

Game Design

- The Box -

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?!!? THE BOX ?!!?



Phidgets

- ❑ Phidgets = Physical Gadgets (www.phidgets.com)
 - University of Calgary
 - Hardware Interface Kit for the PC
 - Phidgets support low cost input and output of digital and analog signals to and from the PC
 - Based on Universal Serial Bus (USB)
 - Simple Application Programming Interface (API)
 - Application development in Visual Basic or C# (.NET) (Beta support for C, C++, Delphi and Foxpro)
 - Supports own proprietary libraries
 - A number of open source projects available
 - User community forum available

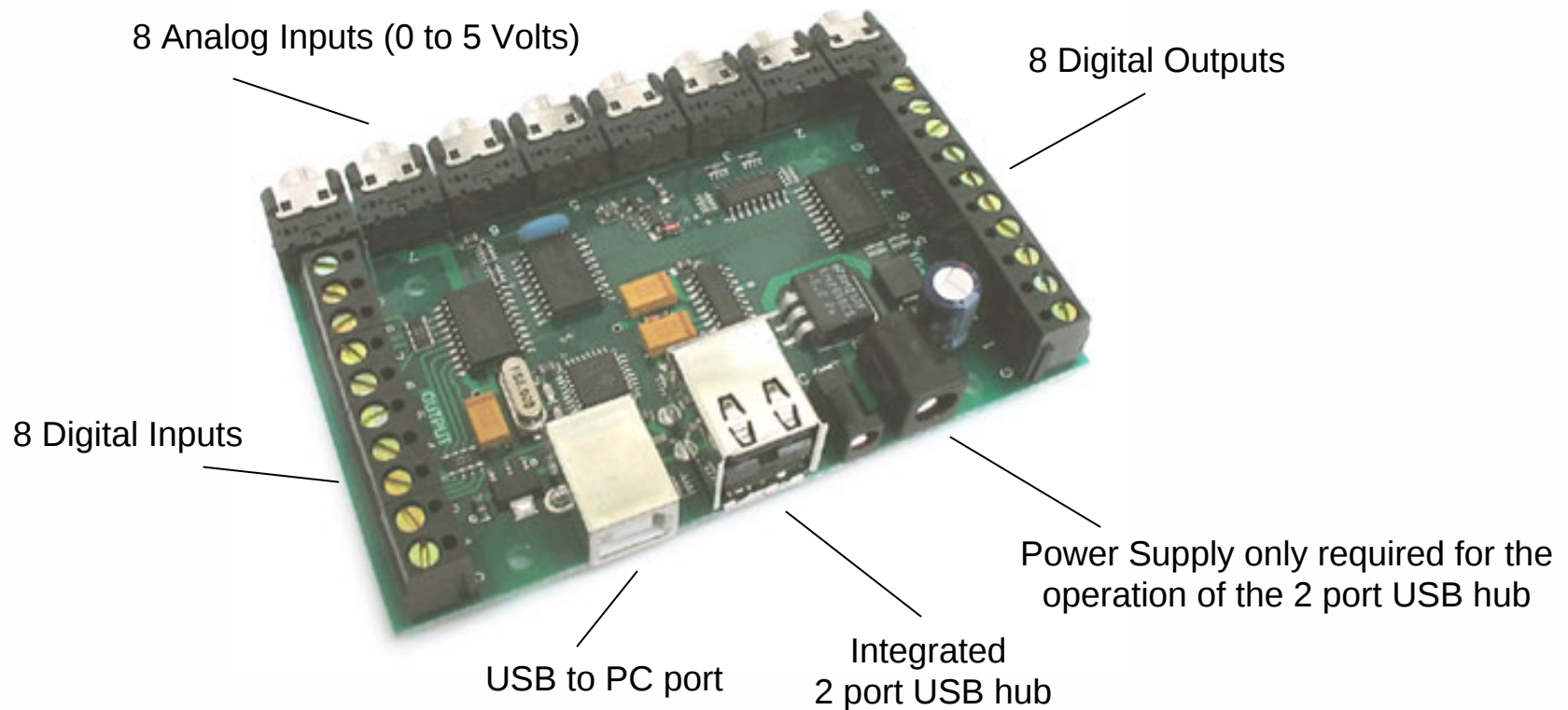


<http://www.glynnis.net/cards/smiley.jpg>

In Short: !!! TOTAL FUN !!!

