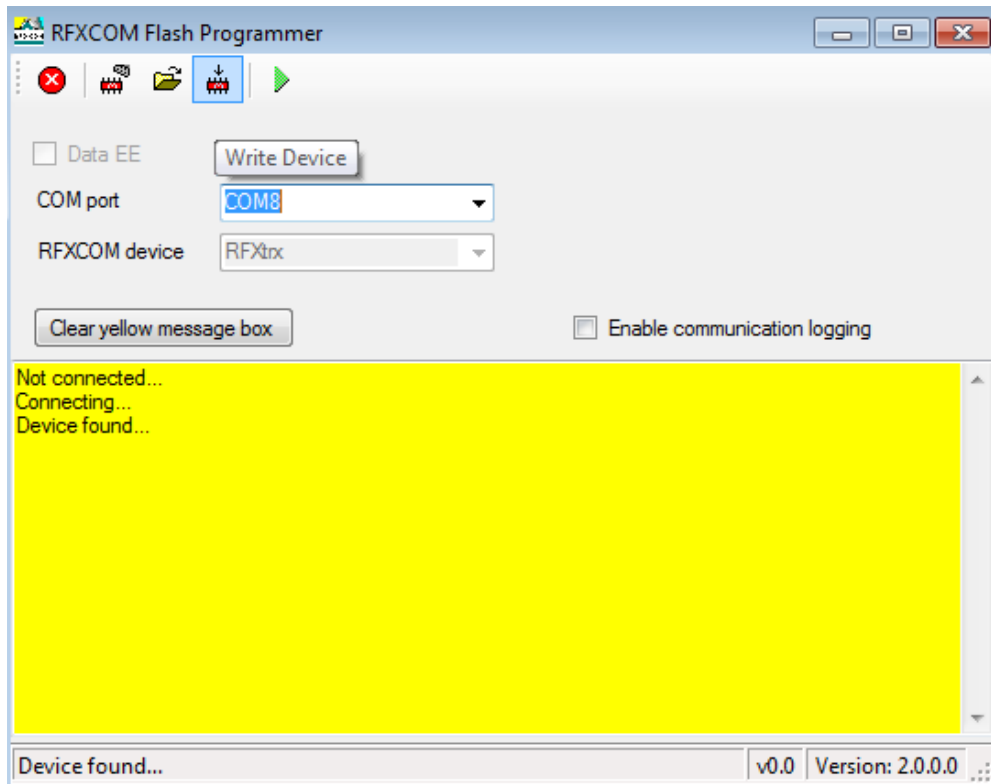
The RFXtrx will automatically switch from normal mode to the bootloader now.

- Click the Open HEX file button and load the RFXtrx $yyy\_xx$ .hex file  
Be sure to load the latest firmware file for the RFXtrx.  
 $yyy$  indicates the RFXtrx frequency, so load the RFXtrx433 for an RFXtrx433!  
 $xx$  indicates the firmware version.

