

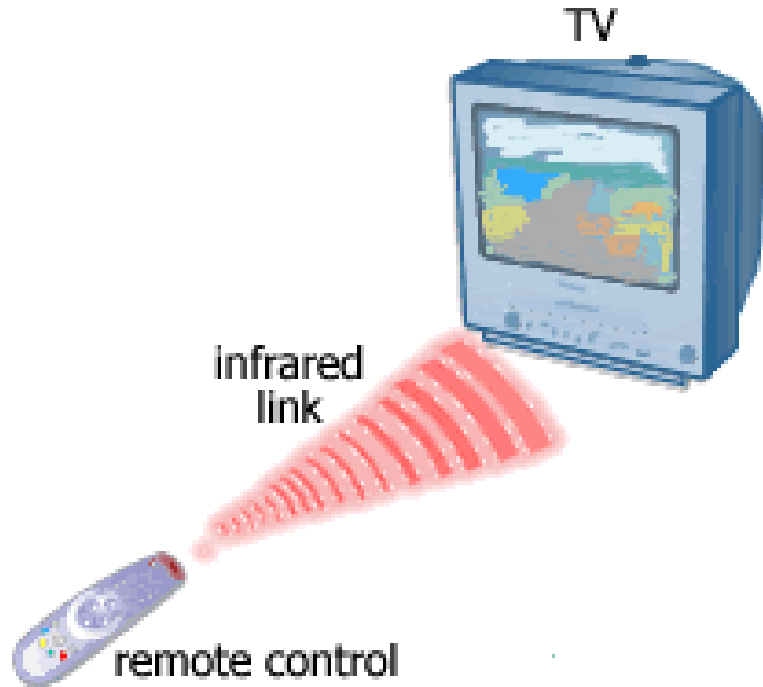
IR Remote Hacking and Home Automation

SHAMSUDHEEN MARAKKAR

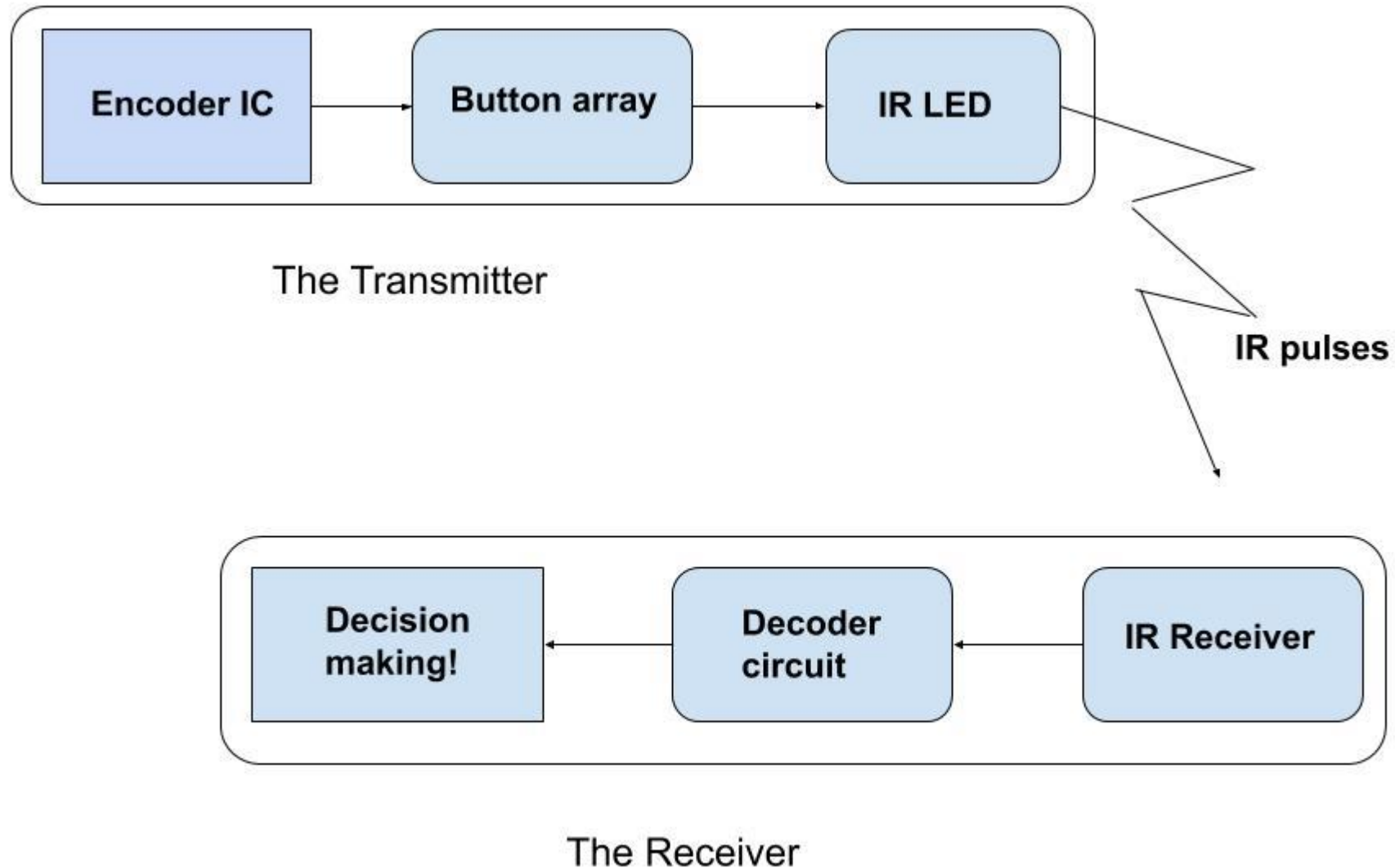
M.Tech Robotics and Intelligent Systems

- Introduction.
- Basics of IR.
- Decoding IR remote controller.
- Control device.
- Home automation.

