

# Arduino and Bluetooth

Interfacing an Arduino Mega with a Sony PS3 controller for an RC project

# Sony PS3 compared to RC

- Smaller form factor
- Longer battery life
- Less processor intensive
- More channels of communication
- PS3 is much cheaper,
- **DISADVANTAGES**
- PS3 has a shorter range of communication
- PS3 is prone to magnetic interference
- PS3 will drop the connection at times
- PS3 is prone to magnetic interference

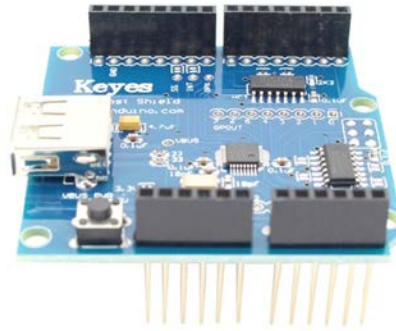


# The hardware

- Arduino Mega or Uno
- Arduino USB Shield – Don't buy on Ebay, buy on Amazon “**Anycubic USB Host Shield 2.0**”
- Arduino Dongle – “**Cybertech Bluetooth CSR v 4.0 Dongle for PC**”
- PS3 Controller – must be SONY original, full size or just the PS3 navigation stick.



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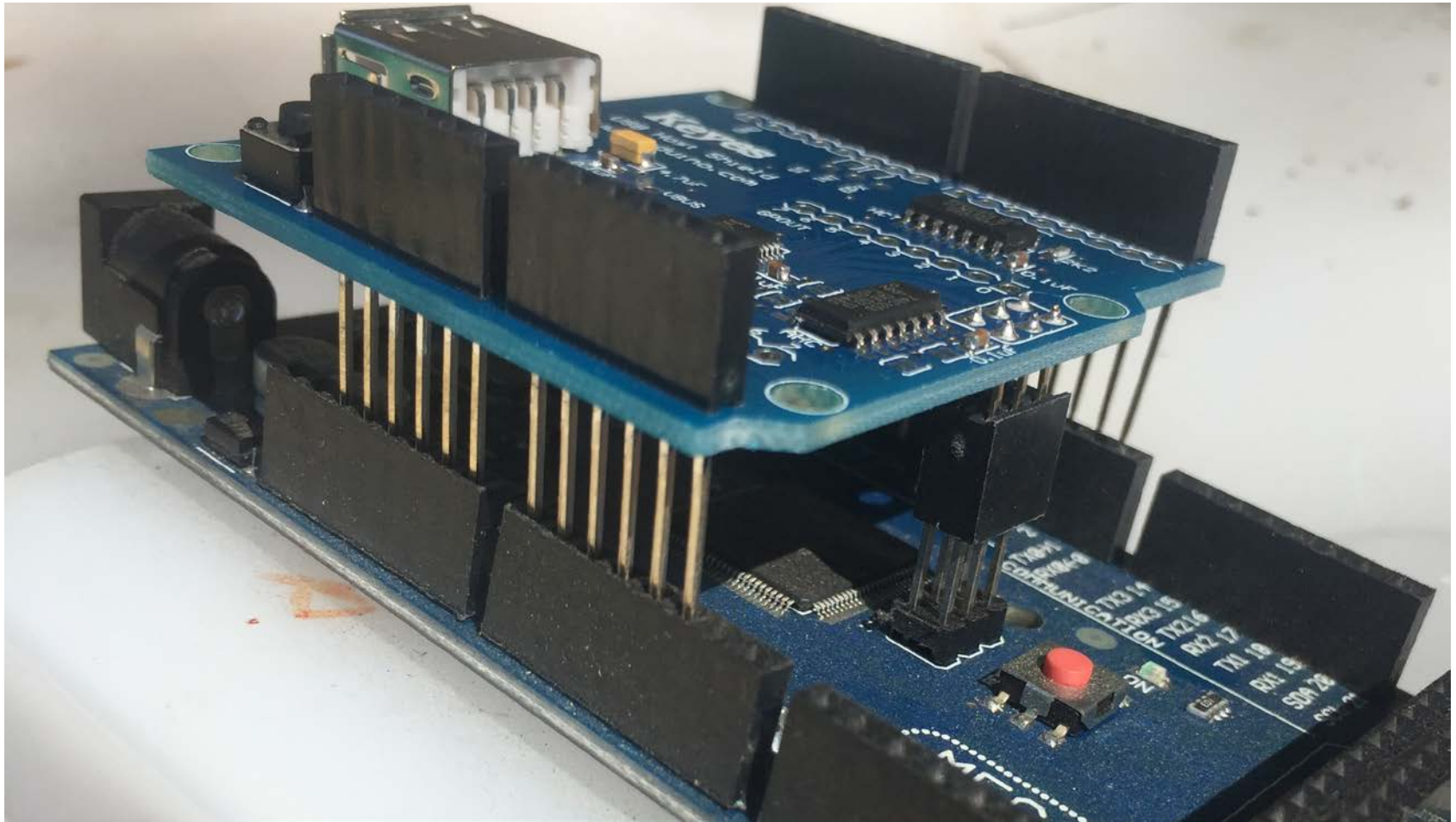


# Download Arduino Library

- **Kristian Sloth Lauszus** from Denmark did all the hard work for us and wrote a library for Bluetooth devices such as PS3 or PS4 .
- Download the library at [https://github.com/felis/USB\\_Host\\_Shield\\_2.0](https://github.com/felis/USB_Host_Shield_2.0)
- Other USB shields and libraries are available, as an alternate check out LinkSprite.com