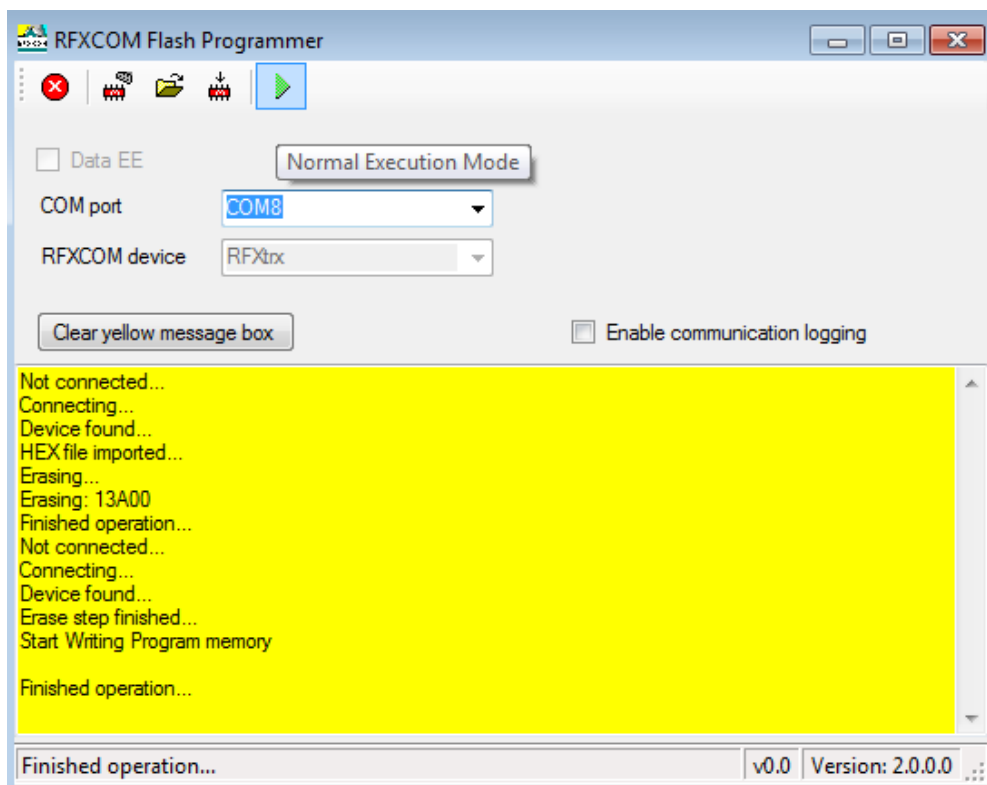




- Click the Write device button and the RFXtrx is flashed.



- Click on the Normal Execution Mode button to set the RFXtrx to running mode.



**Note:** Receiver Settings are lost after a firmware update and have to be set again.

## 7. RFXtrx433 special device codes

### 7.1. Remote commands

#### 7.1.1. X10 RF Remote

Dec	Hex	Button
2	02	0
18	12	8
34	22	4
56	38	Rewind
58	3A	Info
64	40	CHAN+
66	42	2
82	52	Ent
96	60	VOL+
98	62	6
99	63	Stop
100	64	Pause
112	70	Cursor-left
113	71	Cursor-right
114	72	Cursor-up
115	73	Cursor-down
116	74	Cursor-up-left
117	75	Cursor-up-right
118	76	Cursor-down-right
119	77	Cursor-down-left
120	78	left mouse
121	79	left mouse-End
123	7B	Drag
124	7C	right mouse
125	7D	right mouse-End
130	82	1
146	92	9
160	A0	MUTE
162	A2	5
176	B0	Play
182	B6	Menu
184	B8	Fast Forward
186	BA	A+B
192	C0	CHAN-
194	C2	3
201	C9	Exit
209	D1	MP3
210	D2	DVD
211	D3	CD
212	D4	PC / Shift-4
213	D5	Shift-5
214	D6	Shift-Ent
215	D7	Shift-Teletext
216	D8	Text
217	D9	Shift-Text
224	E0	VOL-
226	E2	7
242	F2	Teletext
255	FF	Record

## 7.1.2. ATI Remote Wonder

Dec	Hex	Button	54	36	
0	00	A	55	37	rename TAB
1	01	B	56	38	Acquire image
2	02	power	57	39	edit image
3	03	TV	58	3A	Full screen
4	04	DVD	112	70	DVD Audio
5	05	?	113	71	Cursor-left
6	06	Guide	114	72	Cursor-right
7	07	Drag	115	73	Cursor-up
8	08	VOL+	116	74	Cursor-down
9	09	VOL-	117	75	Cursor-up-left
10	0A	MUTE	118	76	Cursor-up-right
11	0B	CHAN+	119	77	Cursor-down-right
12	0C	CHAN-	120	78	Cursor-down-left
13	0D	1	121	79	V
14	0E	2	124	7C	V-End
15	0F	3	125	7D	X
16	10	4			X-End
17	11	5			
18	12	6			
19	13	7			
20	14	8			
21	15	9			
22	16	txt			
23	17	0			
24	18	snapshot ESC			
25	19	C			
26	1A	^			
27	1B	D			
28	1C	TV/RADIO			
29	1D	<			
30	1E	OK			
31	1F	>			
32	20	<-			
33	21	E			
34	22	v			
35	23	F			
36	24	Rewind			
37	25	Play			
38	26	Fast forward			
39	27	Record			
40	28	Stop			
41	29	Pause			
44	2C	TV			
45	2D	VCR			
46	2E	RADIO			
47	2F	TV Preview			
48	30	Channel list			
49	31	Video Desktop			
50	32	red			
51	33	green			
52	34	yellow			
53	35	blue			