- IR remote control and applications.
- Cheapest short range communication technology.
- Home appliances to computing devices.
- IR technology.
- Understanding, hacking and DIY.



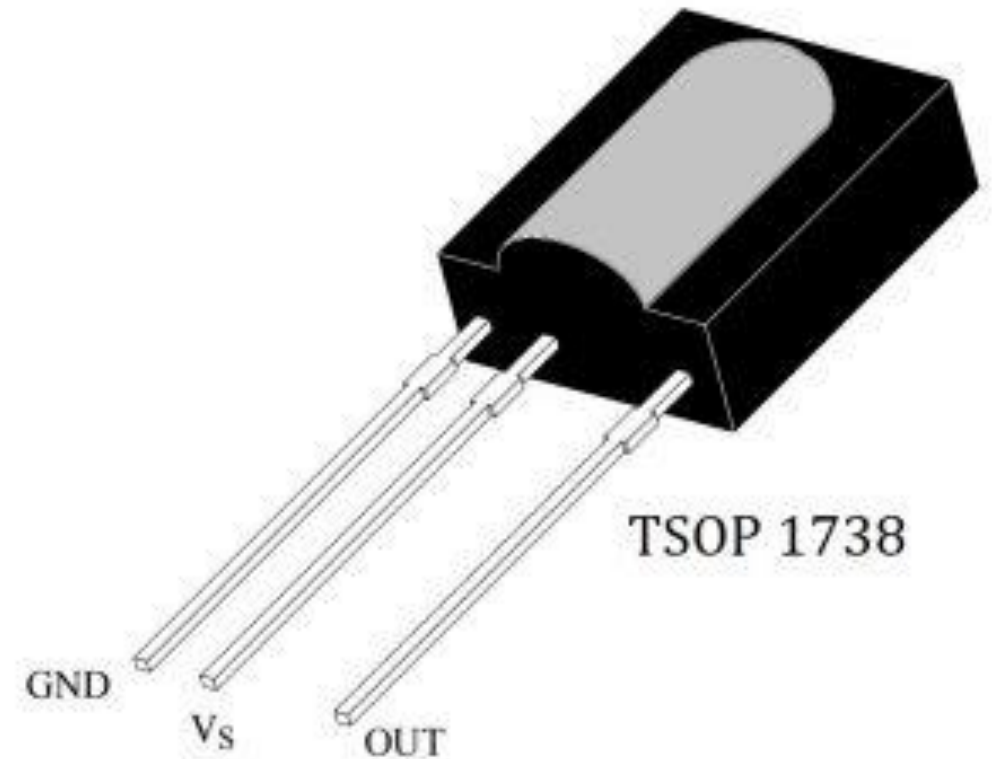
- Simple technology.
- Transmitter-Receiver pair.
- Encoder-Decoder.
- Hex codes.
- IR pulses through air.
- Receiver + Decoder.
- Embedded system.



