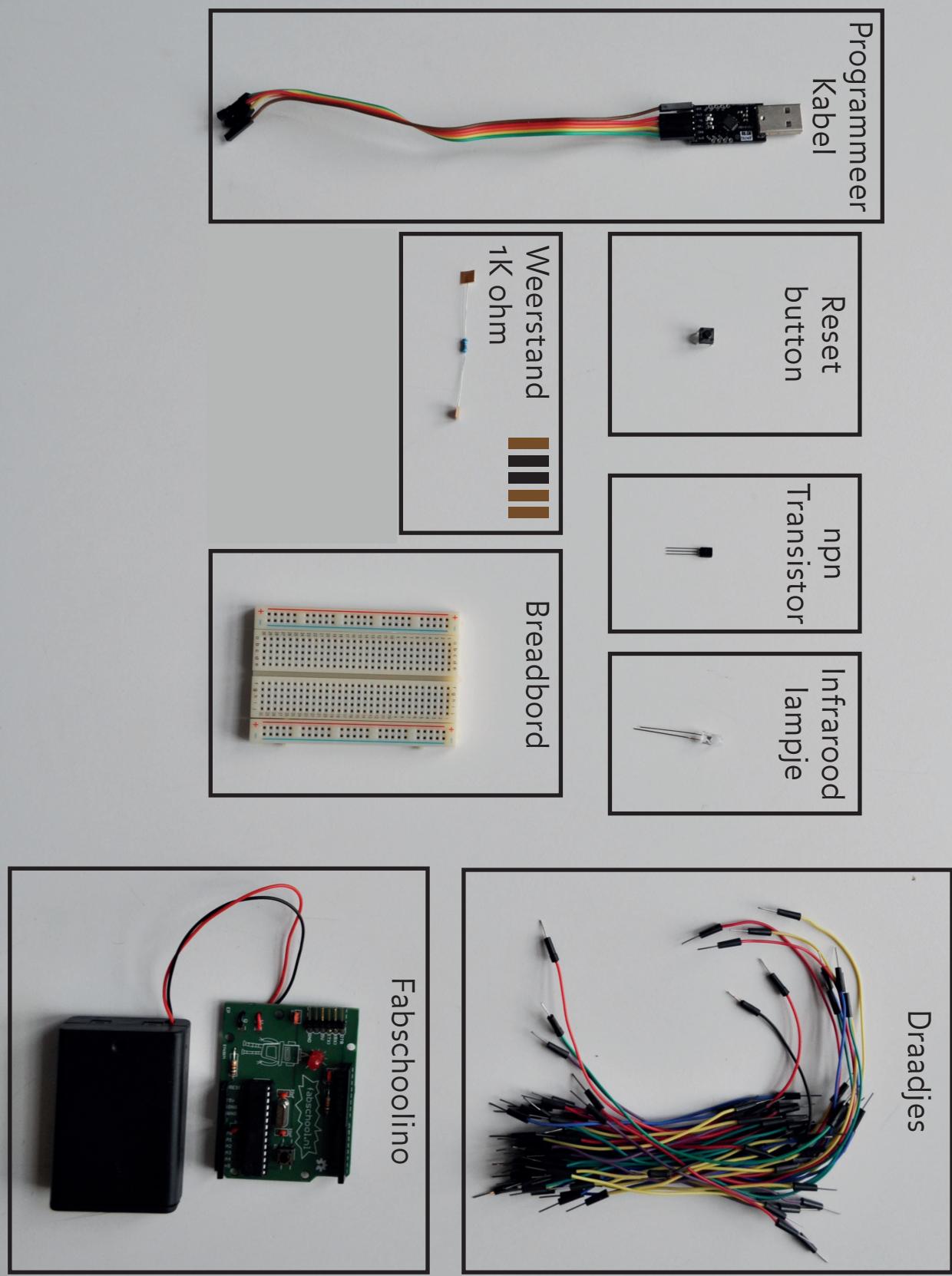


Onderdelen



Dit is een overzicht van alle componenten uit zakje 2 plus de Fabschoolino uit de Fabschoolino basiskit van Waag Society.
Begin je net aan de Instructable? Check dan voor alle zekerheid of je alle bovenstaande benodigde materialen hebt.

fabschoolino Connecting a USB connector

CODE / HACK / PLAY

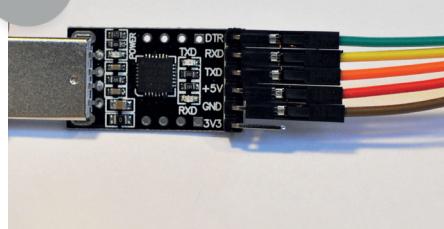
The following four steps will show you how to connect the USB connector so you can upload code onto your Fabschoolino. If you already know how to do this, just skip this section.

1



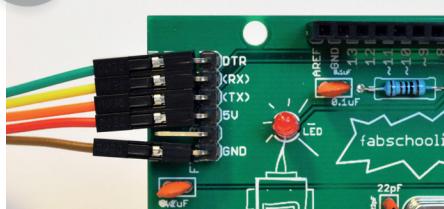
The colour of your cable may differ from those in the Instructable, but don't worry. The cables are exactly the same no matter the colour.

2



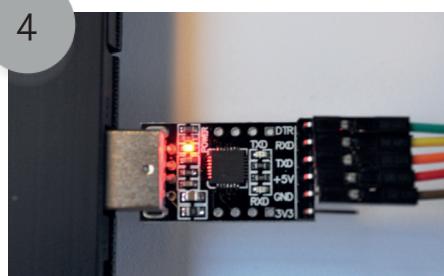
On your USB connector, you'll see a few letters behind each pin. Insert a wire from your cable into each of the pins except for the pin where 3v3 is written.

3



On your Fabschoolino, you'll see the same letters as you see on the USB connector. Insert the wires from the other end of the cable into the pins. Make sure the colours correspond to the USB connector.