### 7.1.3. ATI Remote Wonder Plus

Dec	Hex	Button	Dec	Hex	Button
0	00	A	35	23	F
1	01	B	36	24	Rewind
2	02	power	37	25	Play
3	03	TV	38	26	Fast forward
4	04	DVD	39	27	Record
5	05	?	40	28	Stop
6	06	Guide	41	29	Pause
7	07	Drag	42	2A	TV2
8	08	VOL+	43	2B	Clock
9	09	VOL-	44	2C	TV
10	0A	MUTE	45	2D	VCR
11	0B	CHAN+	46	2E	RADIO
12	0C	CHAN-	47	2F	TV Preview
13	0D	1	48	30	Channel list
14	0E	2	49	31	Video Desktop
15	0F	3	50	32	red
16	10	4	51	33	green
17	11	5	52	34	yellow
18	12	6	53	35	blue
19	13	7	54	36	rename TAB
20	14	8	55	37	Acquire image
21	15	9	56	38	edit image
22	16	txt	57	39	Full screen
23	17	0	58	3A	DVD Audio
24	18	Open Setup Menu	112	70	Cursor-left
25	19	C	113	71	Cursor-right
26	1A	^	114	72	Cursor-up
27	1B	D	115	73	Cursor-down
28	1C	FM	116	74	Cursor-up-left
29	1D	<	117	75	Cursor-up-right
30	1E	OK	118	76	Cursor-down-right
31	1F	>	119	77	Cursor-down-left
32	20	Max/Restore Window	120	78	Left Mouse Button
33	21	E	121	79	V-End
34	22	v	124	7C	Right Mouse Button
			125	7D	X-End

## 7.1.4. Medion Remote

Dec	Hex	Button	54	36	
0	00	Mute	55	37	rename TAB
1	01	B	56	38	Acquire image
2	02	power	57	39	edit image
3	03	TV	58	3A	Full screen
4	04	DVD	112	70	DVD Audio
5	05	Photo	113	71	Cursor-left
6	06	Music	114	72	Cursor-right
7	07	Drag	115	73	Cursor-up
8	08	VOL-	116	74	Cursor-down
9	09	VOL+	117	75	Cursor-up-left
10	0A	MUTE	118	76	Cursor-up-right
11	0B	CHAN+	119	77	Cursor-down-right
12	0C	CHAN-	120	78	Cursor-down-left
13	0D	1	121	79	V
14	0E	2	124	7C	V-End
15	0F	3	125	7D	X
16	10	4			X-End
17	11	5			
18	12	6			
19	13	7			
20	14	8			
21	15	9			
22	16	txt			
23	17	0			
24	18	snapshot ESC			
25	19	DVD MENU			
26	1A	^			
27	1B	Setup			
28	1C	TV/RADIO			
29	1D	<			
30	1E	OK			
31	1F	>			
32	20	<-			
33	21	E			
34	22	v			
35	23	F			
36	24	Rewind			
37	25	Play			
38	26	Fast forward			
39	27	Record			
40	28	Stop			
41	29	Pause			
44	2C	TV			
45	2D	VCR			
46	2E	RADIO			
47	2F	TV Preview			
48	30	Channel list			
49	31	Video Desktop			
50	32	red			
51	33	green			
52	34	yellow			
53	35	blue			

## 7.2. Harrison address conversion to switch settings

The address used is converted to the address selected in the Harrison curtain motor using the table below.

switch	1	2	3	4		5	6	7	8
	H	H	H	H		X	X	X	X
A	0	1	1	0	1	0	0	0	0
B	0	1	1	1	2	0	0	0	1
C	0	1	0	0	3	0	0	1	0
D	0	1	0	1	4	0	0	1	1
E	1	0	0	0	5	0	1	0	0
F	1	0	0	1	6	0	1	0	1
G	1	0	1	0	7	0	1	1	0
H	1	0	1	1	8	0	1	1	1
I	1	1	1	0	9	1	0	0	0
J	1	1	1	1	10	1	0	0	1
K	1	1	0	0	11	1	0	1	0
L	1	1	0	1	12	1	0	1	1
M	0	0	0	0	13	1	1	0	0
N	0	0	0	1	14	1	1	0	1
O	0	0	1	0	15	1	1	1	0
P	0	0	1	1	16	1	1	1	1

H H H H = House code

X X X X = device code

Switch position in the motor:

Up = 1

Middle = not used!!!!