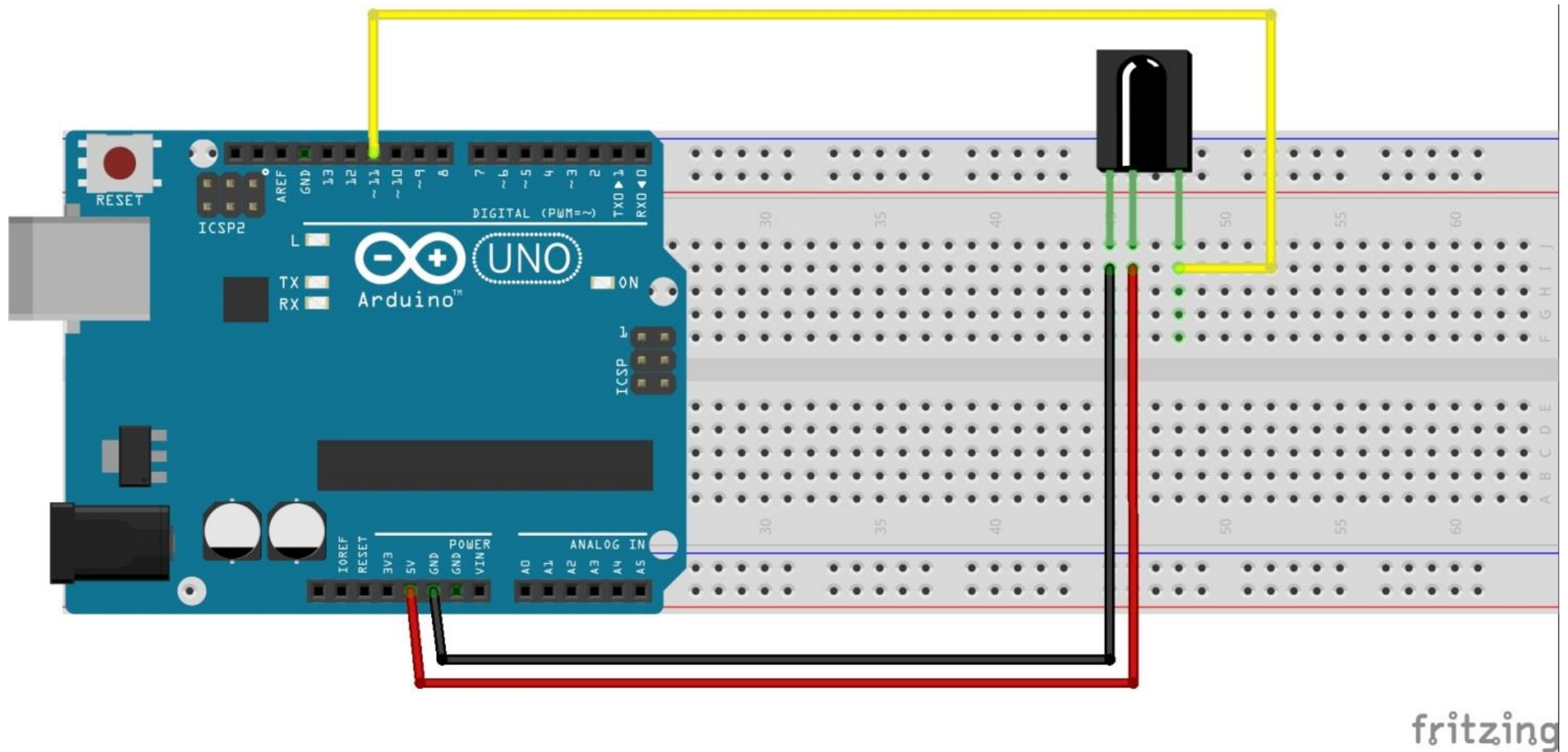
Decoding IR Remote controller

Things required:

- IR remote controller.
- Arduino Uno.
- Bread board.
- Jumper wires.
- IR Receiver TSOP 1738.



Circuit diagram

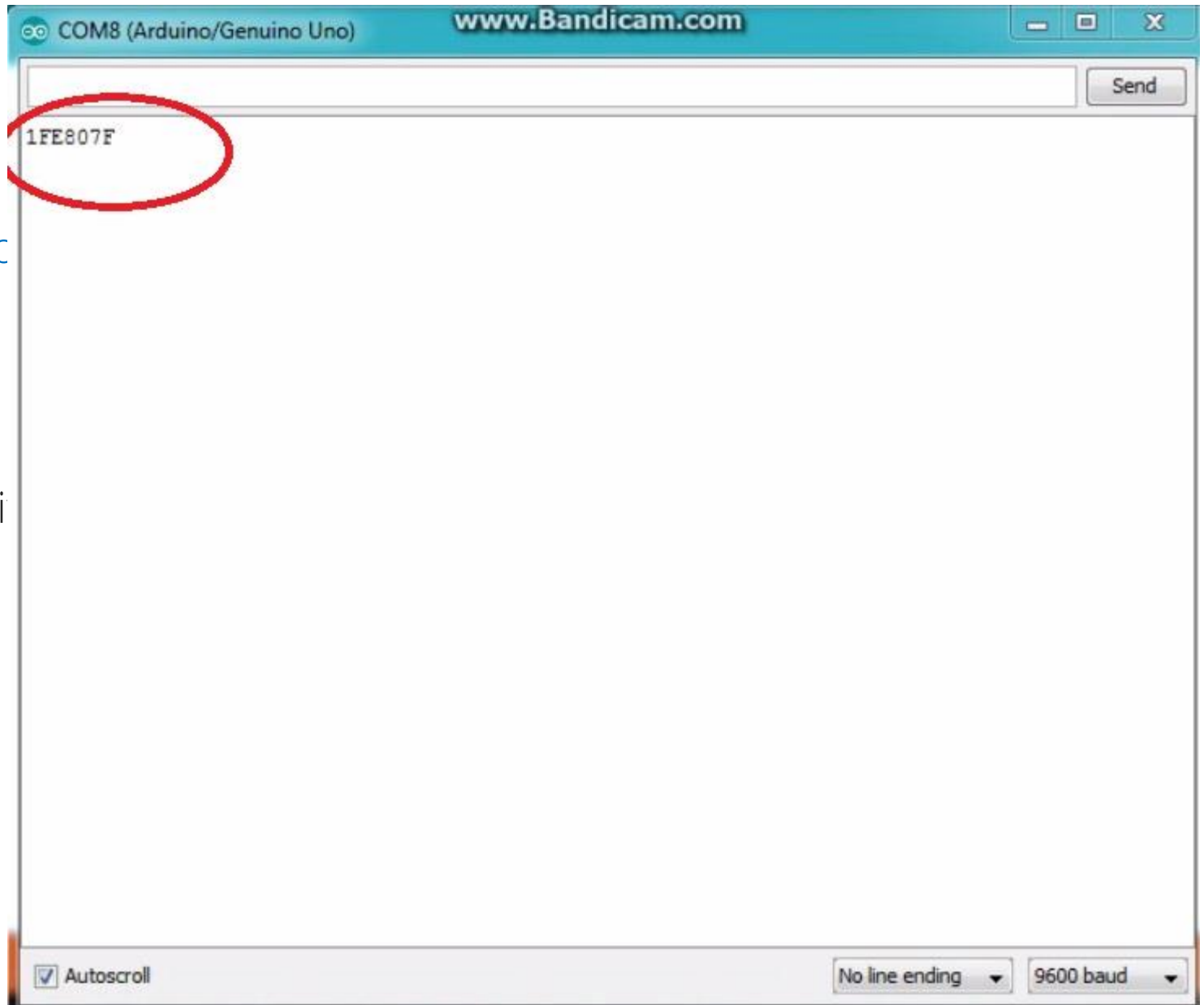


Code

- Arduino IDE.
- Dedicated IR library.
- The code can be found at efy.cc

Decode the buttons

- Point the remote to the IR receiver
- Open the serial monitor.
- Note the Hex codes.

