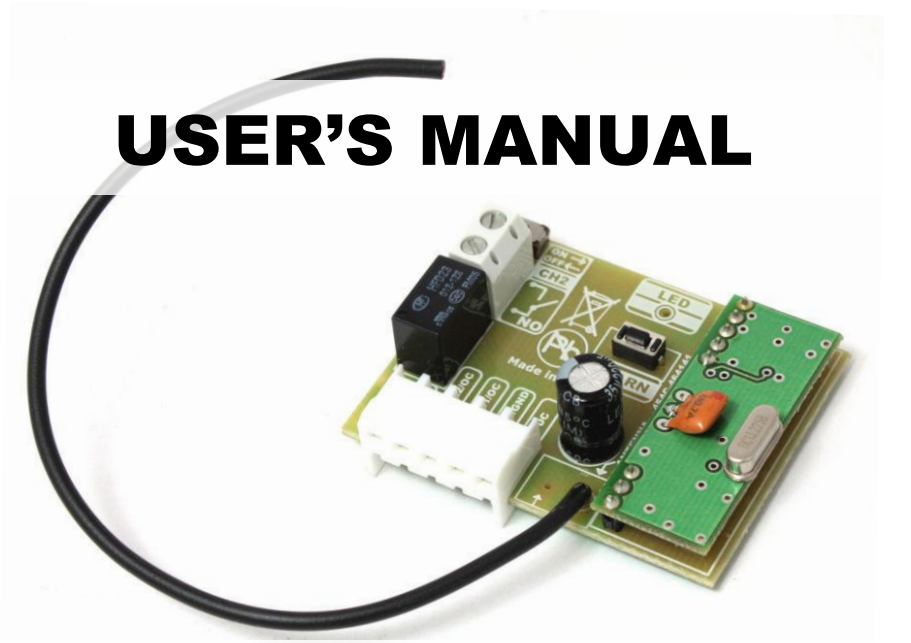
USER'S MANUAL



eLRFAA2E/eLRFAA2H

INTRODUCTION

Thank you for buying two-channel radio receiver eLRFAA2E/eLRFAA2H. We hope you'll enjoy it. We make efforts to provide high quality and high reliability products.

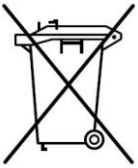
eLRFAA2E/eLRFAA2H cooperates with transmitters operating at a 433,92MHz frequency and is compatible with Keeloq protocol (Basic Pulse Element 400µs).

NOTE:

eLRFAA2E is a two-channel radio-receiver and can memorize up to 32 transmitters. It can be connected to all controllers using 5-pins connector type MX-5145-5AH as a radio input. Outputs CH1/OC and CH2/OC are Open Collector type. Output CH2 is Normally Open type. Channel CH2 can work in bistable or monostable mode. **eLRFAA2E** cooperates with eLdrim's transmitters working at a 433.92MHz frequency and compatible with Keeloq standard.

eLRFAA2H is a two-channel radio-receiver and can memorize up to 42 transmitters. It can be connected to all controllers using 5-pins connector type MX-5145-5AH as a radio input. Outputs CH1/OC and CH2/OC are Open Collector type. Output CH2 is Normally Open type. Channel CH2 can work in bistable or monostable mode.**eLRFAA2H** cooperates with all transmitters working at a 433.92MHz frequency and compatible with Keeloq standard.

In accordance with the provisions of Directive 2006/42/EC on machinery, we declare that the product must not be put into service until the final machinery into which it is to be incorporated has been declared in conformity with directives and relevant provisions which must be met by the final machinery.



In accordance with the applicable regulations on disposal of redundant equipment by private users in the European Union, any items with such a symbol MUST NOT BE disposed of with other waste. In this case the user is responsible for proper disposal by delivering the device to a designated point, or to the manufacturer, which will handle further disposal. Separate collection and recycling of redundant equipment help to protect the environment and ensure that disposal is carried out in such a way as to protect human health and the environment. The note also applies to used batteries and accumulators.

SOFTWARE

MARKING	*NOTES*
2.0.0-E RFAA2:2.1.1/1.0.0	eLRFAA2E
2.1.0-H RFAA2:2.1.1/2.0.0	eLRFAA2H

PRECAUTIONS

- Please read all warnings and safety rules before attempting to assemble and use the receiver.
- Do not connect power supply earlier than indicated in the manual.
- The device should be stored and mounted in a dry place and away from children.
- All the operations associated with the installation (connection, start-up, operation) must be carried out in accordance with the applicable rules on operation of electrical equipment and the occupational health and safety rules.
- The type of electrical system and its protection against electric shock are specified in the standards.
- All the operations can be performed only by properly authorised persons.
- The device must be connected in accordance with the attached description/diagram

ADVANTAGES OF eLRFAA2E/eLRFAA2H RECEIVERS

- An excellent superheterodyne receiver with double interference filtering.
- Non-volatile memory in remote controls.
- Easy installation, learning and configuration procedure.
- Operation in the bistable and monostable mode for channel CH2.
- Option to connect an external antenna.