Down = 0

Examples:

If you assign the address E7 (1000 0110) to the curtain motor then set the switches to: 1=up, 2=down, 3=down, 4=down, 5=down, 6=up, 7=up, 8=down

If you assign the address A2 (0110 0001) to the curtain motor then set the switches to: 1=down, 2=up, 3=up, 4=down, 5=down, 6=down, 7=down, 8=up

### 7.3. Flamingo, AB400, IMPULS, Sartano, Brennenstuhl switch settings

Use type ELRO AB400D

Note that the HC (House Code A-P) is the house code used in programs and has no direct relation with the A,B,C,D,E buttons on the remotes!

	1 2 3 4		5 A B C D E		5 A B C D E	<== switches	
	1 2 3 4		5 6 7 8 9 10		5 6 7 8 9 10	<== OR switches	
HC	=====DC=====						
A	0 0 0 0	1	0 0 0 0 0 0		33 0 0 0 0 0 1		
B	0 0 0 1	2	0 0 0 1 0 0		34 0 0 0 1 0 1		
C	0 0 1 0	3	0 0 1 0 0 0		35 0 0 1 0 0 1		
D	0 0 1 1	4	0 0 1 1 0 0		36 0 0 1 1 0 1		
E	0 1 0 0	5	0 1 0 0 0 0		37 0 1 0 0 0 1		
F	0 1 0 1	6	0 1 0 1 0 0		38 0 1 0 1 0 1		
G	0 1 1 0	7	0 1 1 0 0 0		39 0 1 1 0 0 1		
H	0 1 1 1	8	0 1 1 1 0 0		40 0 1 1 1 0 1		
I	1 0 0 0	9	1 0 0 0 0 0		41 1 0 0 0 0 1		
J	1 0 0 1	10	1 0 0 1 0 0		42 1 0 0 1 0 1		
K	1 0 1 0	11	1 0 1 0 0 0		43 1 0 1 0 0 1		
L	1 0 1 1	12	1 0 1 1 0 0		44 1 0 1 1 0 1		
M	1 1 0 0	13	1 1 0 0 0 0		45 1 1 0 0 0 1		
N	1 1 0 1	14	1 1 0 1 0 0		46 1 1 0 1 0 1		
O	1 1 1 0	15	1 1 1 0 0 0		47 1 1 1 0 0 1		
P	1 1 1 1	16	1 1 1 1 0 0		48 1 1 1 1 0 1		
		17	0 0 0 0 1 0		49 0 0 0 0 1 1		
		18	0 0 0 1 1 0		50 0 0 0 1 1 1		
		19	0 0 1 0 1 0		51 0 0 1 0 1 1		
		20	0 0 1 1 1 0		52 0 0 1 1 1 1		
		21	0 1 0 0 1 0		53 0 1 0 0 1 1		
		22	0 1 0 1 1 0		54 0 1 0 1 1 1		
		23	0 1 1 0 1 0		55 0 1 1 0 1 1		
		24	0 1 1 1 1 0		56 0 1 1 1 1 1		
		25	1 0 0 0 1 0		57 1 0 0 0 1 1		
		26	1 0 0 1 1 0		58 1 0 0 1 1 1		
		27	1 0 1 0 1 0		59 1 0 1 0 1 1		
		28	1 0 1 1 1 0		60 1 0 1 1 1 1		
		29	1 1 0 0 1 0		61 1 1 0 0 1 1		
		30	1 1 0 1 1 0		62 1 1 0 1 1 1		
		31	1 1 1 0 1 0		63 1 1 1 0 1 1		
		32	1 1 1 1 1 0		64 1 1 1 1 1 1		

Examples:

```
A1    0000000000
A15   0000111000
N2    1101000100
N11   1101101000
```

0 = switch off  
1 = switch on

## 7.4. Energenie 5-gang 429.950

To know the codes to use open the remote and check the 1 to 5 jumpers connected. If a jumper connection is open it is a 1. If connected it is a 0 (zero)

	1	2	3	4	jumper setting in the remote
HC=====					
A	0	0	0	0	
B	0	0	0	1	
C	0	0	1	0	
D	0	0	1	1	
E	0	1	0	0	
F	0	1	0	1	
G	0	1	1	0	
H	0	1	1	1	
I	1	0	0	0	
J	1	0	0	1	
K	1	0	1	0	
L	1	0	1	1	
M	1	1	0	0	
N	1	1	0	1	
O	1	1	1	0	
P	1	1	1	1	

If jumper 5 is open (1) than add 5 to the remote code.