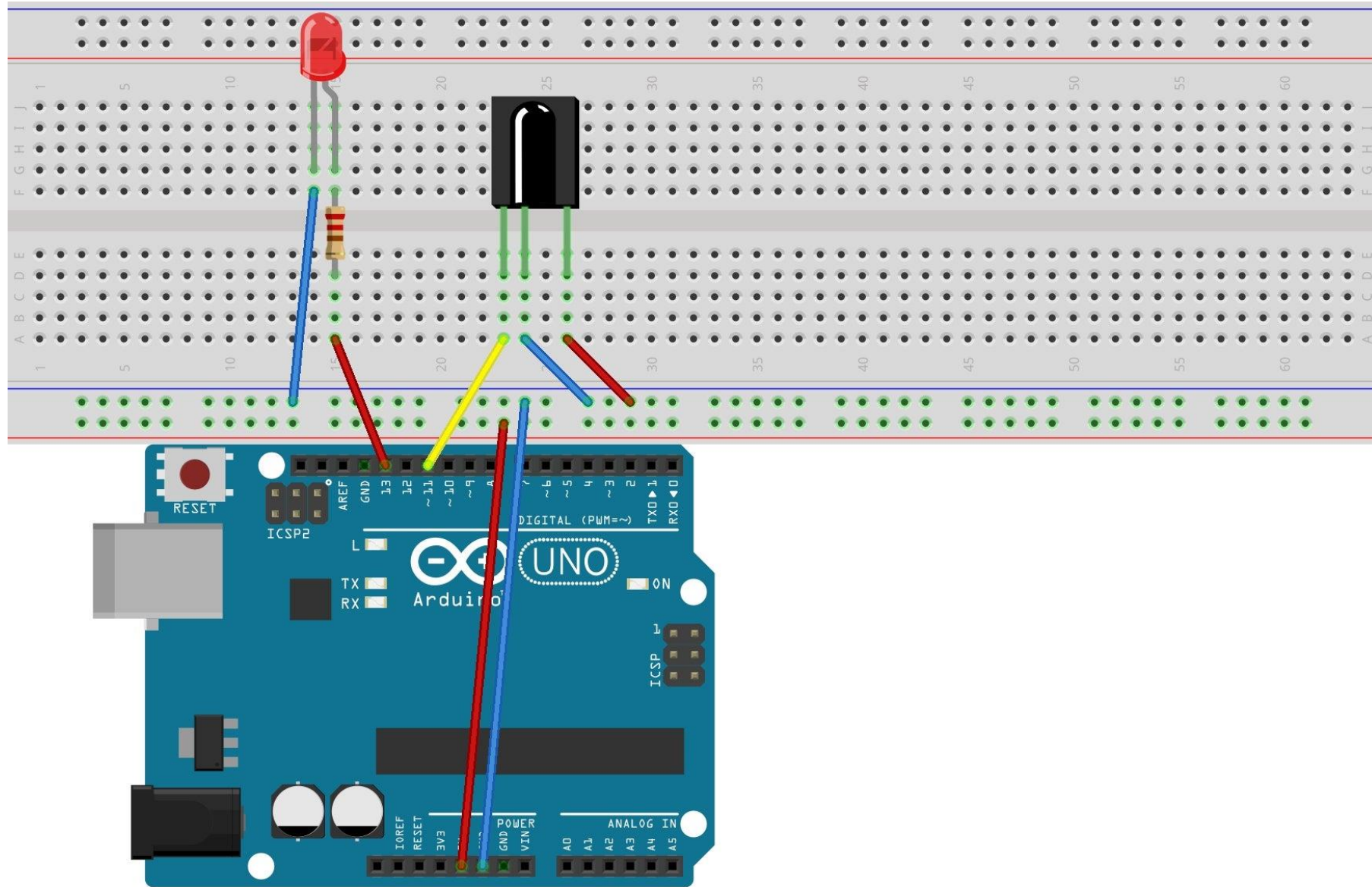


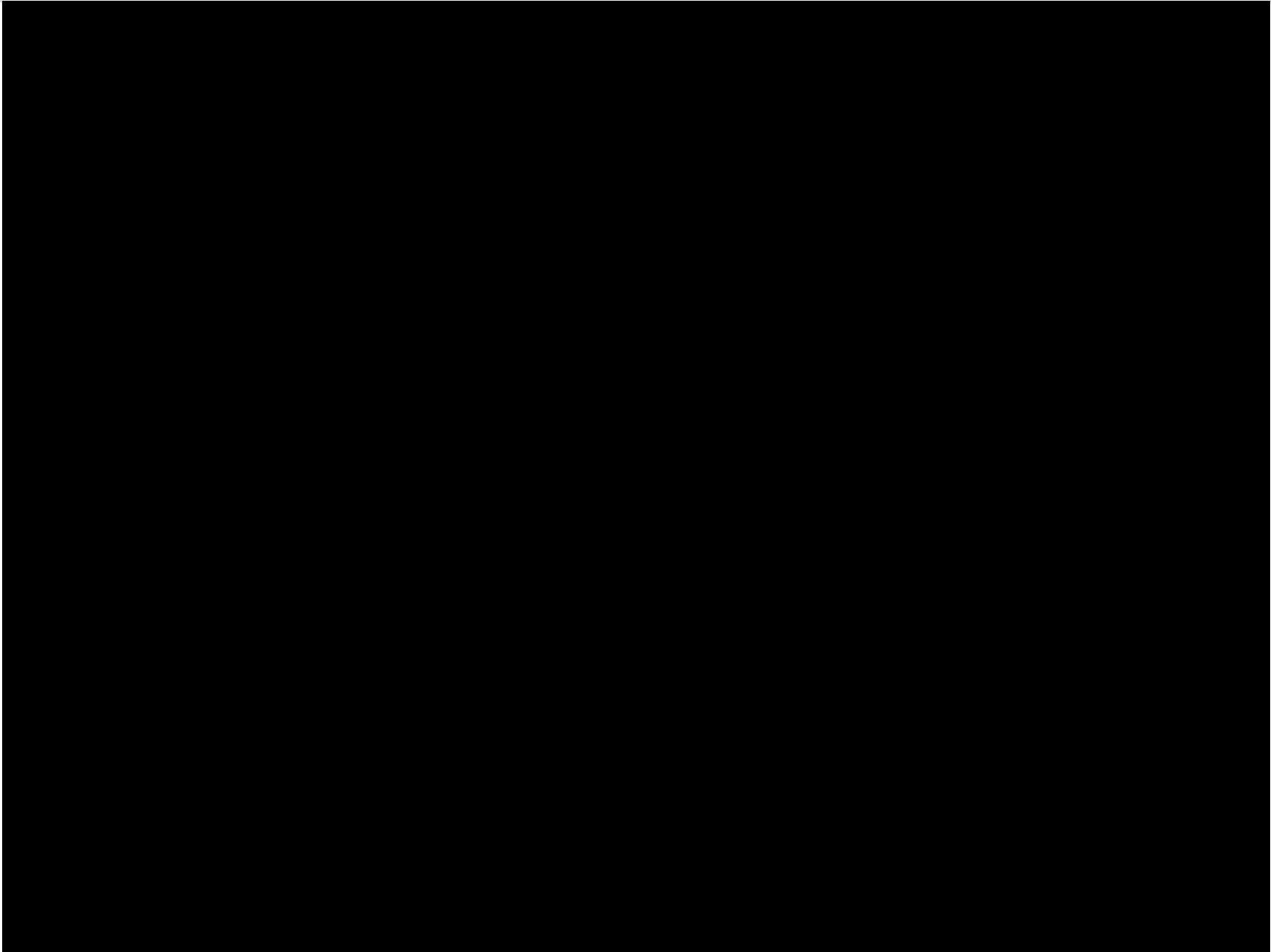


Button	Code