CONFIGURATION

Bistable mode.
eLRFAA2E/eLRFAA2H receivers have the option to configure the CH2 output as monostable or bistable; to switch the CH2 channel to the bistable mode change the position of the DP1 to ON. The DP1 switch in the OFF position changes the CH2 output to the monostable mode.

NOTE!
All the activities relating to installation of the driver should be carried out when the device to which we want to incorporate the receiver is powered off.
The first step of the installation is to assemble the mechanical radio receiver, then to connect the outputs and supply voltage.

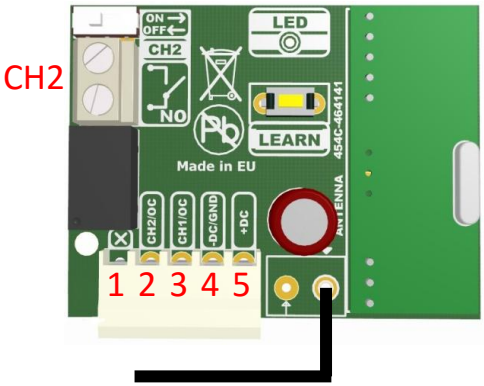
CONNECTION

Connector MX-5145 pins:
1 – unconnected,
2 – output OC CH2,
3 – output OC CH1,
4 – power supply (-DC/GND),
5 – power supply (+DC)

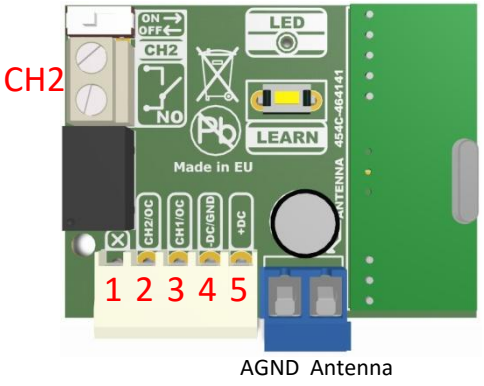
Connector CH2:
Normally Open
(NO)

Connector ANTENNA:

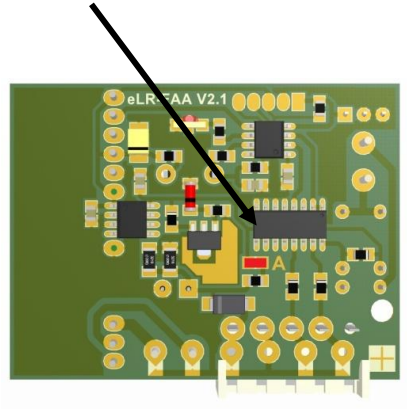
With soldered wire antenna



With external antenna connector

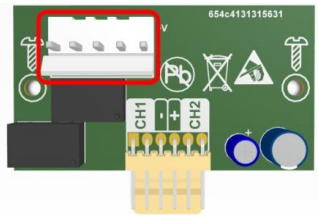


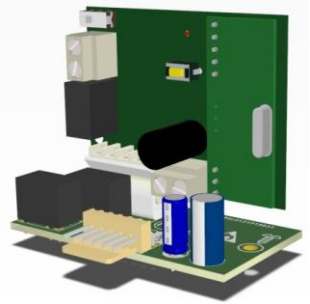
It is possible to supply the eLRFAA2E/eLRFAA2H with a voltage below 17V. To do this, connect the solder points marked with the letter "A".



eLRFAA2E/eLRFAA2H with eLA11 module can be used as an independent universal radio-receiver. Open Collector outputs of eLRFAA2 control relays of the eLA11 module.

eLA11-1C –one-channel (CH1) version
eLA11-2C –two-channel (CH1 and CH2) version





PROGRAMMING

Programming is carried out by the light emitting diode (LED) and the button (LEARN) located on the plate:

Deleting all transmitters from the receiver memory.
NOTE! We recommend to delete all transmitters after mechanical installation and before controllers programming.
Press and hold the LEARN button. At this time the LED should light up, go out, light up again, then flash 3 times. Release the LEARN button while the LED is flashing, it will light up again. Now you need to press and hold the LEARN button within 3 seconds until the LED flashes 3 times again and goes out. All transmitters have been removed from the receiver memory
NOTE.
It is possible to change the control keys of a pre-programmed remote control by re-programming other key on the remote control. When you are programming changes remember that the unprogrammed key will replace the previously programmed key. After reprogramming, the key previously programmed on one channel will begin to work in other mode. You can also delete all the keys from one of the selected channels. You must enter one of the three remote control button modes; when the LED is flashing press and hold the LEARN button again until the LED lights up and blinks 3 times, then release the button. All the keys in the selected feature have been deleted.