Examples:

Jumper	Button Code	
1 2 3 4 5		
1 0 0 0 0	1	I1
1 0 0 0 1	1	I6



## 7.5. Phenix, IDK YC-4000S switch settings

Use type ELRO AB400D

Note that the HC (House Code A-P) is the house code used in programs and has no direct relation with the A,B,C,D,E buttons on the remotes!

HC	switch				DC	switch				
	1	2	3	4		5	A	B	C	D
A	0	0	0	0	1	0	0	0	0	0
B	0	0	0	1	2	0	0	0	1	0
C	0	0	1	0	3	0	0	1	0	0
D	0	0	1	1	4	0	0	1	1	0
E	0	1	0	0	5	0	1	0	0	0
F	0	1	0	1	6	0	1	0	1	0
G	0	1	1	0	7	0	1	1	0	0
H	0	1	1	1	8	0	1	1	1	0
I	1	0	0	0	9	1	0	0	0	0
J	1	0	0	1	10	1	0	0	1	0
K	1	0	1	0	11	1	0	1	0	0
L	1	0	1	1	12	1	0	1	1	0
M	1	1	0	0	13	1	1	0	0	0
N	1	1	0	1	14	1	1	0	1	0
O	1	1	1	0	15	1	1	1	0	0
P	1	1	1	1	16	1	1	1	1	0
					17	0	0	0	0	1
					18	0	0	0	1	1
					19	0	0	1	0	1
					20	0	0	1	1	1
					21	0	1	0	0	1
					22	0	1	0	1	1
					23	0	1	1	0	1
					24	0	1	1	1	1
					25	1	0	0	0	1
					26	1	0	0	1	1
					27	1	0	1	0	1
					28	1	0	1	1	1
					29	1	1	0	0	1
					30	1	1	0	1	1
					31	1	1	1	0	1
					32	1	1	1	1	1

## 7.6. HE105 switch settings

Unitnr	HE105 switches				
	1	2	3	4	5
0	0	0	0	0	0
1	0	0	0	0	1
2	0	0	0	1	0
3	0	0	0	1	1
4	0	0	1	0	0
5	0	0	1	0	1
6	0	0	1	1	0
7	0	0	1	1	1
8	0	1	0	0	0
9	0	1	0	0	1
10	0	1	0	1	0
11	0	1	0	1	1
12	0	1	1	0	0
13	0	1	1	0	1
14	0	1	1	1	0
15	0	1	1	1	1
16	1	0	0	0	0
17	1	0	0	0	1
18	1	0	0	1	0
19	1	0	0	1	1
20	1	0	1	0	0
21	1	0	1	0	1
22	1	0	1	1	0
23	1	0	1	1	1
24	1	1	0	0	0
25	1	1	0	0	1
26	1	1	0	1	0
27	1	1	0	1	1
28	1	1	1	0	0
29	1	1	1	0	1
30	1	1	1	1	0
31	1	1	1	1	1

## 7.7. MDREMOTE

This MDREMOTE has been tested.

<http://www.ultraleds.co.uk/mini-dimmer-with-rf-remote-control-12-or-24v-dc-12a-maximum.html>

The RFXtrx433 can only transmit MDREMOTE commands.

Procedure to find the ID of the MDREMOTE:

In RFXmngn enable the X10 protocol and enable "Undec on"

Press a button on the MDREMOTE remote.

The undecoded message contains the ID in the 2<sup>nd</sup> and 3<sup>rd</sup> byte, for example:

```
-----  
08030C0220AF6801D1  
Packettype    = UNDECODED RF Message  
UNDECODED NEC:20AF6801D1
```

The 2 bytes after 20 is the MDREMOTE ID, in this example AF 68

## 8. Blyss commands

Some Blyss devices, like the Blyss motors, require a special command sequence number. To simplify it; 0,1,2,3,4,0,1,...