Play/Pause	0x1FE50AF
Next	0x1FE35AC
VOL +	0x1FE23DE
1	0x1FEA34E

Control a device

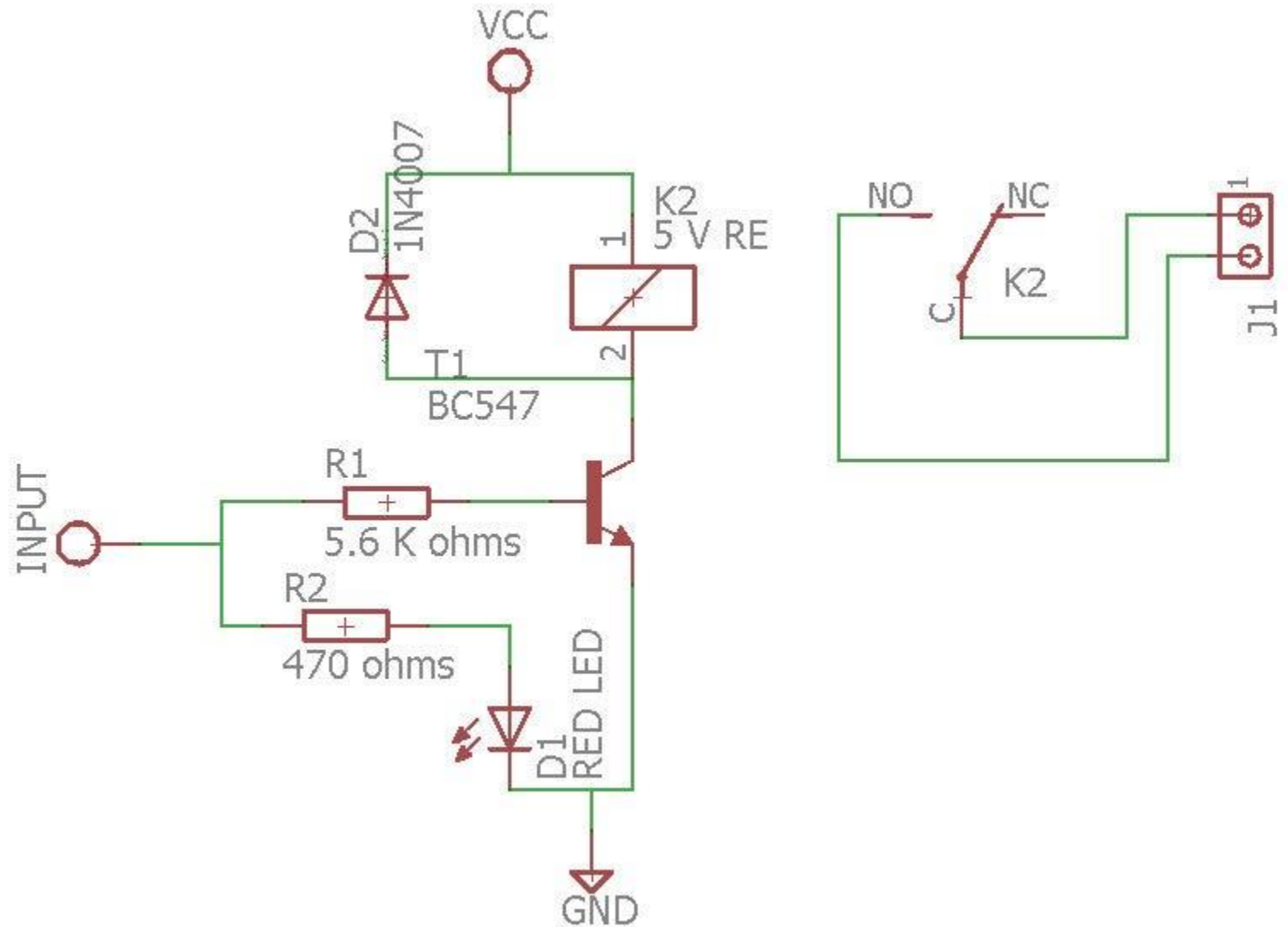