Phidgets

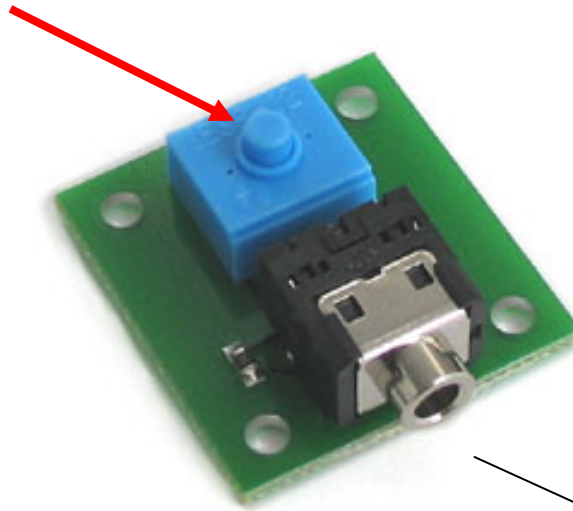
- ❑ The PhidgetInterfaceKit 8/8/8
 - USB-based controller



Phidgets

- ❑ Force Sensor
 - Measures up to 3 kilograms.

Press here!

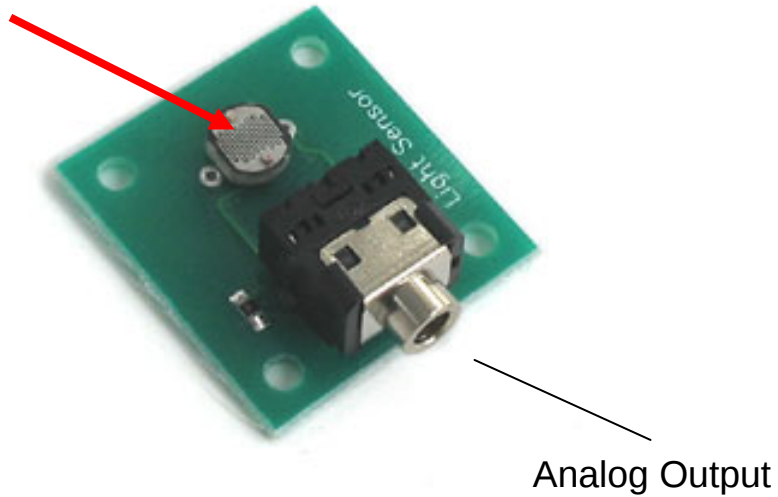


Analog Output

Phidgets

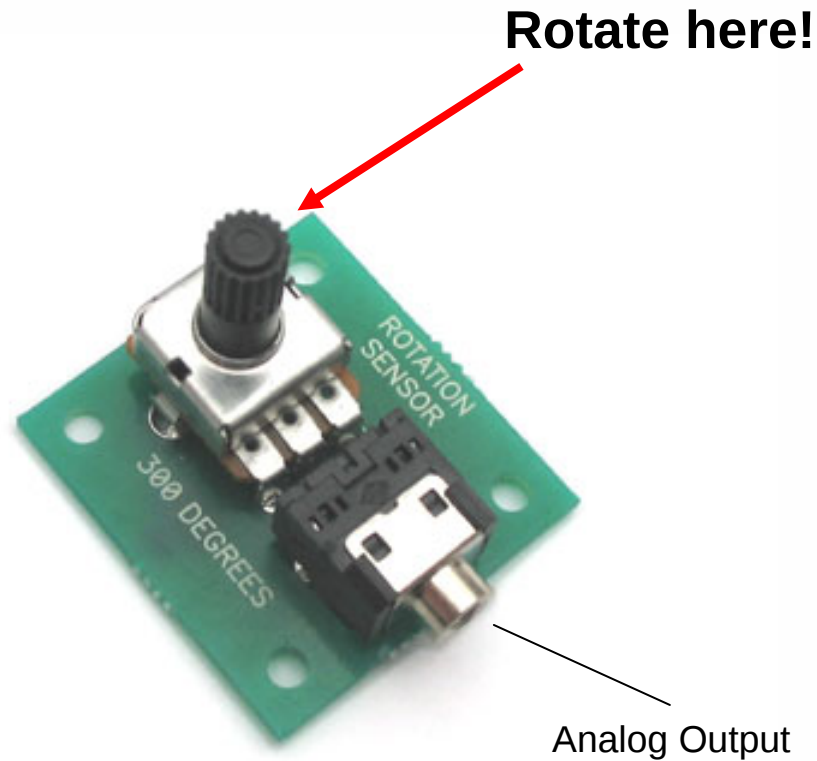
❑ Light Sensor

Put light here!