This sequence number is normally created by the Blyss remote but now also by the RFXtrx433.

If you use a Blyss remote and the application (Domoticz, DomotiGa, Homeseer...) does not sync with the received Blyss command you will see that you need to send multiple commands with the RFXtrx433 before the Blyss device will respond.

For example,

The Blyss remote transmits with the sequence numbers 0,1,2

If the RFXtrx433 transmits now with sequence number 0 it will not be seen by the Blyss device as a valid command and at the time the RFXtrx433 transmits the commands 1,2,3 the command will be detected as valid when it receives the command with sequence number 3.

The same is true for the remote. If you transmit commands with the RFXtrx433 and after that with a Blyss remote you need to transmit several commands with the remote before the Blyss device responds.

I guess the same behaviour will show if you use multiple Blyss remotes.

## 9. How to find the dx.com RGB LED strip driver ID

Flash the RFXtrx433 with Type2 firmware to be able to receive the remote ID in RFXmngn.

In RFXmngn enable only the LightwaveRF (AD) protocol.

```
-----  
0A140605FCC48B00010081  
Packettype    = Lighting5  
subtype       = RGB TRC02  
Sequence nbr  = 5  
ID           = FCC48B  
Command       = On  
Signal level  = 8
```

If necessary flash the RFXtrx433 back to Type1 if Type2 does not support devices you need. (See chapter 2.2)

## 10. Somfy RTS

Somfy RTS\* devices can only be controlled by the RFXtrx433E. (not with the RFXtrx433)  
The RFXtrx433E version is an RFXtrx433 with additional hardware to enable the RFY protocol used to control Somfy RTS.

To pair the Somfy RTS device:

- Select a unique ID and unitcode for the RFXCOM RFY device.
- Disconnect power from all Somfy RTS devices except the device to pair.
- Press the Program button > 2 seconds on the original Somfy remote until the Somfy device responds.
- Transmit a Program command with the RFXtrx433E. The Somfy RTS device should respond indicating the pair command was successful.

The RFXCOM remote is registered in the RFXtrx433E by sending a Program command.  
Up to 16 RFXCOM remotes can be registered in the RFXtrx433E.  
Remotes can be erased from the RFXtrx433E using the RFXmngr program.

The Somfy RTS device can be controlled by any application as long as the same ID and Unit Code are used.

For example if the RTS device is paired using RFXmngr with ID=1 02 03 and Unit Code 1, the RTS device can be controlled with Homeseer using the same ID and unit code.

\* Somfy RTS are registered trademarks of Somfy System, Inc.

## 11. Transmit undecoded ARC commands.

Plug-in modules or other equipment with a PT2262 can be controlled using Lighting4. There are a lot of brands using the PT2262 and some of them use the same timing (350) as used by the ARC devices but a different protocol definition.

Messages will be received as undecoded ARC messages if the protocol definition does not match the definition of the ARC protocol. Remote commands are received as ARC commands with a wrong house and device code and/or command code or as undecoded ARC messages if "undec on" is enabled. Decoding of these remotes is therefore not possible because they overlap the ARC protocol partly.

But transmitting these commands is possible using the Lighting4 command.

So if we receive this command UNDECODED ARC:18014403:  
(18 is not used)

hex to binary table

0=0 0 0 0  
1=0 0 0 1  
2=0 0 1 0  
3=0 0 1 1  
4=0 1 0 0  
5=0 1 0 1  
6=0 1 1 0  
7=0 1 1 1  
8=1 0 0 0  
9=1 0 0 1  
A=1 0 1 0  
B=1 0 1 1  
C=1 1 0 0  
D=1 1 0 1  
E=1 1 1 0  
F=1 1 1 1