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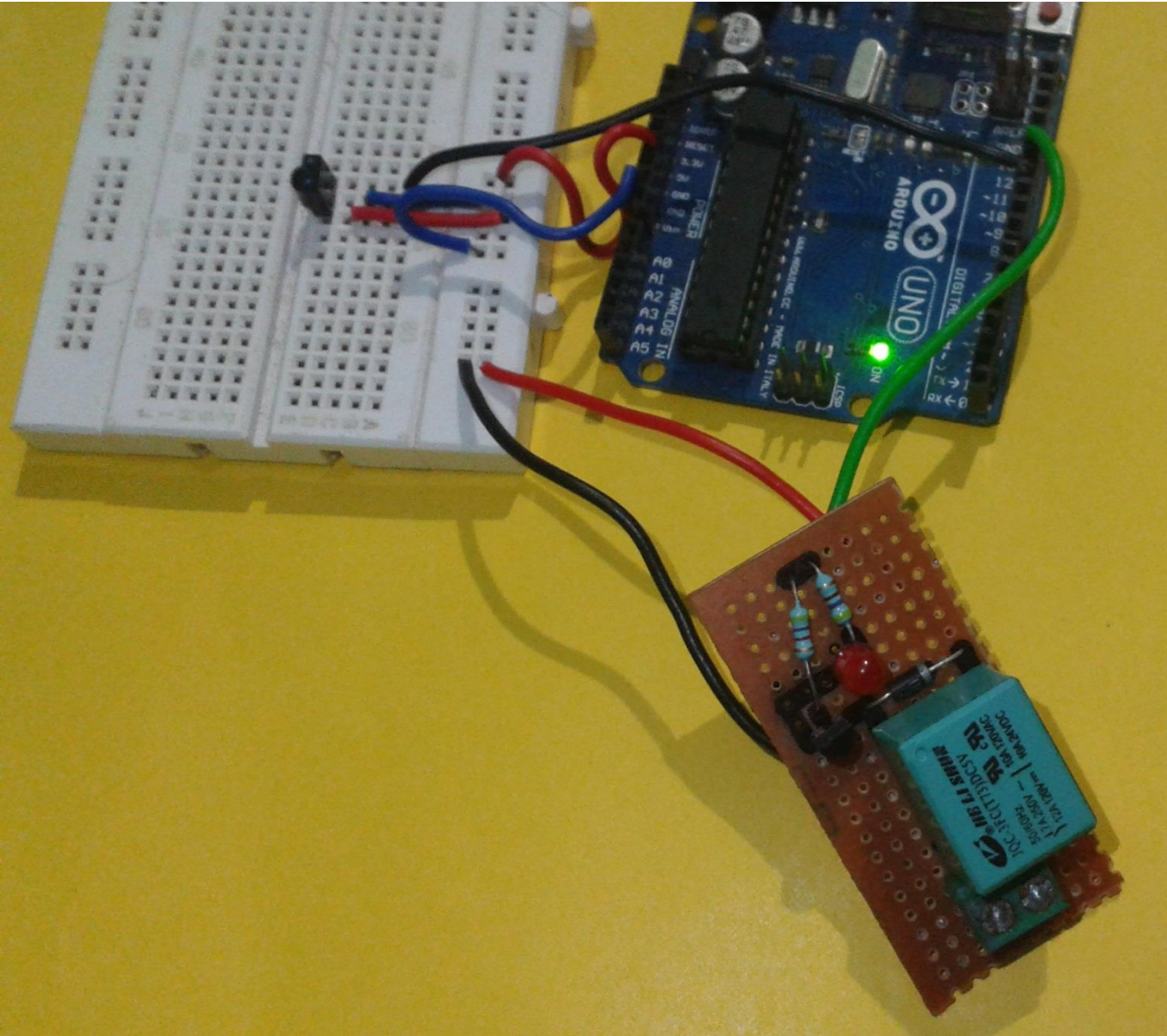