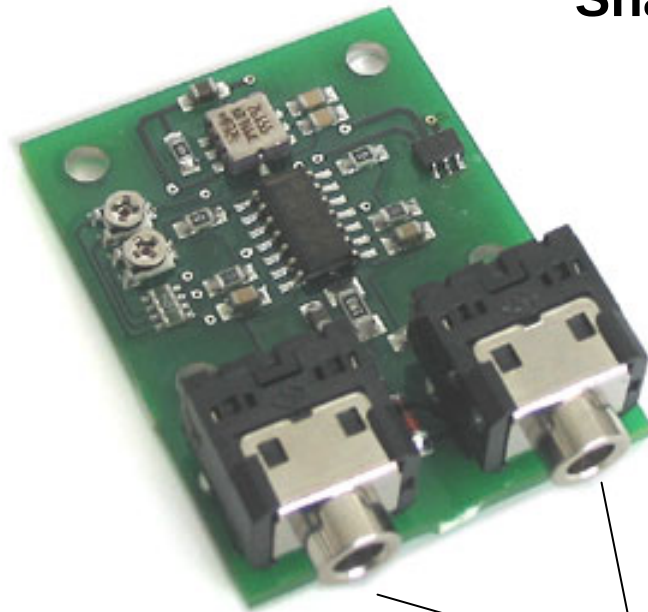
Phidgets

- ❑ Rotation Sensor
 - 300 Degrees



Phidgets

- ❑ Dual Axis Accelerometer
 - +/- 2g per axis



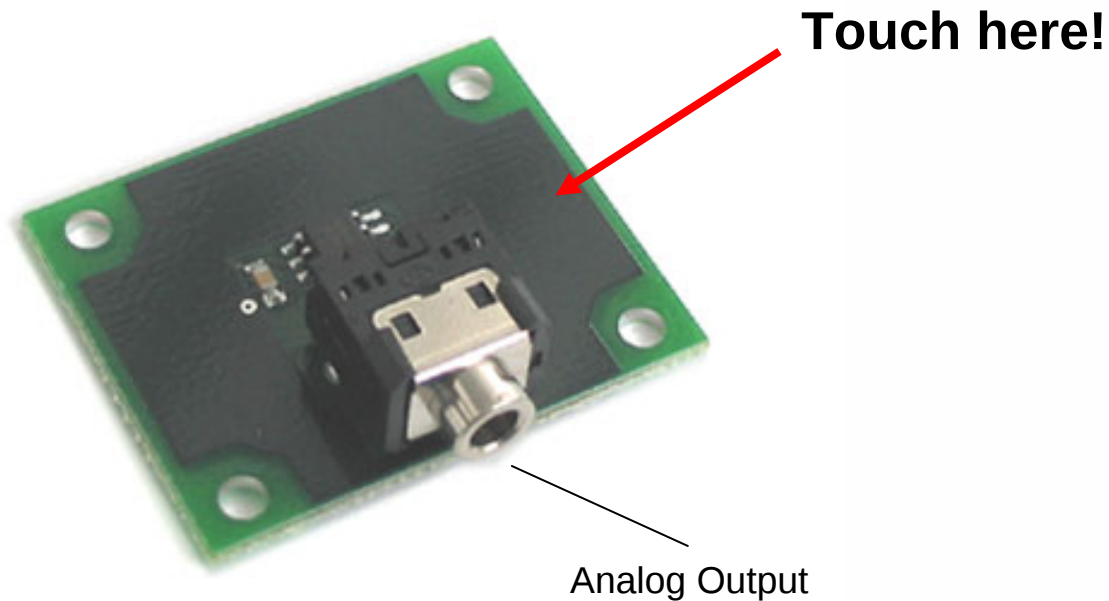