The receiver has two output channels. Transmitters can be programmed to one of the three remote control modes.

Transmitter button for CH1. Press and release the LEARN button (for less than 3 sec.), the LED will begin to flash. The LED will flash for 5 sec. At this time press the selected button you want to program for the device on the remote control. If the remote control has been programmed properly the LED will flash 3 times. The receiver will remain in the remote control programming mode, which will be indicated by LED flashing. To program another remote control, push the selected key on it. The LED will again flash 3 times, etc. When the LED flashes 2 times, it means that the memory is already full, whereas 1 flash means that the receiver has left the remote control programming mode and returned to its normal operation. After programming all remote controls you can exit the programming by briefly pressing the LEARN button, or the receiver will automatically exit the programming mode after 5 seconds, which will be confirmed by 1 flash of the LED.

Transmitter button for CH2. Press and hold the LEARN button, the LED will light up, then go out, which indicates that the LEARN button should be released. When you release the button, the LED will begin to flash. The LED will flash for 5 sec. At this time press the selected button you want to program for the device on the remote control. If the remote control has been programmed properly the LED will flash 3 times. The receiver will remain in the remote control programming mode, which will be indicated by LED flashing. To program another remote control, push the selected key on it. The LED will again flash 3 times, etc. When the LED flashes 2 times, it means that the memory is already full, whereas 1 flash means that the receiver has left the remote control programming mode and returned to its normal operation. After programming all remote controls you can exit the programming by briefly pressing the LEARN button, or the receiver will automatically exit the programming mode after 5 seconds, which will be confirmed by 1 flash of the LED.

Transmitter button for CH1 and CH2. This mode allows you to simultaneously control two channels – CH1 and CH2 – using a single button on the remote control. Press and hold the LEARN button, the LED should light up, go out, then light up again, which indicates that the LEARN button should be released. The LED will begin to flash. The LED will flash for 5 sec. At this time press the selected button you want to program for the device on the remote control. If the remote control has been programmed properly the LED will flash 3 times. The receiver will remain in the remote control programming mode, which will be indicated by LED flashing. To program another remote control, push the selected key on it. The LED will again flash 3 times, etc. When the LED flashes 2 times, it means that the memory is already full, whereas 1 flash means that the receiver has left the remote control programming mode and returned to its normal operation. After programming all remote controls you can exit the programming by briefly pressing the LEARN button, or the receiver will automatically exit the programming mode after 5 seconds, which will be confirmed by 1 flash of the LED.

SPECIFICATION

Frequency/Modulation:	*433,92MHz/OOK*
Range:	*up to 200m*
Transmitters cooperation:	
• eLRFAA2E	*eLdrim's transmitters compatible with Keeloq standard*
• eLRFAA2H	*compatible with Keeloq standard*
Transmitters memory:	
• eLRFAA2E	*32 transmitters*
• eLRFAA2H	*42 transmitters*
Temperature range:	*-20°C +70°C*
Outputs:	2x OC 0.1A/30V DC (connector MX-5145), 1x Normally Open NO 1A/30V AC (connector CH2)
Activation time:	*1 s*
Power supply:	*+12-24Vac/dc*
Current consumption:	*<30mA*
Dimensions:	*52x42x18mm*
Enclosure:	*No*
Weight:	*19g* *21g(with antenna connector)*

EC DECLARATION

EC DECLARATION OF CONFORMITY	No: 1/2013	CE
MANUFACTURER		
PPHU eLdrim Franciszkańska 3 33-300 Nowy Sącz Tel. 0048 18 4490840 Fax. 0048 18 4490848		
PRODUCT DESCRIPTION		
eLRFAA2E, eLRFAA2H –two-channel radio receiver operating at a 433,92MHz frequency compatible with KEELOQ protocol.		
CONFORMITY WITH THE ESSENTIAL REQUIREMENTS OF EC DIRECTIVES		
EMC 2004/108/WE, R&TTE 1999/5/EC, ROHS 2011/65/EU		
CONFORMITY WITH THE EUROPEAN STANDARDS		
EMC • EN 61000-6-1 /2008 • EN 61000-6-3 /2008 • ETSI EN 301 489-1 V1.9.2 /2012 • ETSI EN 301 489-3 V1.6.1 /2014 R&TTE • ETSI EN 300 220-1 V2.4.1 /2013 • ETSI EN 300 220-3 V2.4.1 /2004		
CONFORMITY ASSESSMENT PROCEDURE		
Module A : Internal production control.		
Nowy Sącz, Poland	Date: 4 February 2014	OWNER: Janusz Janowski

NOTES

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

Distributor/Seller