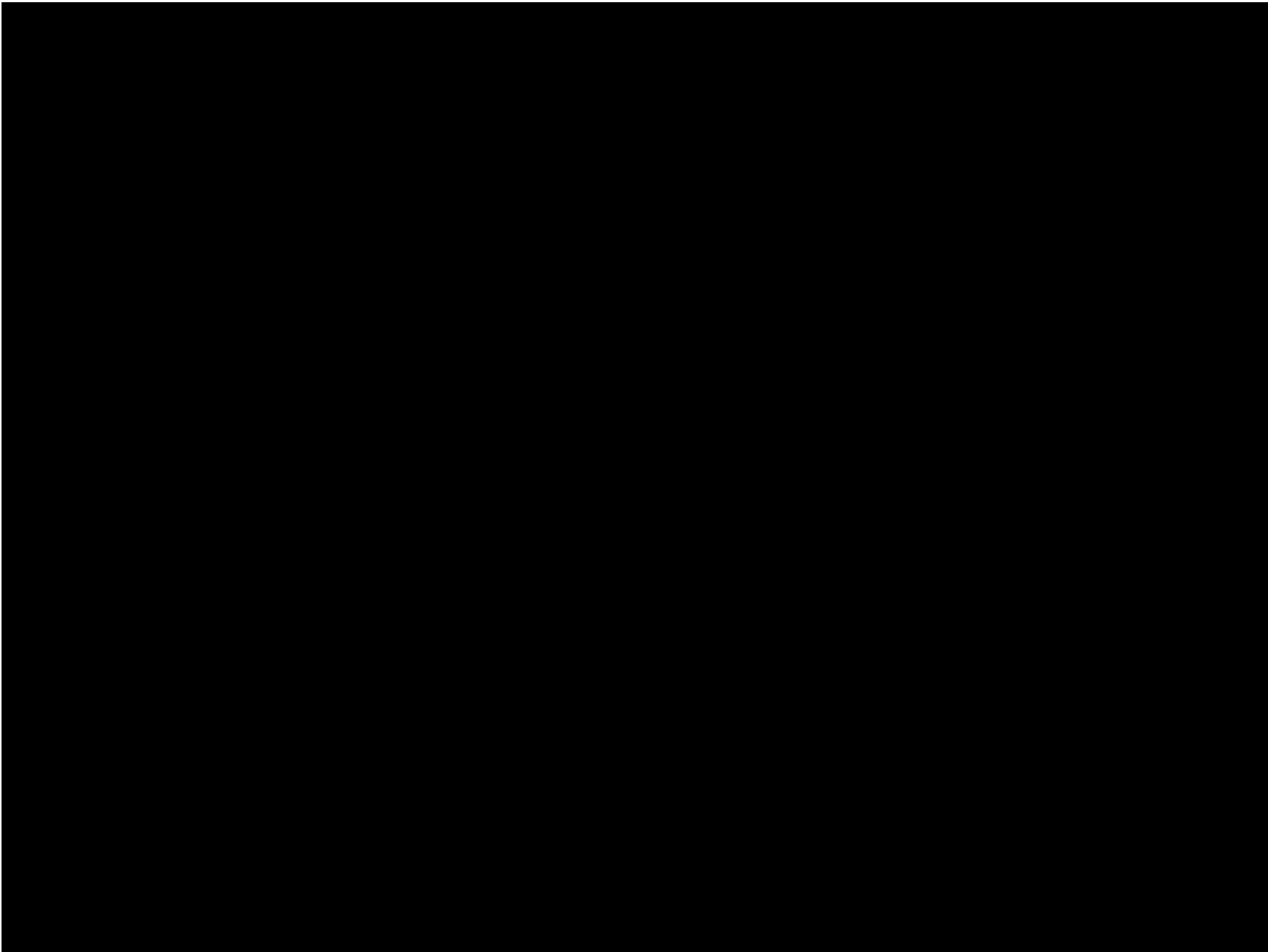


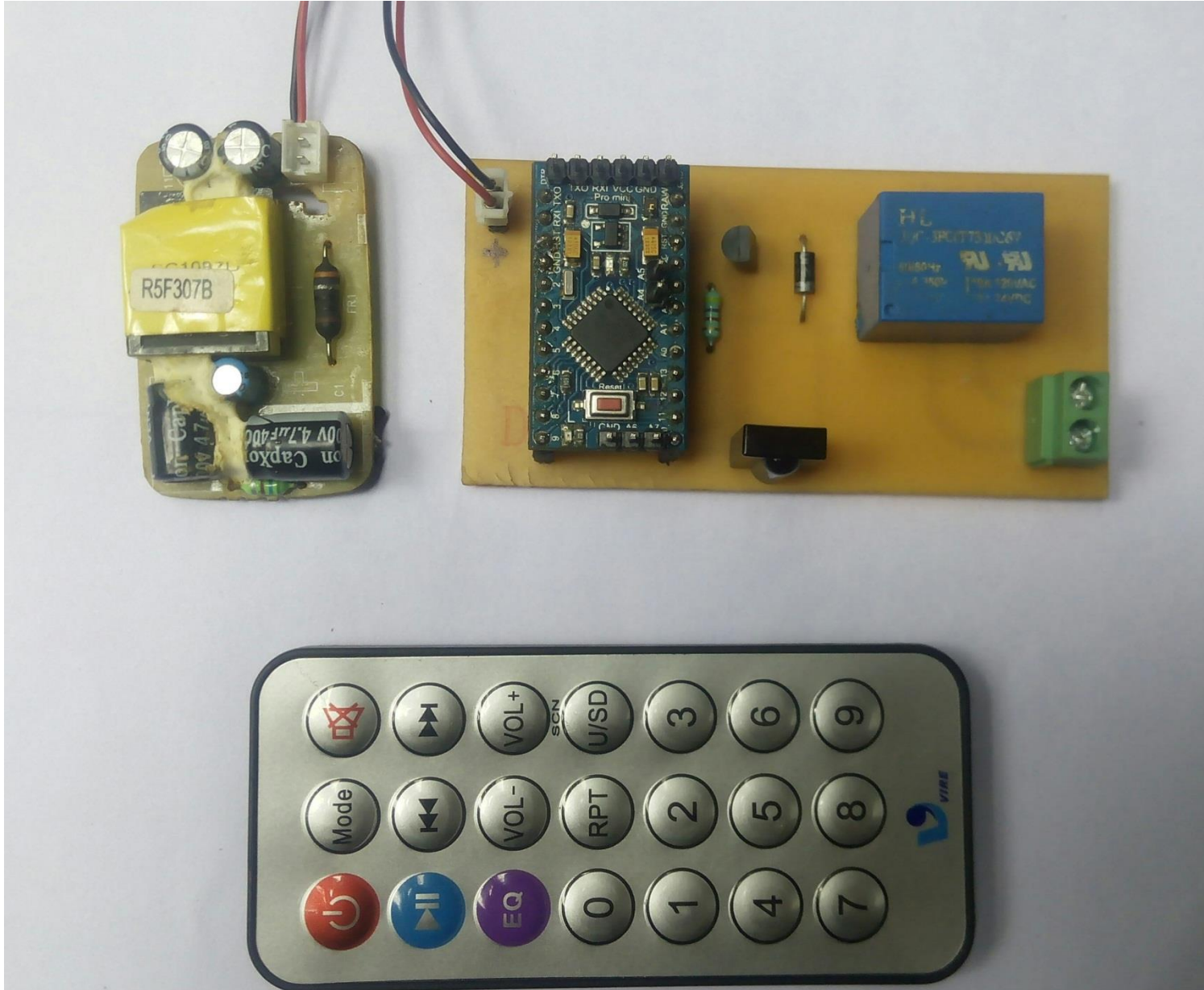
Control AC devices

- Two part circuit.
- Relay circuit is required.

