



instructables

DIY Light Barrier Alarm System With an Industrial Grade PLC (Controllino)



by GreatScottLab

In this project I will be showing you how I combined a PLC (the Controllino) with a light barrier, a siren, a reed switch and a stroboscope light in order to create a truly robust working alarm/security system that will scare off intruders easily. Let's get started!



Step 1: Watch the Video!

The video gives you all the information you need to create your own light barrier alarm system. During the next steps though I will present you some additional information.

<https://youtu.be/0fDPBtbsUgc>

Step 2: Order Your Components!

You can get most of the components from the home improvement store:

- distribution box
- WAGO terminals
- Wall plugs + screws
- NYM Wire, all the other wires,.....

You can also find out how to build the stroboscope light (with parts list) here:

<https://www.instructables.com/id/Make-Your-Own-LED...>

You can find the remaining components here (affiliate links):

Aliexpress:

1x Reed switch:

https://s.click.aliexpress.com/e/_d6ofS6x

1x IR Light Barrier:

https://s.click.aliexpress.com/e/_d9m7QYX

1x 200W Boost Converter:

https://s.click.aliexpress.com/e/_d6VIC7V

1x 100W Siren:

https://s.click.aliexpress.com/e/_d8HmICn

2x 555 Timer: https://s.click.aliexpress.com/e/_dZrO57t

1x Resistor Kit:

https://s.click.aliexpress.com/e/_d74q6Pl

1x Capacitor Kit:

https://s.click.aliexpress.com/e/_dSL5IAr

Ebay:

1x Reed switch:

- M20 installation conduit

- pipe clamps

[http://rover.ebay.com/rover/1/711-53200-19255-0/1?](http://rover.ebay.com/rover/1/711-53200-19255-0/1?icep_ff3=2&pub=5575101368&toolid=10001&campid=5337582279&customid=&icep_item=264392978851&ipn=psmain&icep_vectorid=229466&kwid=902099&mtid=824&kw=lg)

[http://rover.ebay.com/rover/1/711-53200-19255-0/1?...](http://rover.ebay.com/rover/1/711-53200-19255-0/1?icep_ff3=2&pub=5575101368&toolid=10001&campid=5337582279&customid=&icep_item=264392978851&ipn=psmain&icep_vectorid=229466&kwid=902099&mtid=824&kw=lg)

1x IR Light Barrier: -

1x 200W Boost Converter:

[http://rover.ebay.com/rover/1/711-53200-19255-0/1?...](http://rover.ebay.com/rover/1/711-53200-19255-0/1?)

1x 100W Siren: [http://rover.ebay.com/rover/1/711-53200-19255-0/1?...](http://rover.ebay.com/rover/1/711-53200-19255-0/1?)

2x 555 Timer: [http://rover.ebay.com/rover/1/711-53200-19255-0/1?...](http://rover.ebay.com/rover/1/711-53200-19255-0/1?)

1x Resistor Kit: [http://rover.ebay.com/rover/1/711-53200-19255-0/1?...](http://rover.ebay.com/rover/1/711-53200-19255-0/1?)

1x Capacitor Kit: [http://rover.ebay.com/rover/1/711-53200-19255-0/1?...](http://rover.ebay.com/rover/1/711-53200-19255-0/1?)

Amazon.de:

1x Reed switch: <https://amzn.to/2jLocdg>

1x IR Light Barrier: <https://amzn.to/2ldMHQW>

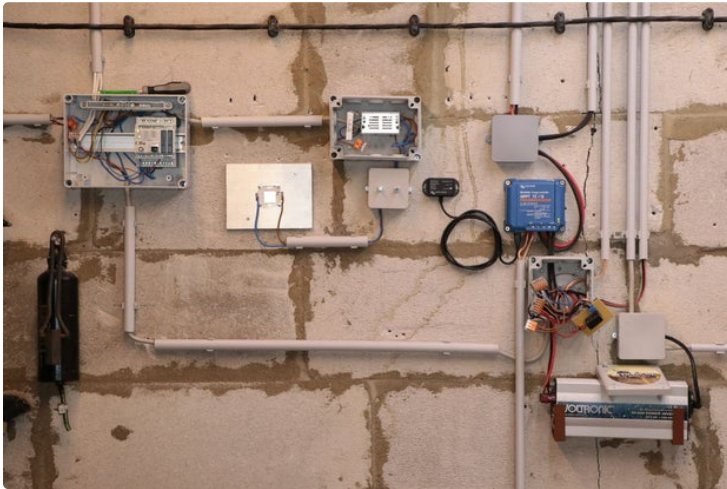
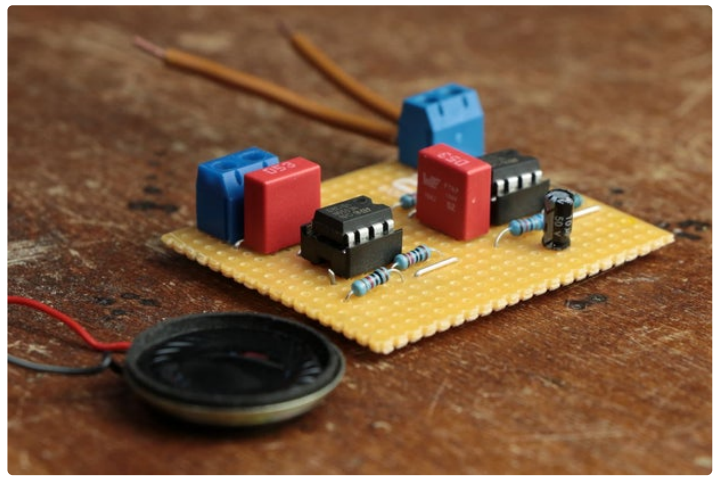
1x 200W Boost Converter: <https://amzn.to/2jJEpjs>

