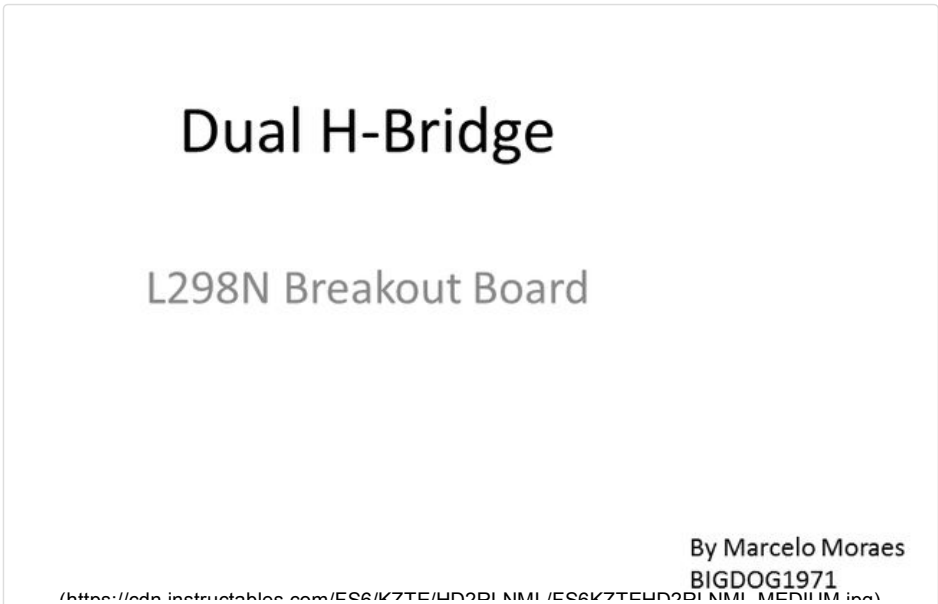
Dual H-Bridge - L298 Breakout Board - Homemade

by BIGDOG1971 (/member/BIGDOG1971/) in arduino (/technology/arduino/)



This is my homemade Dual H-Bridge using the IC L298N.

For control DC motors or step Motors ao other purposes just like you need.

Others projects:

https://www.instructables.com/id/LINUSBot-Line-Follower-Robot/
https://www.instructables.com/id/Basic-Principles/
https://www.instructables.com/id/PINGBot-Explorer-Robot/
https://www.instructables.com/id/3x3x3-LED-Cube-1/
https://www.instructables.com/id/LINUSBot-Line-Follower-Robot-with-PID-control/

Breakout L298N.ppt
Download (https://cdn.instructables.com/ORIG/FGP/QA4T/HD4VDEJR/FGPQA4THD4VDEJR.ppt)
(https://cdn.instructables.com/ORIG/FGP/QA4T/HD4VDEJR/FGPQA4THD4VDEJR.ppt)

Step 1: Hardware and Materials

About This Instructable

94,832 views
105 favorites

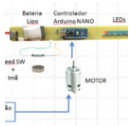
Posted: Feb 13, 2013

License: CC BY-NC-SA

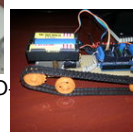
BIGDOG1971 (/member/BIGDOG1971/)
Arduino By Myself (http://arduinobymyself.blogspot
(/member/BIGDOG1971/)
Follow 294

Bio: I am 43 years old and I live in Brazil. I am a Telecommunication / Electronics Engineer. Sixteen years acting in the industry of "Telecommunication and ... More » (/member/BIGDOG1971/)

More by BIGDOG1971:


(/id/Arduino-Propeller-Message-Display-POV/)