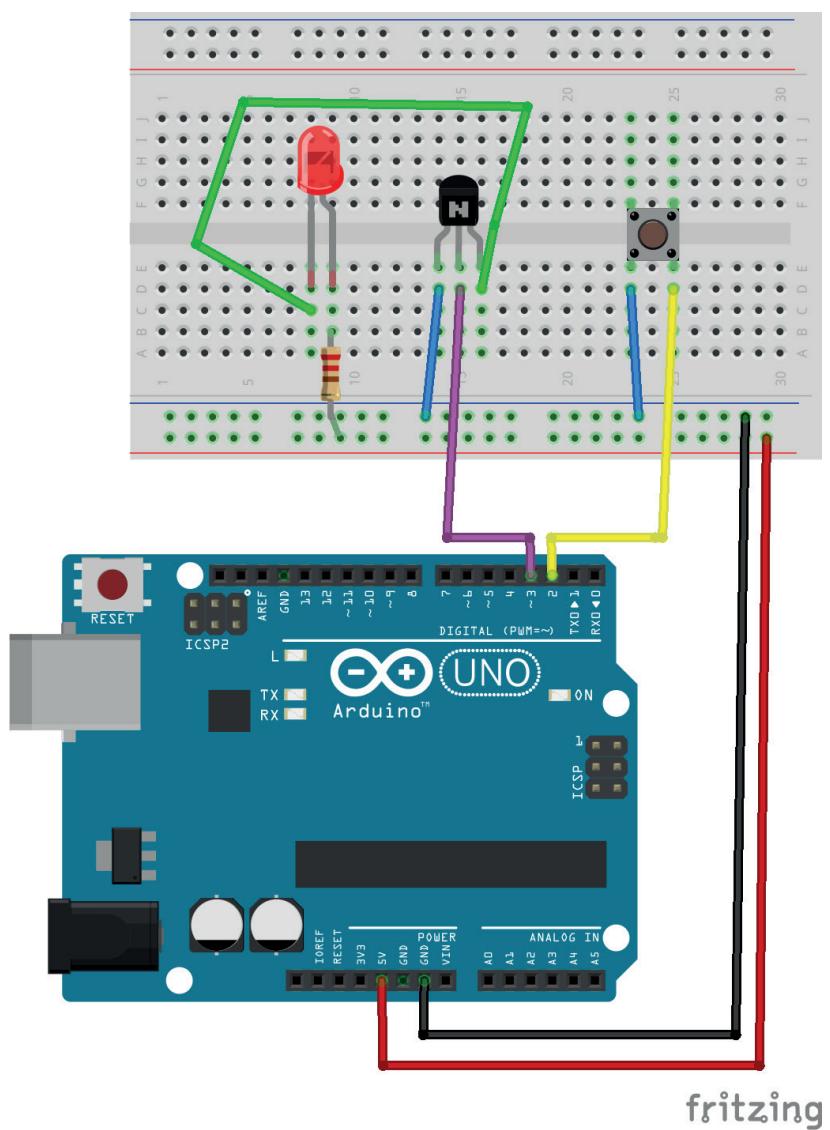
4



Take out the Fabschoolino's battery. Once you've done this, you can insert the USB connector into the USB port on your computer. Then the LED on the connector should light up.

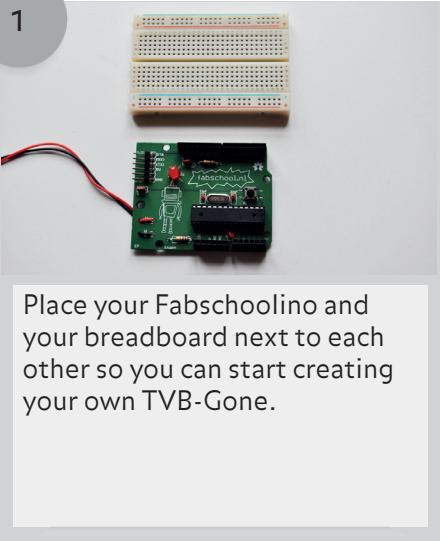


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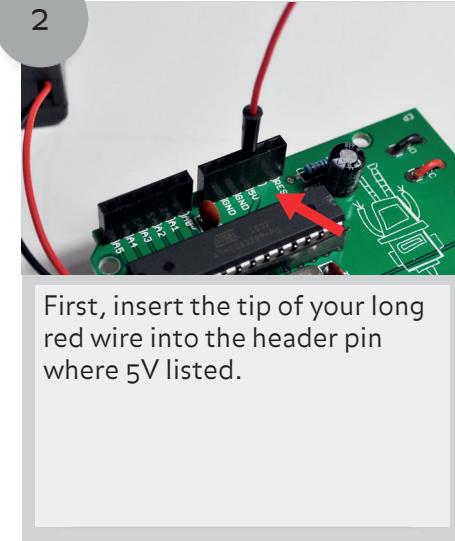
fritzing

1



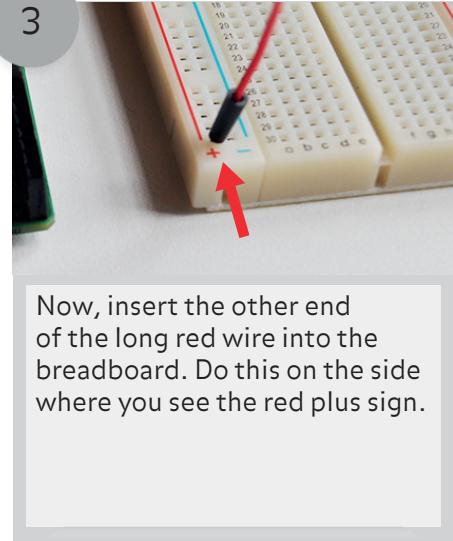
Place your Fabschoolino and your breadboard next to each other so you can start creating your own TVB-Gone.

2



First, insert the tip of your long red wire into the header pin where 5V listed.

3



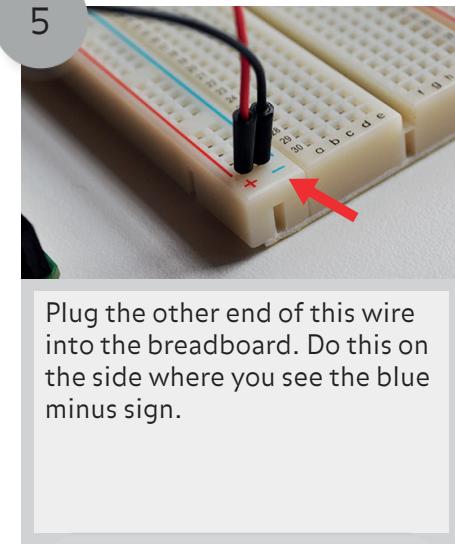
Now, insert the other end of the long red wire into the breadboard. Do this on the side where you see the red plus sign.

4



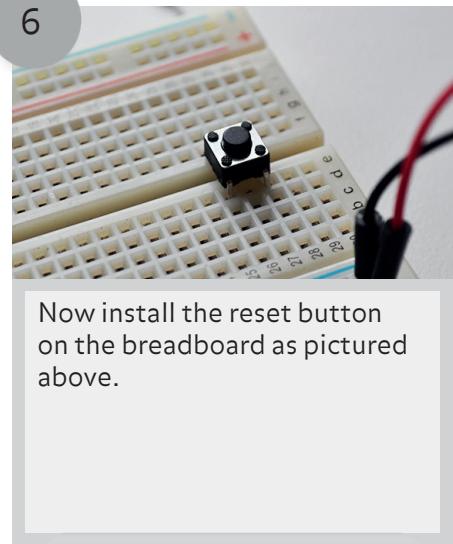
Now take another wire and insert it into the header pin GND / earth on the Fabschoolino.