0 1 4 4 0 3 = selection box 0000 0001 0100 0100 0000 0011

Not selected = 0, box selected = 1

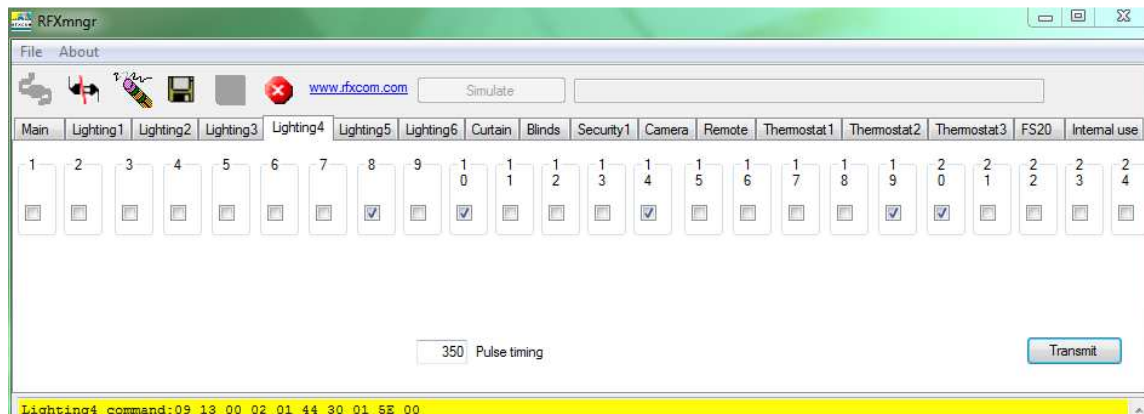
And the Lighting4 command contains the same "undec code" 01 44 03:

Lighting4 command:09 13 00 04 **01 44 03** 01 5E 00

pulse timing is 350 = hex 015E

Another example:

For this command UNDECODED ARC:18014430 set on the Lighting4 tab in RFXmgr selection box 1 to 24 to 0 1 4 4 3 0 = 0000 0001 0100 0100 0011 0000



## 12. Known Lighting4 devices

### 12.1. Proluxx projection screen

Use Lighting4 with a pulse timing of 360

UP	1110 1101 0101 1001 0101 0010	ED 5A 52
STOP	1110 1101 0101 1001 0101 1000	ED 5A 58
DOWN	1110 1101 0101 1001 0101 0100	ED 5A 54
RESET	1110 1101 0101 1001 0101 0001	ED 5A 51

### 12.2. Kingpin (KP100) projection screen

Use Lighting4 with a pulse timing of 1040

UP	1110 0001 0100 0010 0010 0010	E1 42 22
STOP	1110 0001 0100 0010 0010 0100	E1 42 24
DOWN	1110 0001 0100 0010 0010 1000	E1 42 28
PROGRAM	1110 0001 0100 0010 0010 0001	E1 42 21

### 12.3. Mercury remote control mains sockets

<http://mercury.avsl.com/product?range=ME5124>

Use Lighting4 with a pulse timing of 188

1 OFF 01000100010101010011 1100  
1 ON 01000100010101010011 0011

2 OFF 01000100010101011100 1100  
2 ON 01000100010101011100 0011

3 OFF 01000100010101110000 1100  
3 ON 01000100010101110000 0011

4 OFF 01000100010111010000 1100  
4 ON 01000100010111010000 0011

5 OFF 01000100011101010000 1100  
5 ON 01000100011101010000 0011

### 13. EC Declaration of Conformity

# EC Declaration of Conformity

RFXCOM declares that the product:

**RFXtrx**

**Brand: RFXCOM    Type: RFXtrx433**

conforms with the essential requirements and other relevant provisions of the following directives and complies with the following standards applied:

R&TTE Directive 99/5/EC	EN 300 220-1 V2.3.1 (2010-02) EN 300 220-2 V2.3.1 (2010-02)
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Low-voltage Directive 2006/95/EC	IEC 60950-1 (2005-12)
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EMC Directive 2004/108/EC	EN 301 489-1 V1.9.2 (2011-09) EN 301 489-3 V1.4.1 (2002-08)
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## 14. Warning:

RF signals are possible disturbed and it has not been justified for this equipment at uses in circumstances where life-threatening or dangerous situations are possible.

## 15. Copyright notice

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## 16. Revision history

Version 0.0 – August 18, 2011

Initial version.

Version 1.0 – October 30, 2011

RFXflash under Mono added.

Version 2.0 – December 30, 2011

Updated for the production version with FTDI USB chip

Version 2.1 – January 18, 2012

Link for ACM to serial port added in Linux instruction.