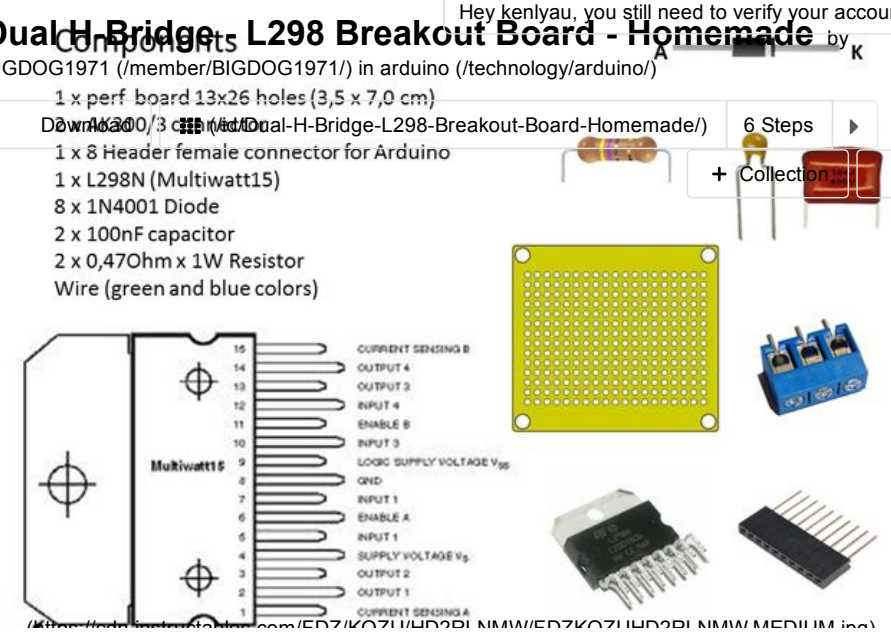

(/id/ARDUINO-by-Myself-Mini-CNC-Plotter/)

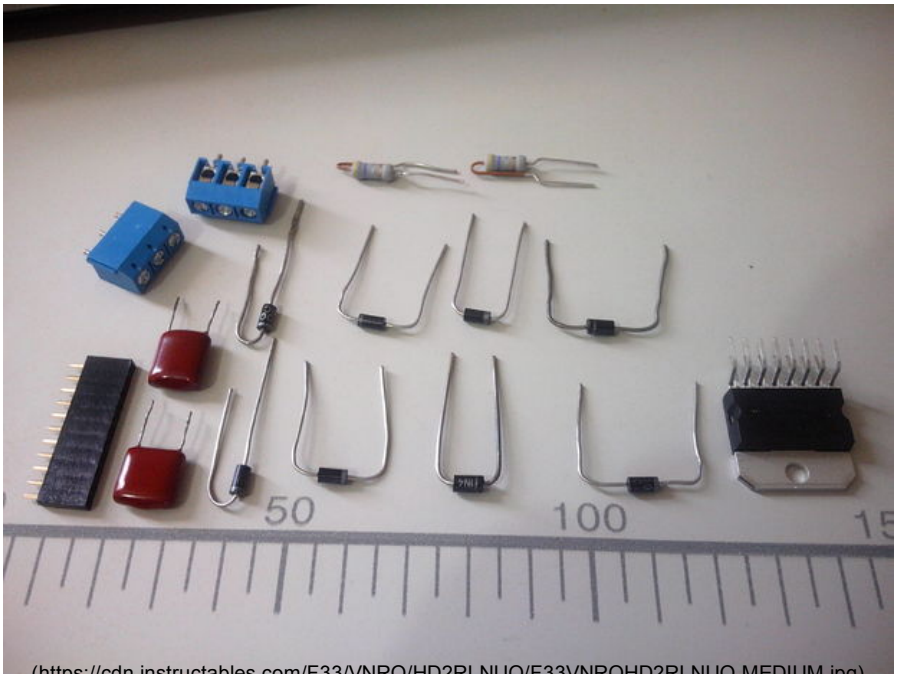

(/id/Arduino-ROVERBot/)

Add instructable to:
Group

Dual H-Bridge - L298 Breakout Board - Homemade

by BIGDOG1971 (/member/BIGDOG1971/) in arduino (/technology/arduino/)





COMPONENTS:

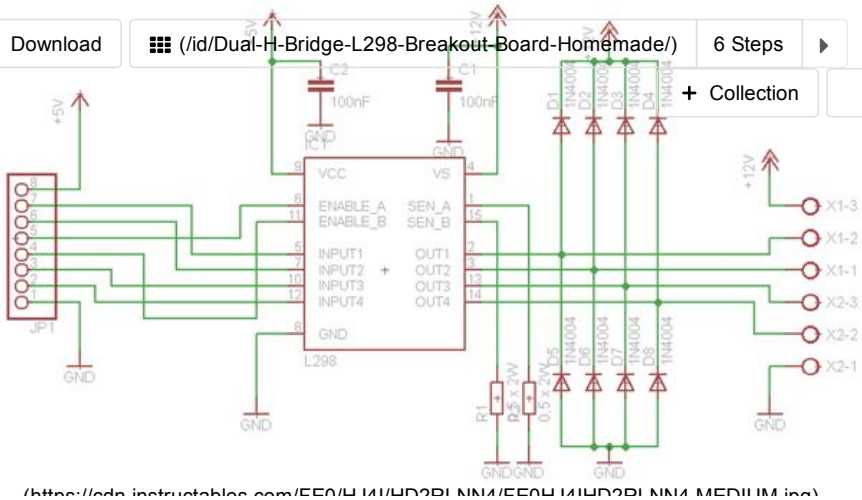
1 x perf board 13x26 holes (3,5 x 7,0 cm)
2 x AK300/3 connector
1 x 8 Header female connector for Arduino
1 x L298N (Multiwatt15)
8 x 1N4001 Diode
2 x 100nF capacitor
2 x 0,47Ohm x 1W Resistor
Wire (green and blue colors)