5



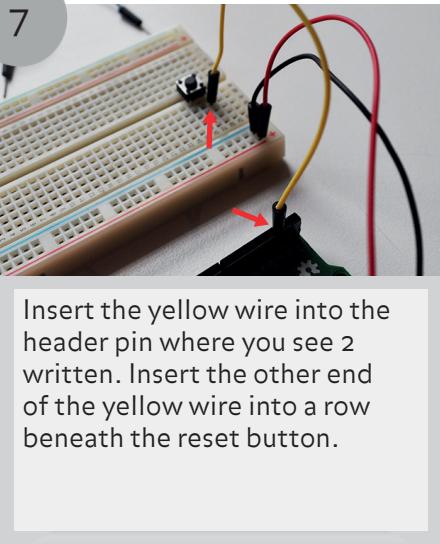
Plug the other end of this wire into the breadboard. Do this on the side where you see the blue minus sign.

6



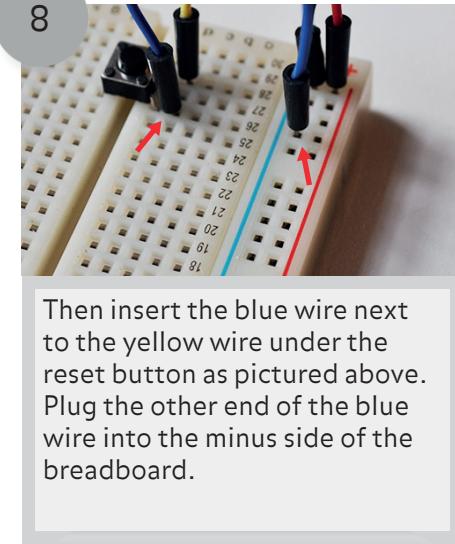
Now install the reset button on the breadboard as pictured above.

7



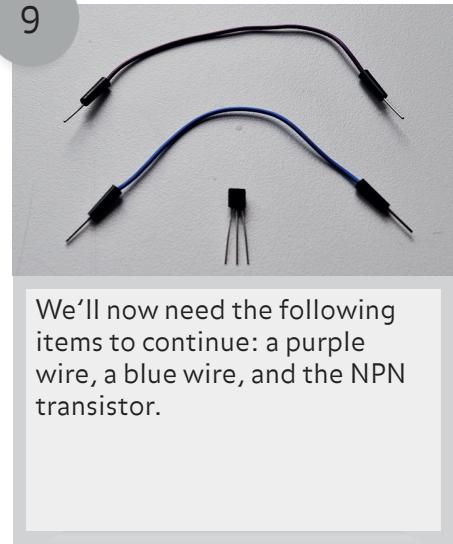
Insert the yellow wire into the header pin where you see 2 written. Insert the other end of the yellow wire into a row beneath the reset button.

8



Then insert the blue wire next to the yellow wire under the reset button as pictured above. Plug the other end of the blue wire into the minus side of the breadboard.

9



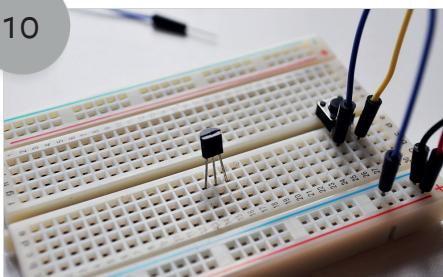
We'll now need the following items to continue: a purple wire, a blue wire, and the NPN transistor.



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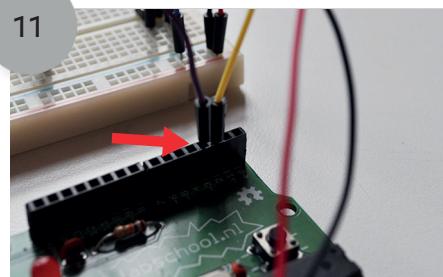
Make a TV-B-Gone

10



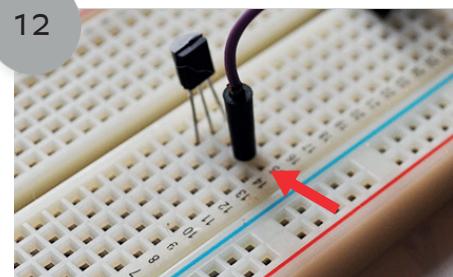
Insert the NPN transistor into the breadboard as pictured above.

11



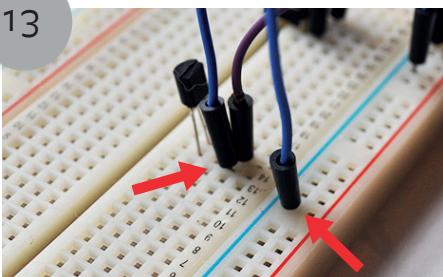
Now insert the purple thread into the header pin 3 on your Fabschoolino.

12



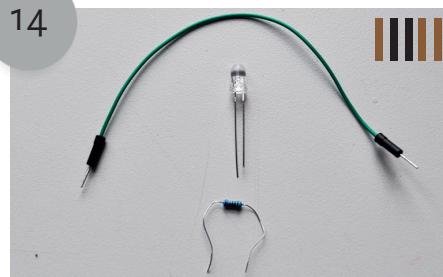
Insert the other end of the purple wire under the NPN transistor. Be sure to do this in a row below the centre-most arm of the transistor.

13



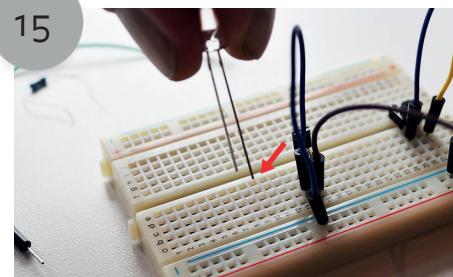
Now insert the blue wire into the breadboard to the left of the purple wire. Plug the other end of the blue wire into the minus side of the breadboard.

14



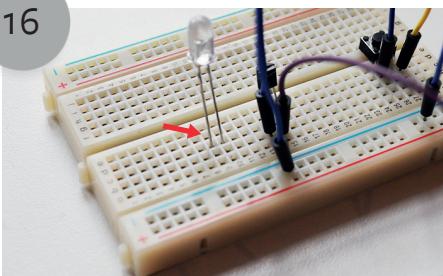
We now need the following items: a green wire, an infrared light, and the 1K ohm resistor.