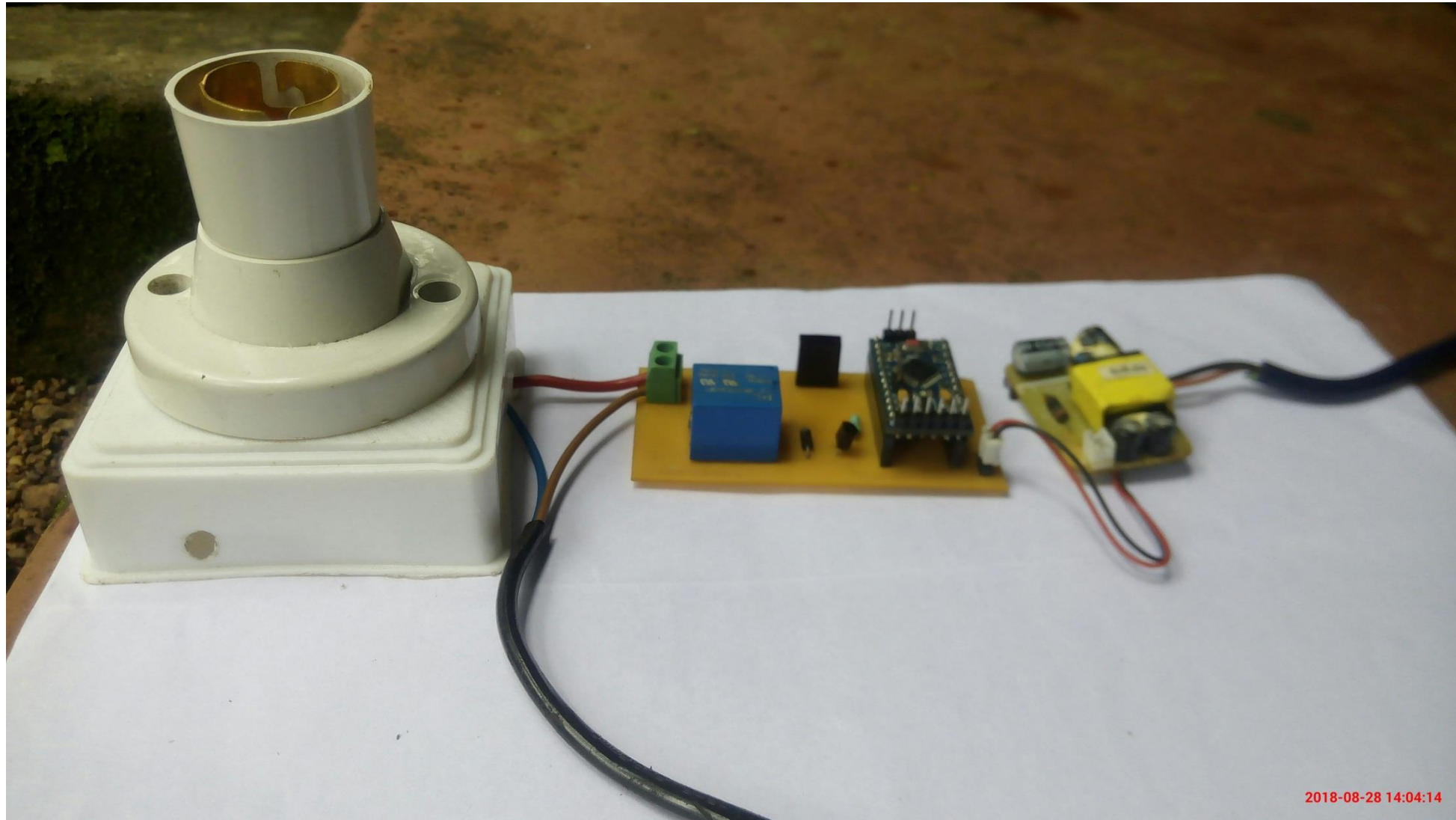








<https://www.electronicsforu.com/electronics-projects/decode-ir-remote-home-automation>



THANK YOU!