Step 2: Schematic

Dual H-Bridge - L298 Breakout Board - Homemade

by BIGDOG1971 (/member/BIGDOG1971/) in arduino (/technology/arduino/)

Schematic



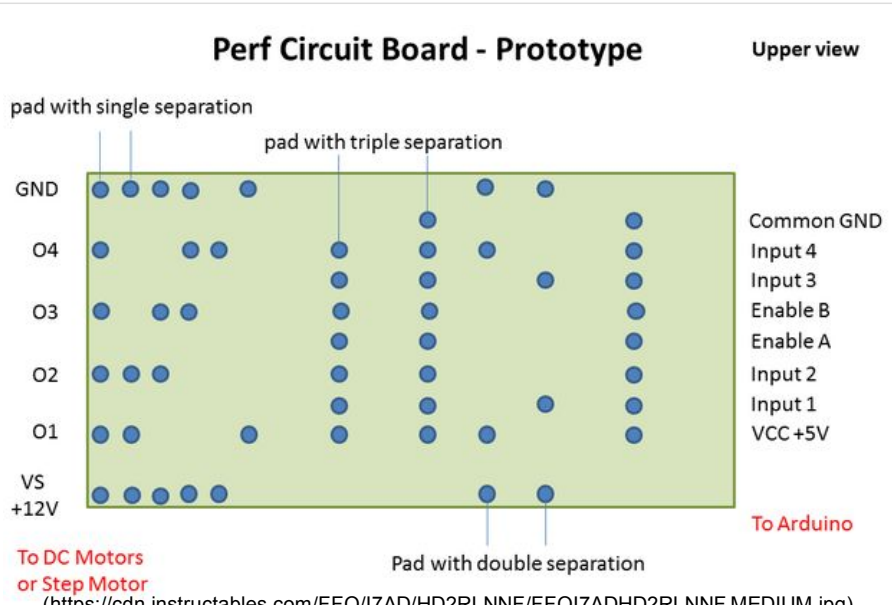
This is the basic schematic. It works perfectly.

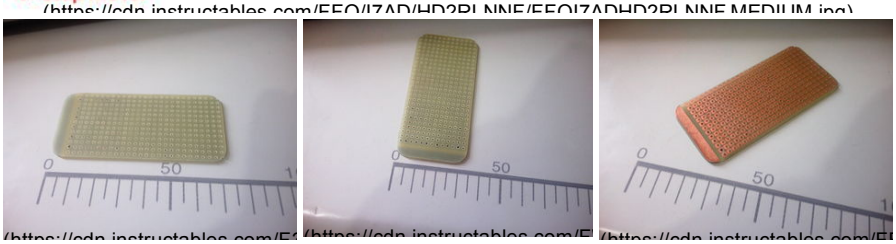
A more advanced schematic and board for eagle cad, you can download from the link below.

http://www.4shared.com/file/T17oVW-z/PONTE_H_L298N.html (http://www.4shared.com/file/T17oVW-z/PONTE_H_L298N.html)

http://www.4shared.com/file/6VdOTgv5/PONTE_H_L298N.html (http://www.4shared.com/file/6VdOTgv5/PONTE_H_L298N.html)

Step 3: 1st Step - Perfboard, Holes Location





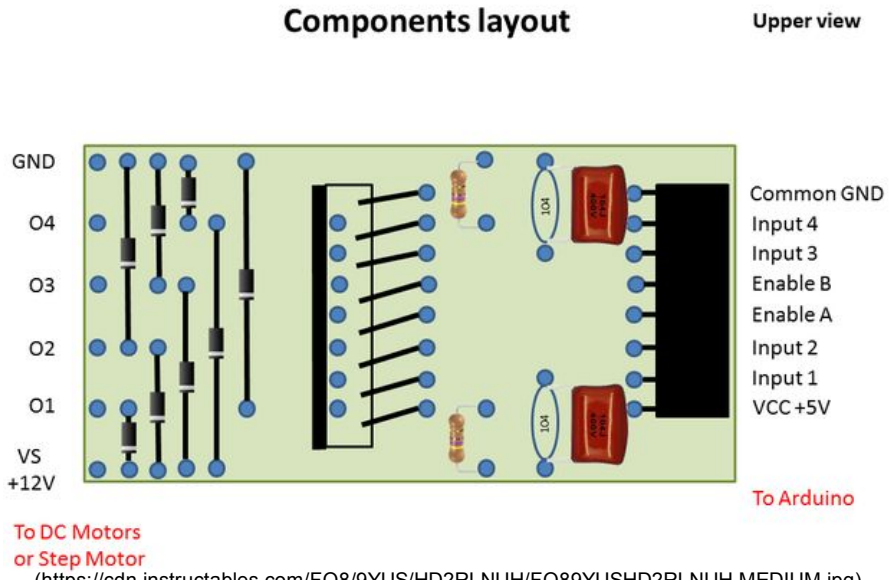
Dual H-Bridge - L298 Breakout Board - Homemade