15



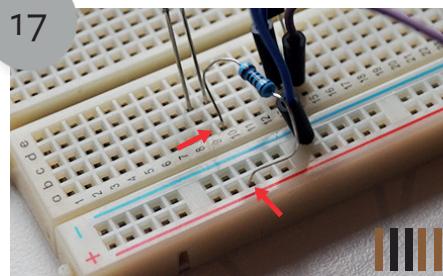
The infrared light has a short and a long leg. Make sure you're holding the light as pictured above before you insert it into the breadboard.

16



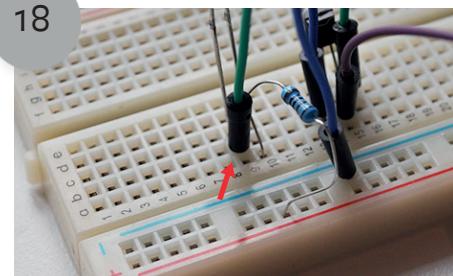
Then insert the light into the breadboard as pictured above.

17



Bend the legs of the resistor and put one leg in a row under the long leg of the infrared light. Plug the other leg of the resistor into the minus side of the breadboard.

18

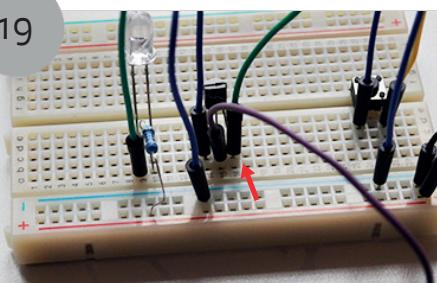


Now take the green wire and place it in a row under the short leg of the infrared light.



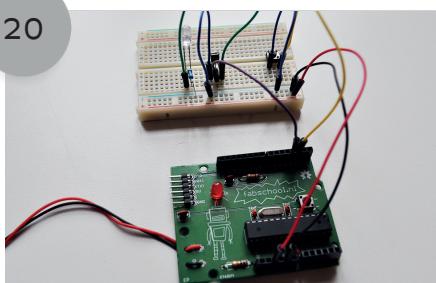
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19



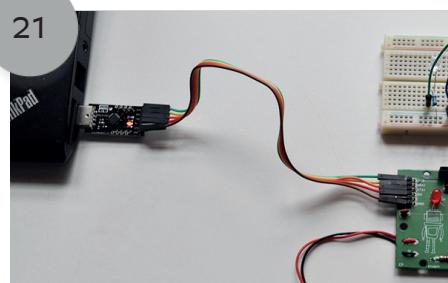
Insert the other side of the green wire into a row below the NPN transistor under the right-hand pin.

20



If you've done this all correctly, it should look like the picture above.

21



It is now time to connect your Fabschoolino to a computer and get coding.

22

[GitHub, Inc. \(US\) | https://github.com/shirriff/Arduino-TV-B-Gone](https://github.com/shirriff/Arduino-TV-B-Gone)

shirriff / Arduino-TV-B-Gone

Code Issues 0 Pull requests 0 Projects 0 Pulse Graphs

The TV-B-Gone software ported to the Arduino platform <http://www.arcfn.com/2010/11/improved-arduino-tv-b-gone.html>

20 commits	1 branch	1 release	2 contributors
Branch: master	New pull request	Find file	Clone or download
Latest commit 1e4e429 17 days ago			
ElectricRCAircraftGuy .gitignore updated			
.gitignore	.gitignore updated	17 days ago	
Arduino-TV-B-Gone.ino	renamed .ino file to Arduino-TV-B-Gone.ino	17 days ago	
README.md	comments update	17 days ago	
WORLD_IR_CODES.h	Updated to v1.3--works w/new gcc now--PROGMEM fixed	17 days ago	
main.h	Updated to v1.3--works w/new gcc now--PROGMEM fixed	17 days ago	
README.md			

Go to "<http://bit.ly/2gGvUCE>" to find the right code.



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23

The TV-B-Gone software ported to the Arduino platform <http://www.arcfn.com/2010/11/improved-arduino-tv-b-gone.html>

Branch: master ▾ New pull request

ElectricRCAircraftGuy .gitignore updated

- .gitignore .gitignore updated
- Arduino-TV-B-Gone.ino renamed Jino file to Arduino-TV-B-Gone.ino
- README.md comments update
- WORLD_IR_CODES.h Updated to v1.3--works w/new gcc now--PROGMEM fixed
- main.h Updated to v1.3--works w/new gcc now--PROGMEM fixed

17 days ago 17 days ago

Find file Clone or download ▾

Clone with HTTPS ⓘ Use Git or checkout with SVN using the web URL.
https://github.com/shirriff/Arduino-TV-B-Gone

Open in Desktop Download ZIP

Click "Clone or Download" and download the ZIP file.

24

U hebt gekozen om het volgende bestand te openen:

Arduino-TV-B-Gone-master.zip

Dit is: Compressed (zipped) Folder
van: https://code4load.github.com

Wat moet Firefox met dit bestand doen?

Openen met WinRAR archiver

Bestand opslaan

Dit vanaf nu automatisch doen voor dit type bestanden

OK Annuleren

The TV-B-Gone software ported to the...

Branch: master ▾ New pull request

ElectricRCAircraftGuy .gitignore updated

- .gitignore .gitignore updated
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17 days ago 17 days ago

Find file Clone or download ▾

Clone with HTTPS ⓘ Use Git or checkout with SVN using the web URL.
https://github.com/shirriff/Arduino-TV-B-Gone