EC Declaration of Conformity added

Version 2.2 – February 8, 2012

Protocols overview added

Screen dumps updated

Version 2.3 – February 16, 2012

Novatys planned

Version 2.4 – February 25, 2012

General information updated

Version 2.5 – March 1, 2012

Chapter added how to run RFXmngr or RFXflash on Linux.

Version 2.6 – March 14, 2012

Code tables added

Cresta, UPM added

Version 2.7 – March 15, 2012

Flash procedure updated

Version 2.8 – March 31, 2012

Phenix table added

Version 2.9 – March 31, 2012

AB400 and Phenix address extended

Version 2.10 – April 16, 2012

Linux USB - tty configuration updated

Version 2.11 – May 14, 2012

List of supported protocols updated.

Version 2.12 – June 8, 2012

Chapter added how to run RFXmngr or RFXflash on Mac OS

Version 2.13 – July 15, 2012

List of supported protocols updated

Version 2.14 – August 4, 2012

List of enabled protocols influence added

RFXtrx315 added

Version 2.15 – August 18, 2012

Enabled protocols table changed

Version 2.16 – August 26, 2012

Rubicson stektermometer added

ATI Remote Wonder II added

Version 2.17 – August 28, 2012



Table "sensitivity influenced" updated

Version 2.18 – September 18, 2012  
 Chapter 2.3 updated: BlindsT0 disables all other protocols

Version 2.19 – September 25, 2012  
 RFXFlash version required changed to 4.0.0.0

Version 2.20 – September 28, 2012  
 RF range reduction guide added

Version 2.21 – October 18, 2012  
 BlindsT2 and BlindsT3 added

Version 2.22 – October 24, 2012  
 Sartano added

Version 2.23 – October 31, 2012  
 Sensitivity table updated

Version 2.24 – November 7, 2012  
 Protocol table extended with the protocols to enable for receive

Version 2.25 – November 14, 2012  
 HE105 switch settings added

Version 2.26 – November 28, 2012  
 undec on explained

Version 2.27 – December 4, 2012  
 Use of Lighting4 commands for undec ARC  
 Brennenstuhl added

Version 2.28 – December 18, 2012  
 Receiver tab removed from RFXmngr

Version 2.29 – December 27, 2012  
 Lighting4 receive added

Version 2.30 – January 1, 2013  
 Raex motor added

Version 3.00 – January 4, 2013  
 RFXtrx433 Type1/Type2 firmware added

Version 3.01 – February 4, 2013  
 Supported protocols list updated

Version 4.00 – February 21, 2013  
 Chapter 8 - Lighting4 screen updated for RFXmngr 11.0.0.0  
 Known Lighting4 chapter added

Version 4.01 – March 13, 2013  
 Receive of LaCrosse sometimes influenced by enabled Hideki

Version 4.02 – June 8, 2013  
 MDREMOTE LED dimmer added  
 Conrad RSL2 added  
 Energenie added

Version 4.03 – September 27, 2013  
 How to find the MDREMOTE ID (chapter 7.6)  
 WS1200 added  
 Byron SX Chime added

Version 4.04 – November 15, 2013  
 Maverick ET-732 added  
 Alecto SA30 added  
 Oregon EW109 added  
 Revolt added

Version 4.05 – December 5, 2013  
 Blyss command explanation added.  
 Lighting4 - Mercury added  
 Lighting5 – dx.com RGB LED controller added

Version 4.06 – December 27, 2013  
 Chapter 2.2 updated

Version 4.07 – February 10, 2014  
 Chapter 7.8 added: how to find the dx.com RGB LED strip driver ID

Version 4.08 – March 20, 2014  
ARC and Oregon3.0 updated in table 2.4.  
Energenie 5-gang 429.950 added

Version 4.09 – April 4, 2014  
BlindsT6 - DC106, YOODA, Röhrlmotor24 RMF added

Version 4.10 – April 7, 2014  
BlindsT7 - Forest added

Version 4.11 – April 28, 2014  
RGB LED – clarified AD is LightwaveRF

Version 4.12 – May 21, 2014  
Kambrook RF3672 added  
RFY protocol added  
Somfy programming instructions added  
Supported protocol list RFXtrx433 updated.  
Protocol list by function added

Version 4.13 – May 31, 2014  
Opus TX300/Imagintronix Soil sensor added