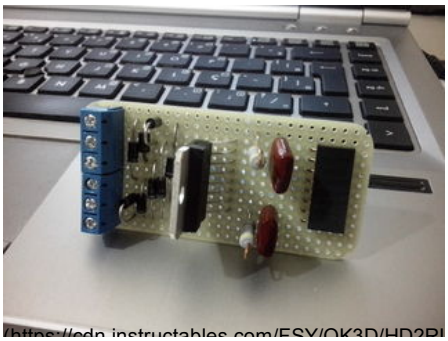
by BIGDOG1971 (/member/BIGDOG1971/) in arduino (/technology/arduino/)

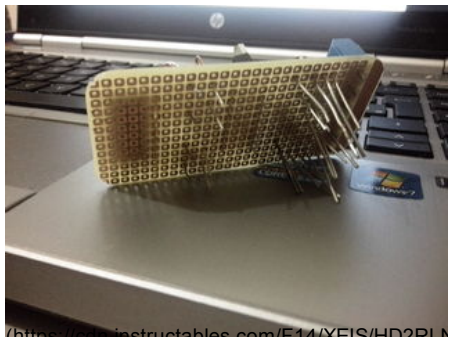
Make a Board with 3,5 x 7,0 cm or 13 x 26 holes.

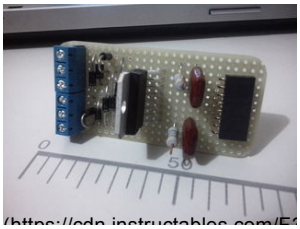
Locate in this board, all holes that we will use for the components.