Open in Desktop Download ZIP

duino-tv-b-gone.html

2 contributors

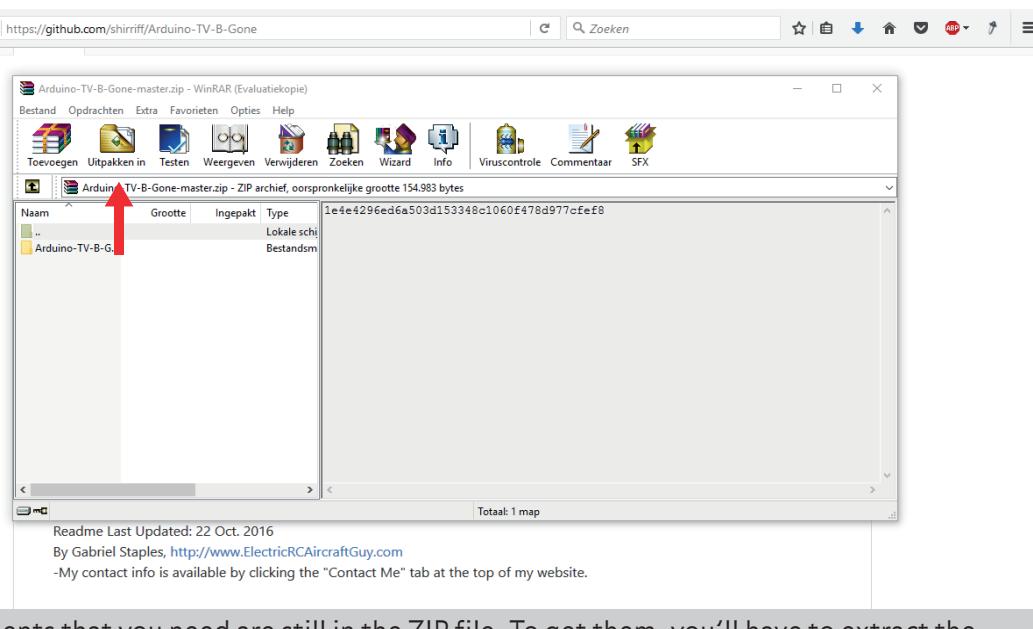
Find file Clone or download ▾

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https://github.com/shirriff/Arduino-TV-B-Gone

Open in Desktop Download ZIP

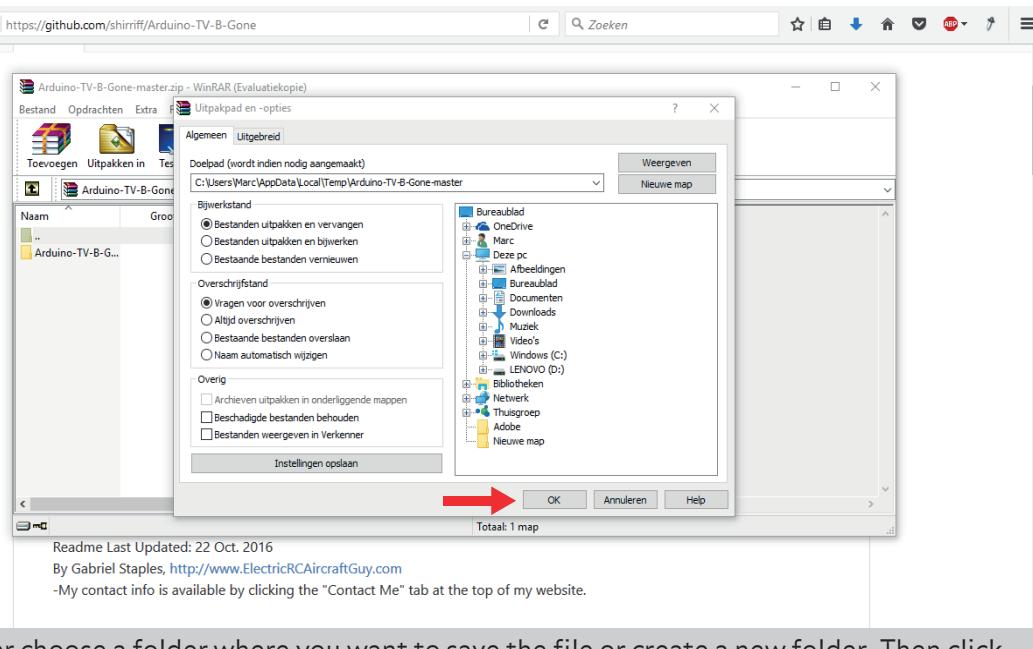
Click OK to open the file using WinRAR or any other ZIP program.

25



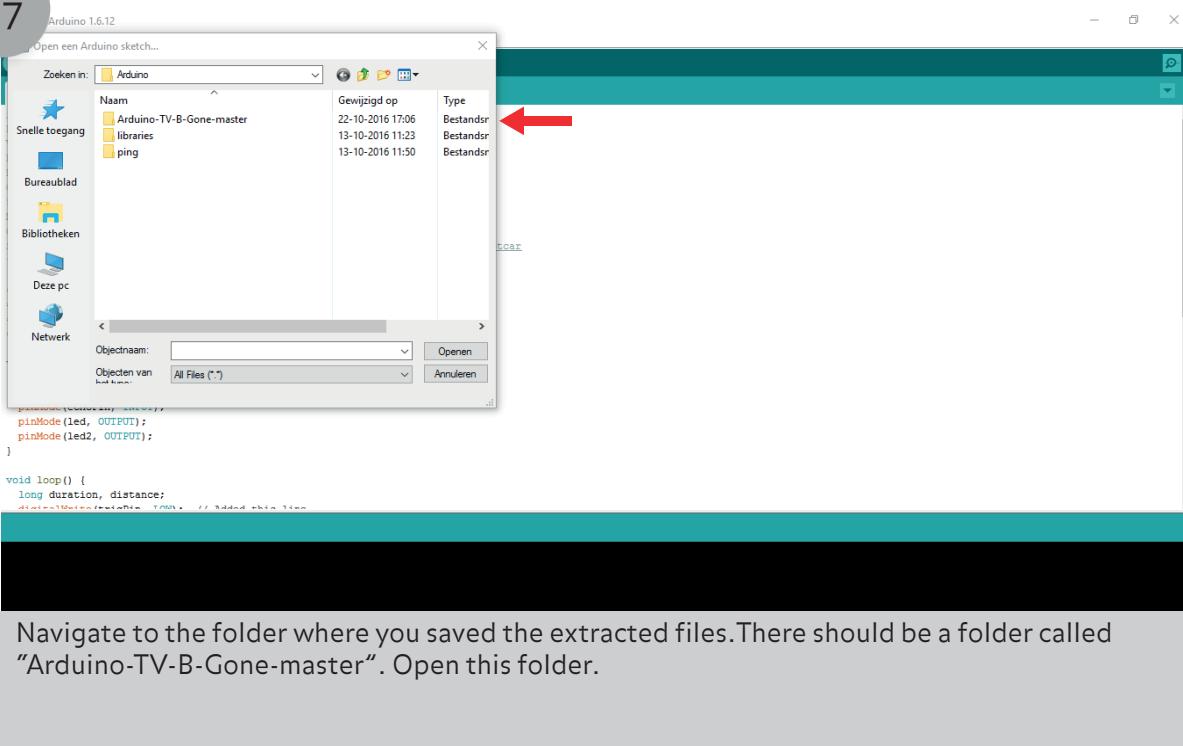
The documents that you need are still in the ZIP file. To get them, you'll have to extract the file. You can do this by clicking on the "Extract to" button.