# Plugging the USB Shield

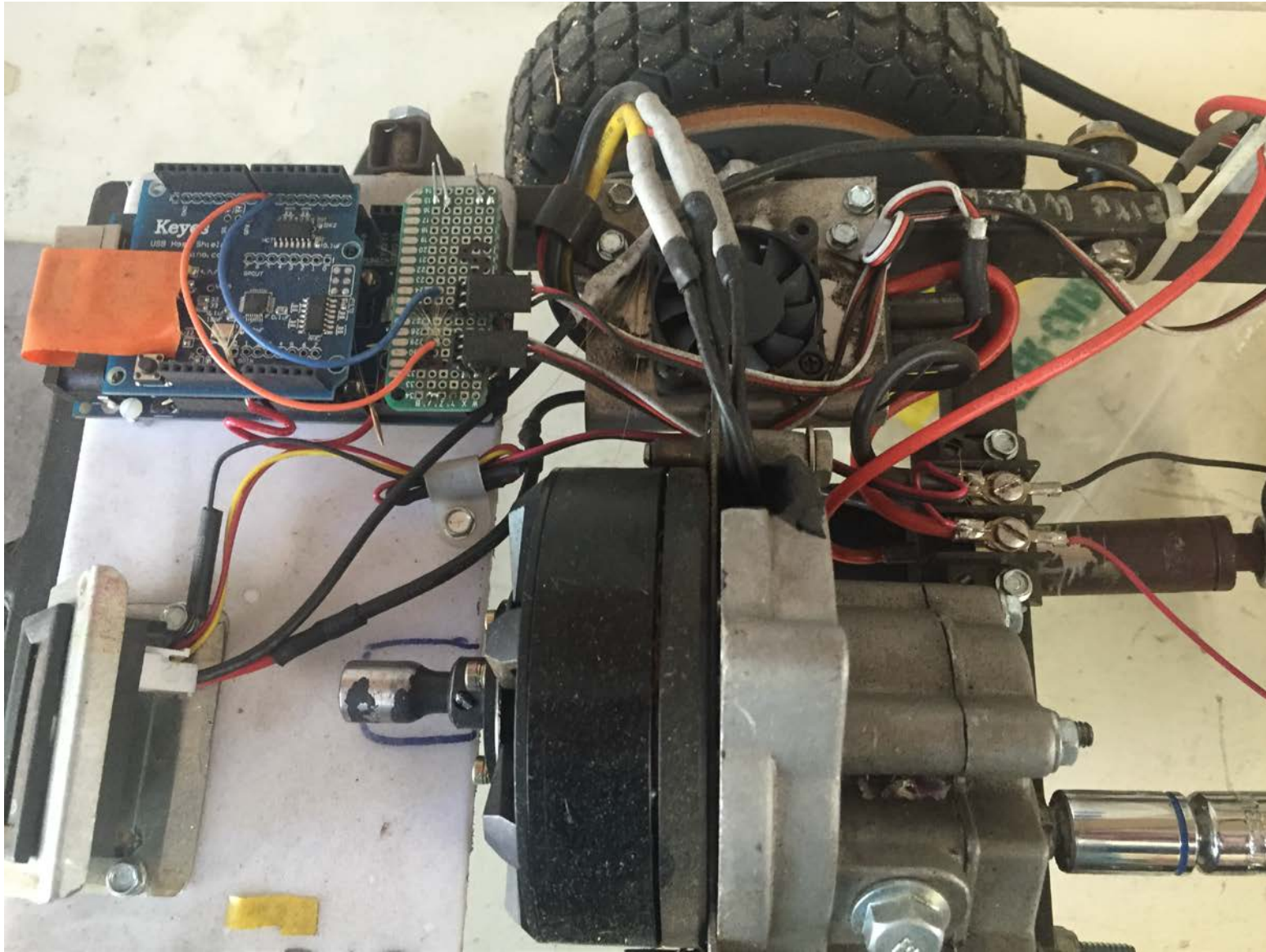


# Hardware Installation

- Plug the USB Shield in the Mega
- **Procedure to pair up the remote with the dongle.**
- PS3 or PS3 navigator can be used with the same procedure. Dongle Must be V3 or V4 backwards compatible. "CSR V4.0" works fine tested by me, the rest I cant promise.
- \* 1. Plug in the USB shield in the Arduino and load an empty sketch, recycle power. Then load the PS3BT example.
- \* 2. Plug in the dongle for 5 sec. in the USB Port,
- \* 3. Unplug dongle and plug in PS3 remote in the USB port. Press "PS" button on the remote and wait 5 sec. The Led will keep flashing but that is OK.
- \* 4. Unplug Remote, and plug back the dongle in the USB Shield port. After 5 sec the LED on the Remote LED should go solid, if not press PS again - Connection established.
- \* After pairing , the current consumption of MEGA Plus the stuff above is 180mA. If more, check if the dongle is hot.
- MUST Respect all steps,
- A video of the pairing procedure is on <https://www.youtube.com/watch?v=7dgXu-HNkRs>



# Bedford Truck with Bluetooth control



# Can you trust it?

- A magnet in the vicinity of the controller will generate signal. It caused a tank accident.
- I tried the PS4, but the same interference is there.
- The inclination signal from the PS3 is not coming through, unless you get a special dongle.
- Check out ServoShock Bluetooth.