1x 100W Siren: <https://amzn.to/2jIXBhj>

2x 555 Timer: <https://amzn.to/2lfCZxt>

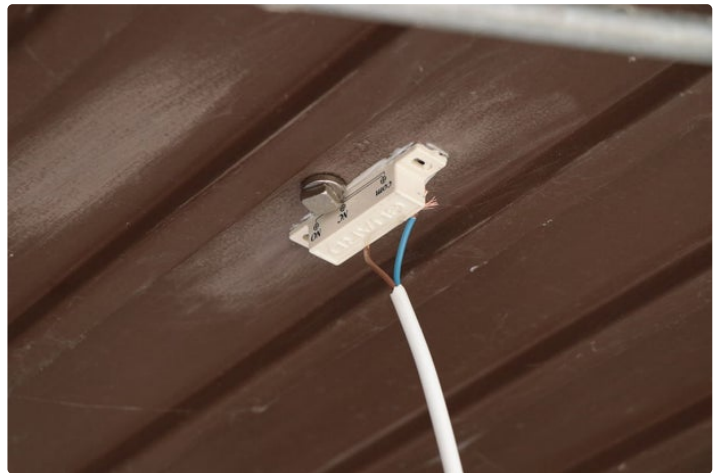
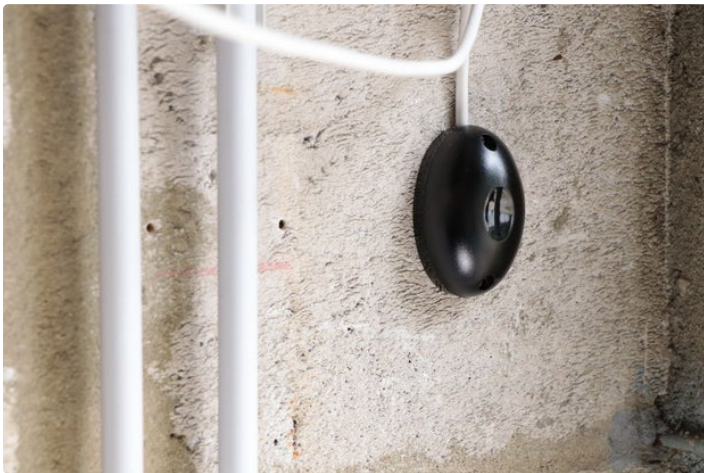
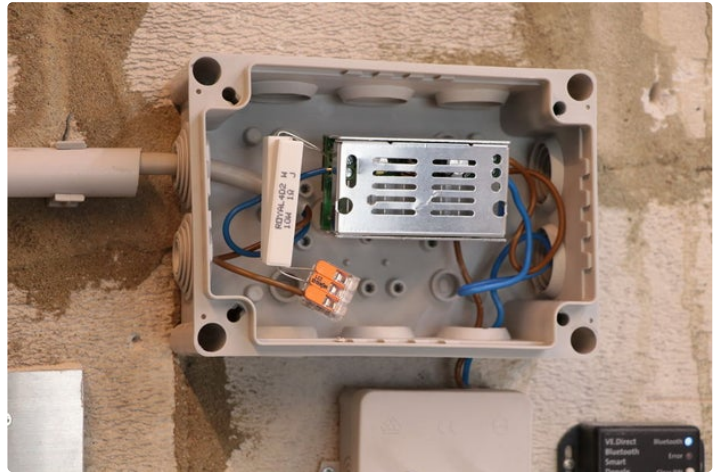
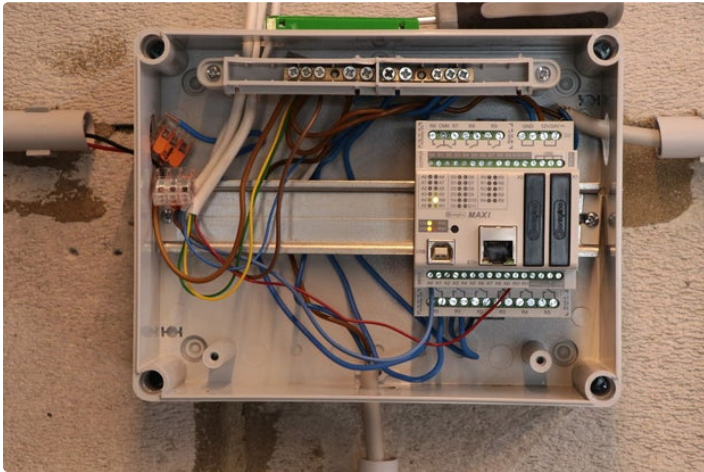
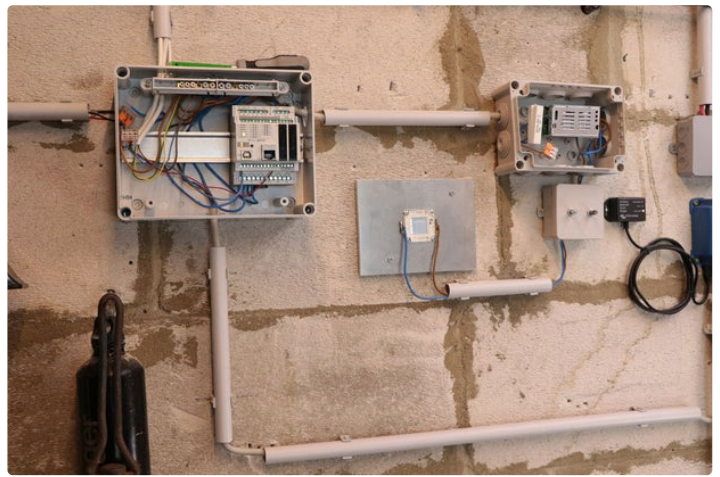
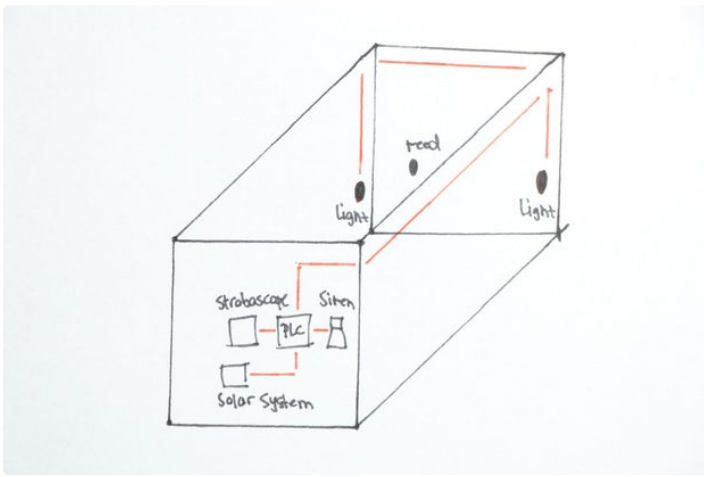
1x Resistor Kit: <https://amzn.to/2l7O3g6>

1x Capacitor Kit: <https://amzn.to/2lcqcMk>




Step 3: Create the Wiring & Circuits!

Here you can find all schematics and wiring diagrams for the project. Feel free to use them as a reference.



Step 4: Upload the Code!

Here you can find the code that I created for my PLC. Feel free to use it as a reference for your own code.

 <https://www.instructabl...>

Download

Step 5: Success!

You did it! You just created your own light barrier alarm system!
Feel free to check out my YouTube channel for more awesome projects:

<http://www.youtube.com/user/greatscottlab>

You can also follow me on Facebook, Twitter and Google+ for news about upcoming projects and behind the scenes information:

<https://twitter.com/GreatScottLab>

<https://www.facebook.com/greatscottlab>



The barrier input is not used on your code, is this a mistake or most certainly smth I didnt understand?



Can't open the file