26



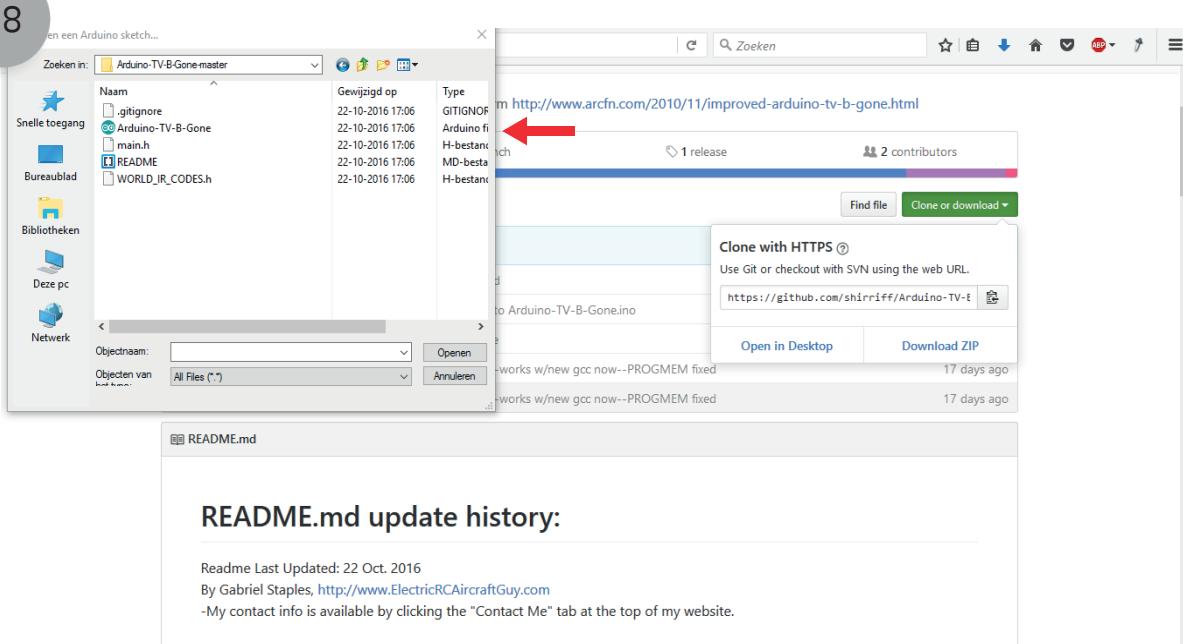
Now, either choose a folder where you want to save the file or create a new folder. Then click OK.

27



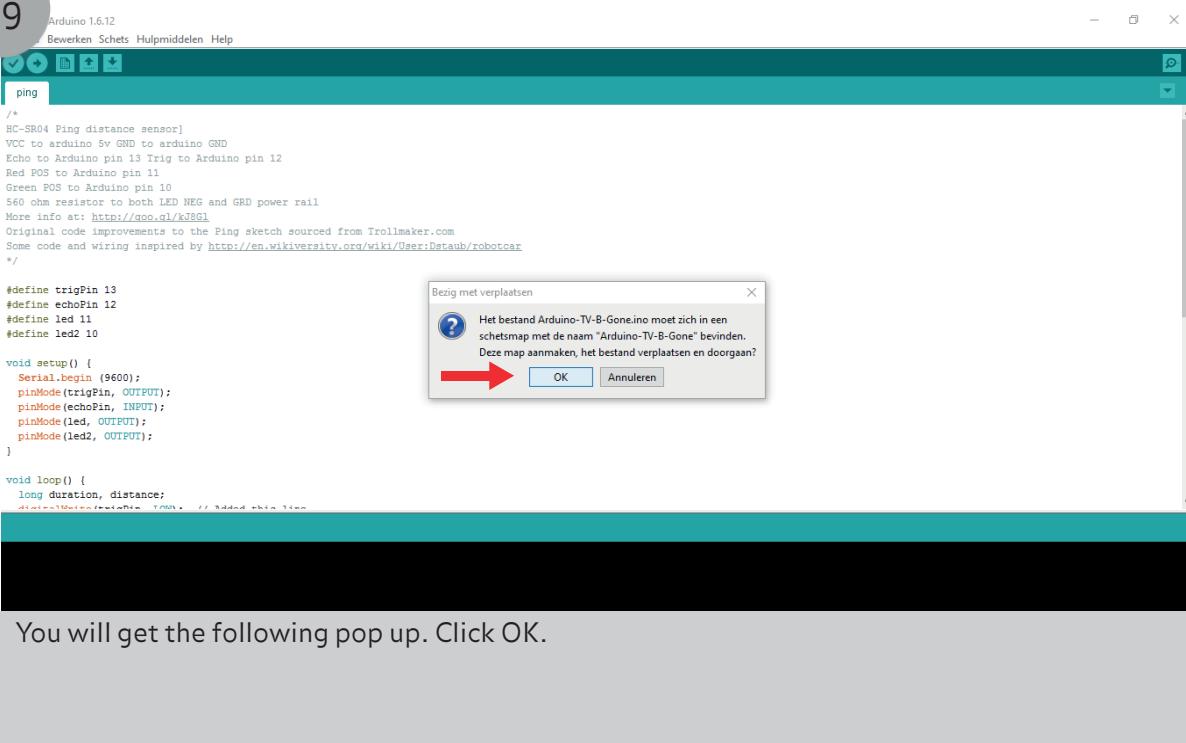
Navigate to the folder where you saved the extracted files. There should be a folder called "Arduino-TV-B-Gone-master". Open this folder.

