# VGA Pong with Arduino Uno

by **Rob Cai** on September 17, 2015

**Table of Contents**

# Intro: VGA Pong with Arduino Uno

I have repruduced a **color version of the classic Pong** running for a VGA monitor, using a bare **Arduino Uno**.

It is for two players and it has sound too. It has four colors and a resolution of 120 x 60 pixels.

**My goal was to avoid any special shield or support IC!**

I just used few resistors, a DSUB15 connector, a pair of potenziometers and buttons. The Arduino board and the others components are placed in two wood boxes. The second player paddle is connected to the main block by means of a recycled USB cable. Pictures of the whole "console" and a simple schematic are shown at the beginning of this video:

In the past I have reproduced the B&W version for TV, using the TVout libraries...

...but now, insted of the TVout library, the color Pong is done using the VGAx library recently written by Smaffer.

You can read further the details in this Arduino forum

## Instructions to built your own Color Pong with Arduino

In brief, here you can download the latest code version, then you need the VGAx libraries from **Smaffer** on **github** published here.

Once you have the code uploaded an an Arduino Uno (I have Rev. 3) without errors, you can start to build your own console.
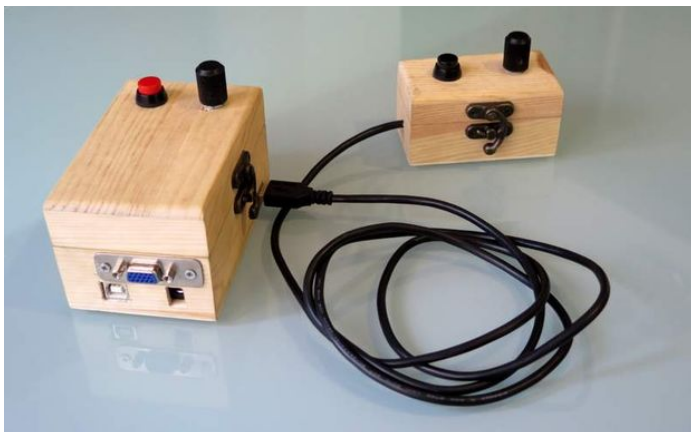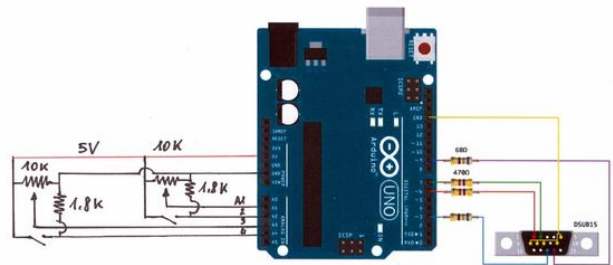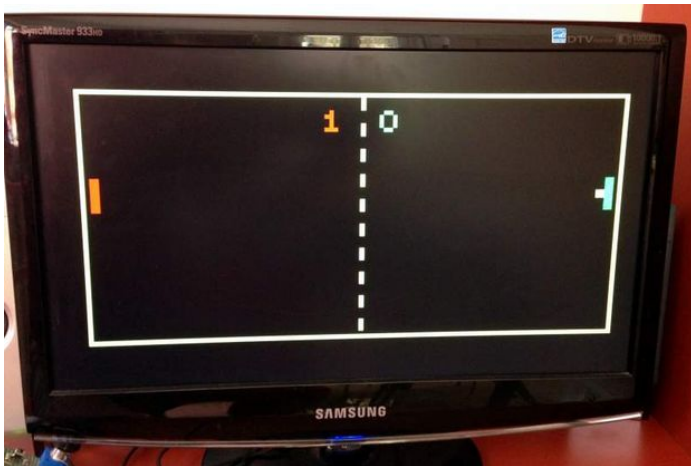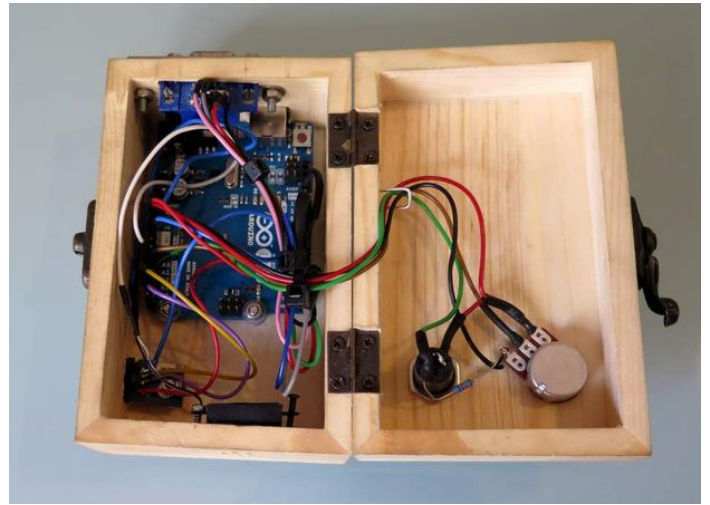
You need:

1. an Arduino Uno Rev. 3
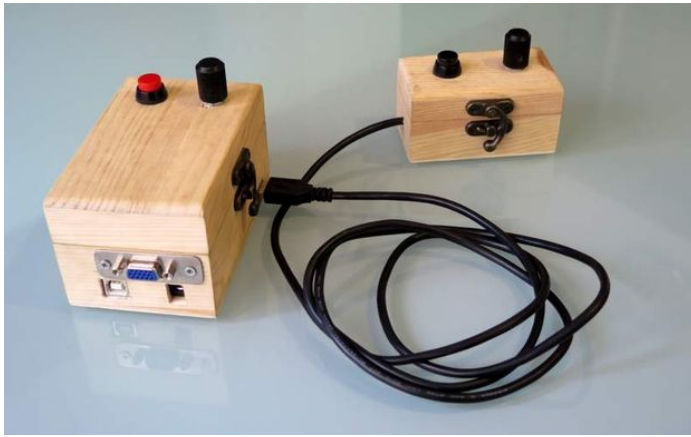2. DSUB15 Connector, i.e. a VGA female connector or a VGA cable to be cut.
3. four resistors: 2 x 68 Ohm and 2 x 470 Ohm
4. two 10 kOhm potentiometers
5. two buttons
6. other two resistors (from 1 to 2 kOhm are fine)
7. some piece of cable
8. facoltative: an USB female plug and an USB cable for the second player, or any other connector/cable with four wires

The schematic is reported at the beginning of this Instructable, together with an overview of the finished consolle and how the game looks on my TV.

I placed the Arduino board with the VGA connector in a wood box, which holds also the first player potentiometer and button. I used a second smaller wood box for the second player and I decided to connect it to the main one by means of an USB female plug and an USB cable. You can use any other connector/cable wich contains at least four separated wires.
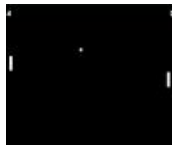
Enjoy!

## Related Instructables



**Littlebits Pong** by Louisville Public Library



**Photo resistor controlled arduino pong with processing** by GIV-ENG-2014



**2-Player Pong Game Using Arduino Uno and 8x8 Led Matrix** (video) by onuravun



**Getting started with Arduino - Potentiometer Pong** by Digital Art and Technology



**Ardu-pong! the Arduino based pong console** by kyle brinkerhoff



**Ponghatduino: Play pong using your hat** by RonanOD

## Comments