Step 4: 2nd Step - Components









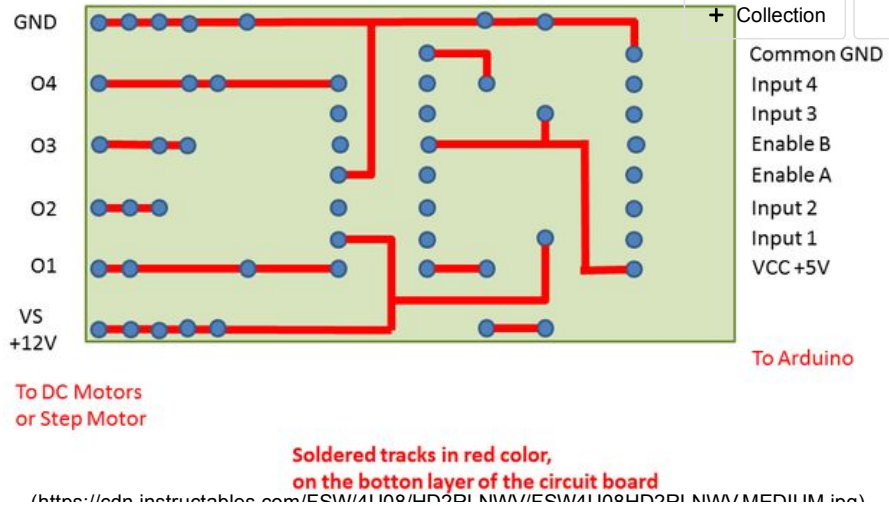
Show All 8 Items

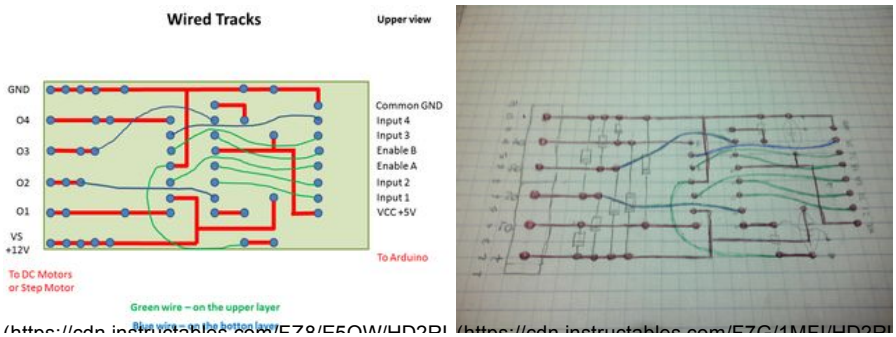
After sanding and cleaning the board, put all components in it according of the diagram above and schematic.
For this, bend components properly.
Do the soldering for each group of components independently, for example: diodes first and then connectors and then capacitors and resistors and finally the L298N IC; or in what order you want or you are used to do.

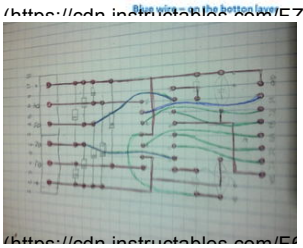
Step 5: 3rd Step - Soldering and Wired Tracks

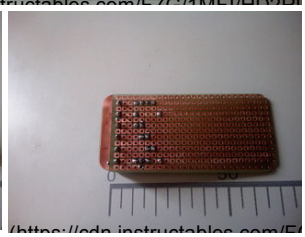
Dual H-Bridge - L298 Breakout Board - Homemade

BIGDOG1971 (/member/BIGDOG1971/) in arduino (/technology/arduino/)









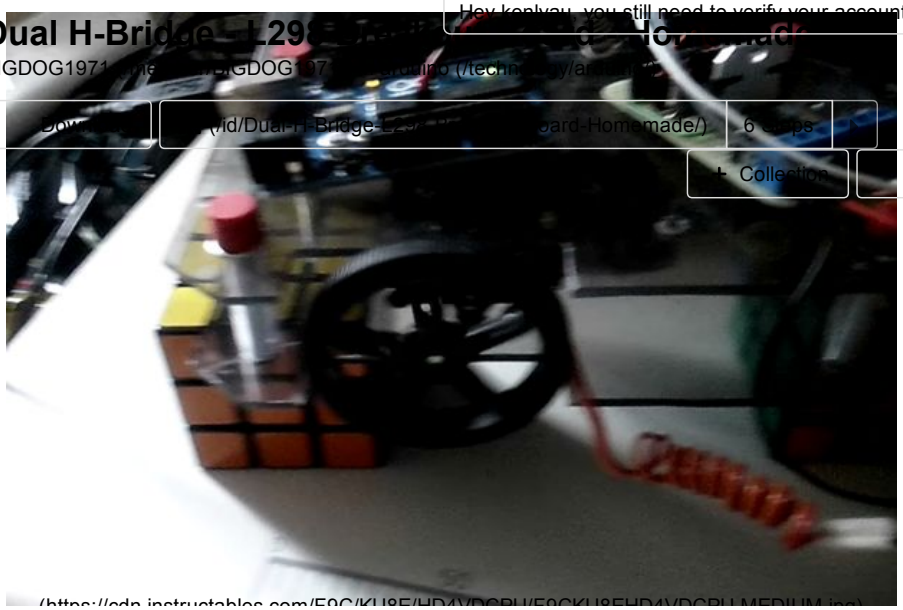
Following the schematic and diagram above, first of all make all soldered tracks in the bottom layer of the board.
After that, solder the jumper wires making the wired tracks.

Note.
Green wires are on the top layer and blue wires are on the bottom layer of the board.

Step 6: 4th Step - Video and Tests

Dual H-Bridge - L298 [illegible] Homemade

BIGDOG1971 [illegible] BIGDOG197[illegible] Arduino (/tech[illegible]y/ard[illegible])



This is my first test of the "Dual H-Bridge" homemade, with the IC-L298N in a Breakout Board.

The cart was controlled by bluetooth (using the "Blue Control" application of the Android market).

Each time we hit in the controls (forward or backward) the DC motor run for 1s, in this way, if we hit twice the motors will run for 2s and so on .
For the left and right, each time we hit the control, the motors will run for 500ms. This temporization can be modified in the program below.

See the entire video for more information; ahh sorry for my English I am studying yet...

http://youtu.be/0conwkmiAoM (http://youtu.be/0conwkmiAoM)

BlueTooth Controlled cart L298N Breakout Board

```
/*
#####################################################################
#####################
#   File:                   BlueTooth_Bot_R1.pde
#   Micro controller:  Arduino UNO ou Teensy++ 2.0
#   Language:           Wiring / C /Processing /Fritzing / Arduino IDE
```