28



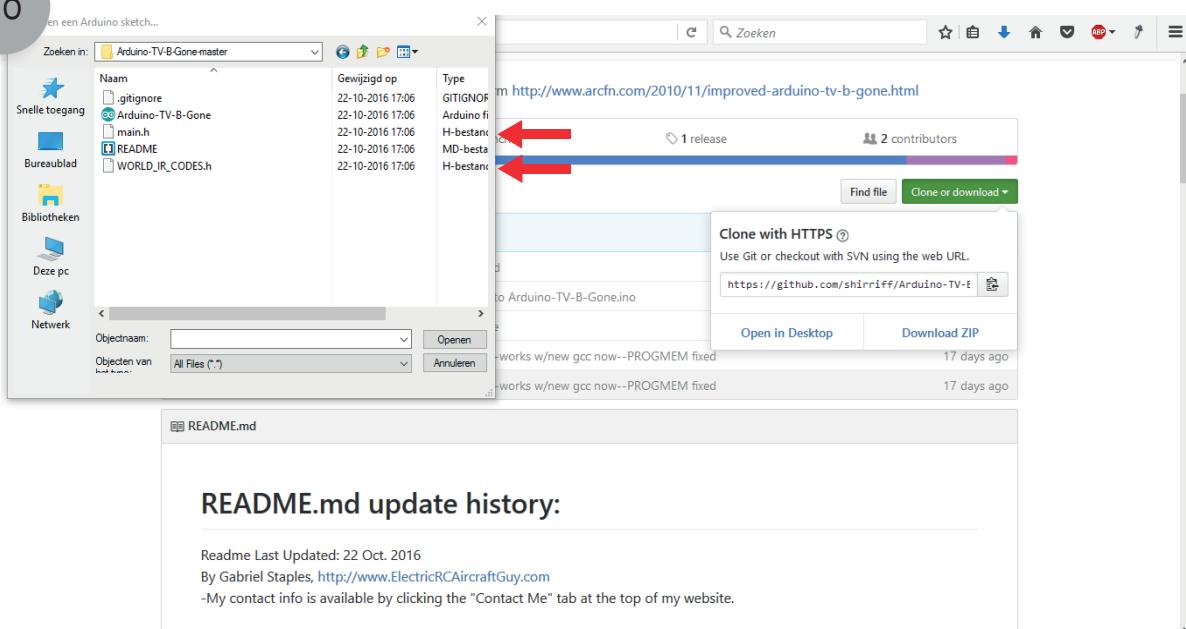
Double click on "Arduino-TV-B-Gone.ino" to put the code into the Arduino compiler.

29



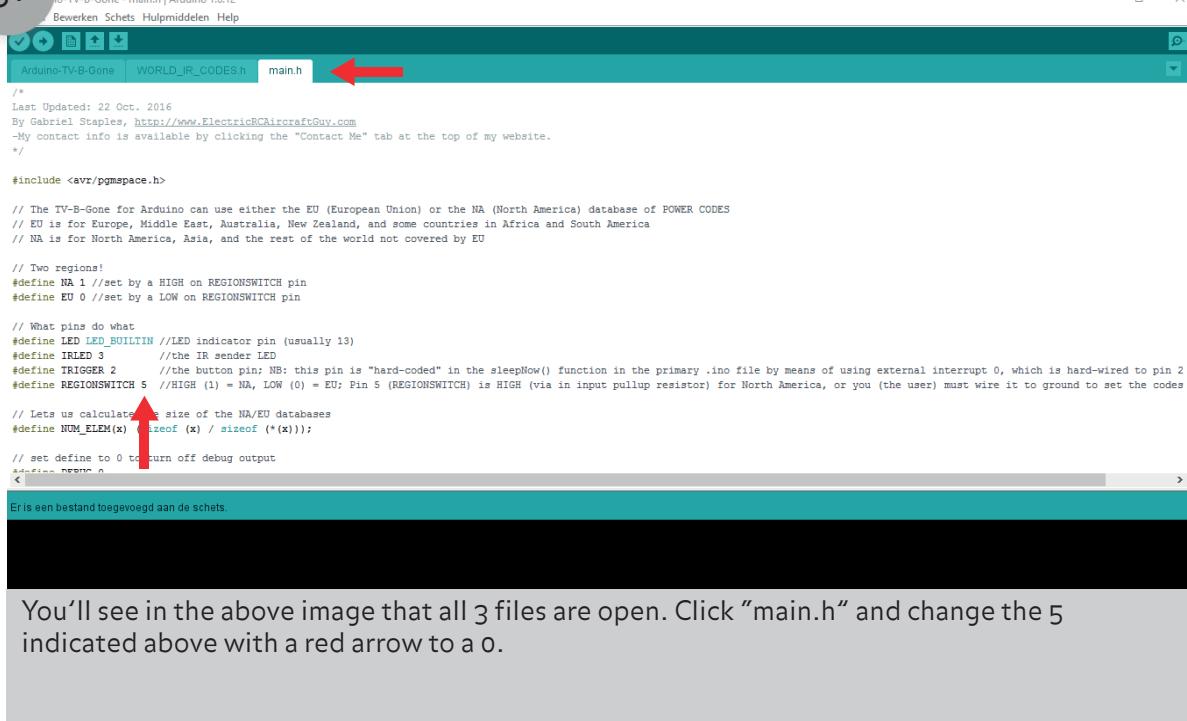
You will get the following pop up. Click OK.

30



Go back to the folder "Arduino-TV-B-Gone-master". Now, open the files "mail.h" and "WORLD_IR_CODE.h"

31



```

Arduino-TV-B-Gone - main.h | Arduino 1.6.12
Bewerken Schets Hulpmiddelen Help
Arduino-TV-B-Gone WORLD_IR_CODES.h main.h
/*
Last Updated: 22 Oct. 2016
By Gabriel Staples, http://www.ElectricRCaircraftGuy.com
-My contact info is available by clicking the "Contact Me" tab at the top of my website.
*/
#include <avr/pgmspace.h>

// The TV-B-Gone for Arduino can use either the EU (European Union) or the NA (North America) database of POWER CODES
// EU is for Europe, Middle East, Australia, New Zealand, and some countries in Africa and South America
// NA is for North America, Asia, and the rest of the world not covered by EU

// Two regions!
#define NA 1 //set by a HIGH on REGIONSWITCH pin
#define EU 0 //set by a LOW on REGIONSWITCH pin

// What pins do what
#define LED_LED_BUILTIN //LED indicator pin (usually 13)
#define IRLED 3 //the IR sender LED
#define TRIGGER 2 //the button pin; NB: this pin is "hard-coded" in the sleepNow() function in the primary .ino file by means of using external interrupt 0, which is hard-wired to pin 2
#define REGIONSWITCH 5 //HIGH (1) = NA, LOW (0) = EU; Pin 5 (REGIONSWITCH) is HIGH (via an input pullup resistor) for North America, or you (the user) must wire it to ground to set the codes

// Lets us calculate the size of the NA/EU databases
#define NUM_ELEM(x) (sizeof (x) / sizeof (*x));

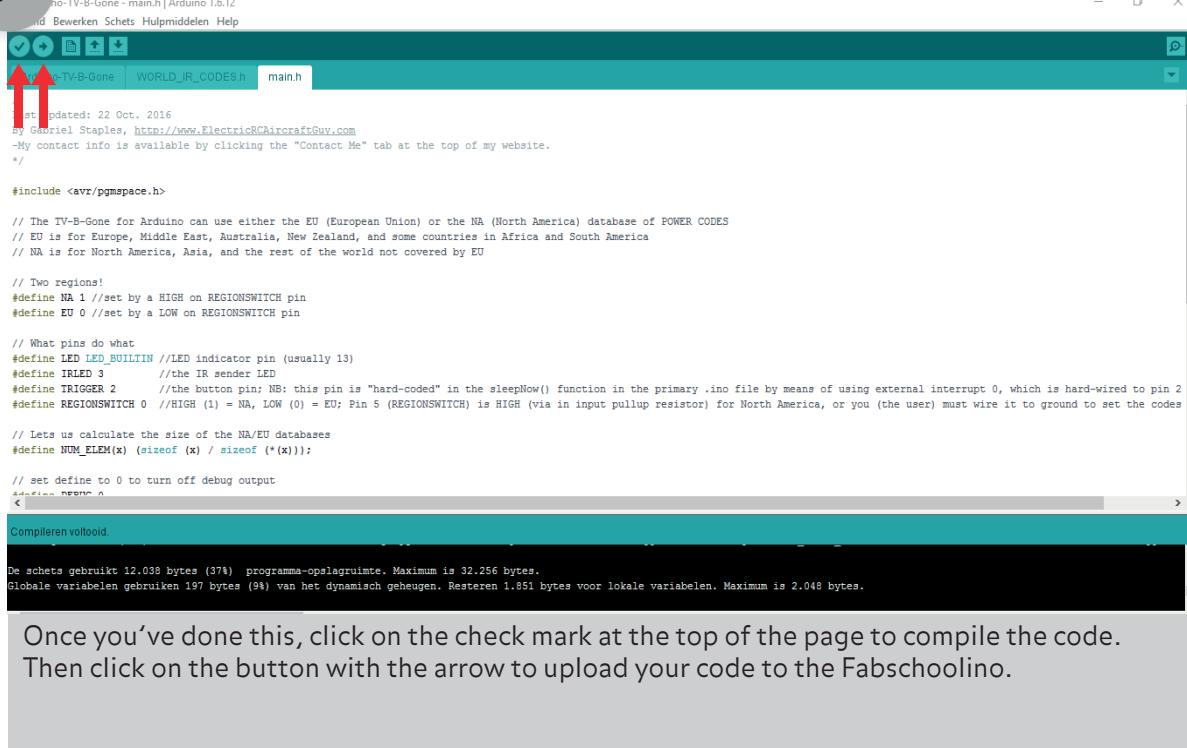
// set define to 0 to turn off debug output
#define DEBUG 0

Eris een bestand toegevoegd aan de schets.

```

You'll see in the above image that all 3 files are open. Click "main.h" and change the 5 indicated above with a red arrow to a 0.

32



```

Arduino-TV-B-Gone - main.h | Arduino 1.6.12
Bewerken Schets Hulpmiddelen Help
Arduino-TV-B-Gone WORLD_IR_CODES.h main.h
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#define TRIGGER 2 //the button pin; NB: this pin is "hard-coded" in the sleepNow() function in the primary .ino file by means of using external interrupt 0, which is hard-wired to pin 2
#define REGIONSWITCH 0 //HIGH (1) = NA, LOW (0) = EU; Pin 5 (REGIONSWITCH) is HIGH (via an input pullup resistor) for North America, or you (the user) must wire it to ground to set the codes

// Lets us calculate the size of the NA/EU databases
#define NUM_ELEM(x) (sizeof (x) / sizeof (*x));

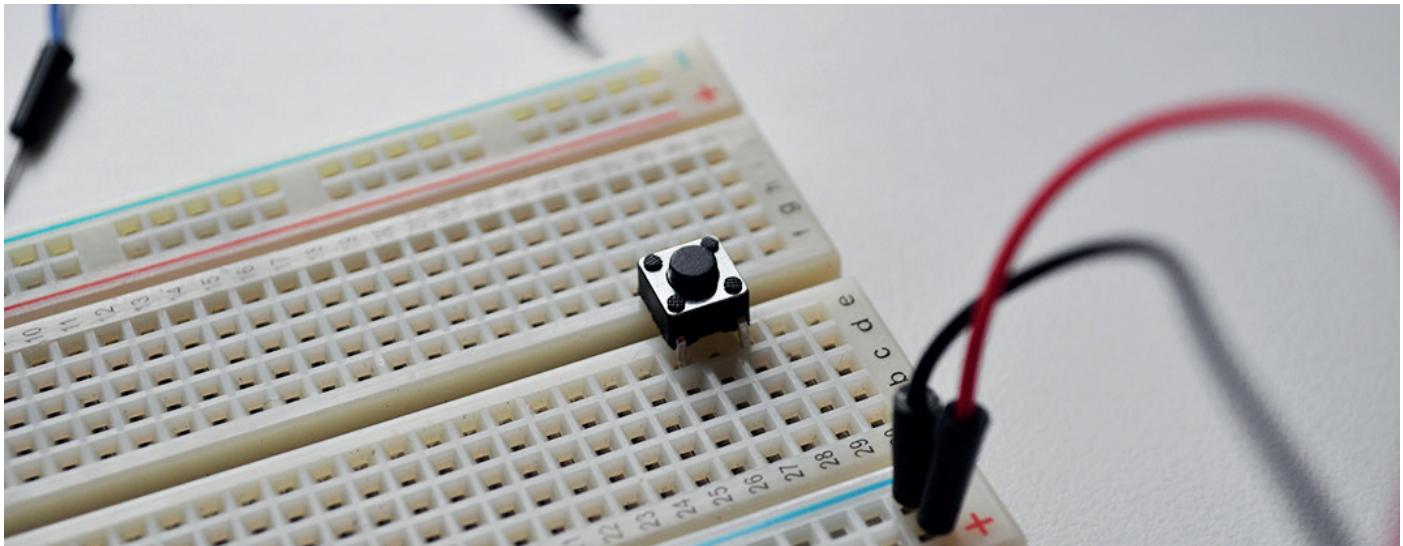
// set define to 0 to turn off debug output
#define DEBUG 0

Compilieren voltooid.

De schets gebruikt 12.038 bytes (37%) programma-opslagruimte. Maximum is 32.256 bytes.
Globale variabelen gebruiken 197 bytes (9%) van het dynamisch geheugen. Resteren 1.851 bytes voor lokale variabelen. Maximum is 2.048 bytes.

```

Once you've done this, click on the check mark at the top of the page to compile the code. Then click on the button with the arrow to upload your code to the Fabschoolino.



After you upload your code, click the reset button on the breadboard. To make sure that your TVB-Gone works, you can replace the infrared light with the LED from your starter kit. If the LED lights up, that means your TVB-Gone is working. After you've tested it, remove the LED and replace it with the infrared light. Congratulations! You can now turn off any TV you come across. Use your power wisely.