Shake it!

Analog Outputs

Phidgets

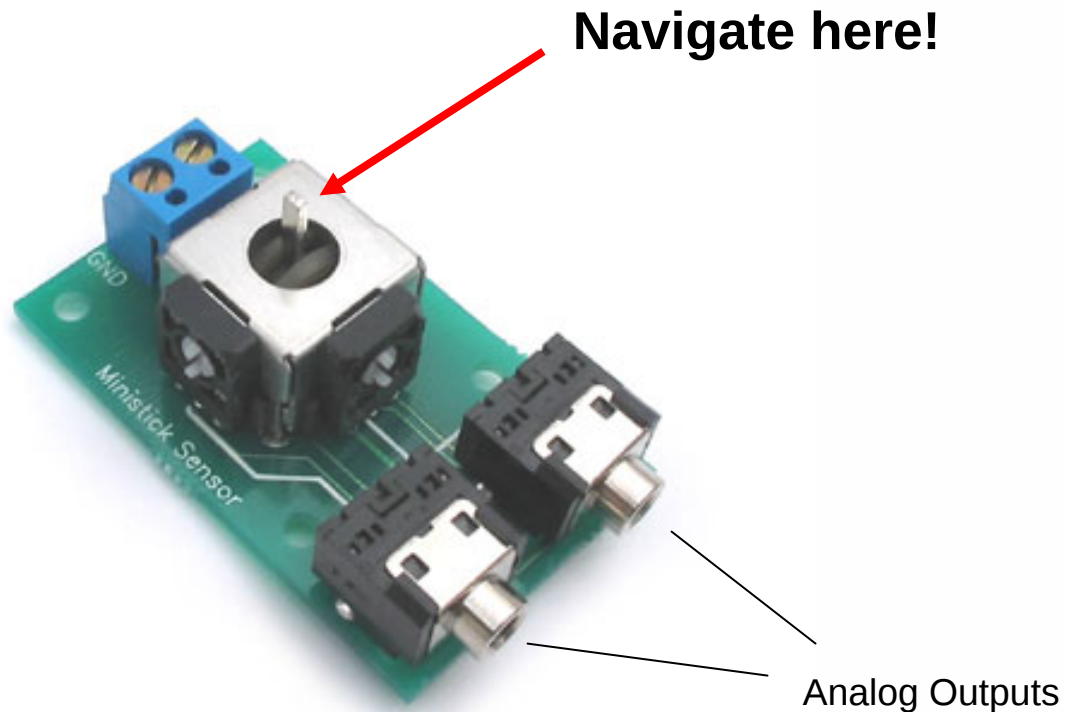
❑ Touch Sensor

- Capacitive touch sensor, detects a touch through plastic, glass, paper



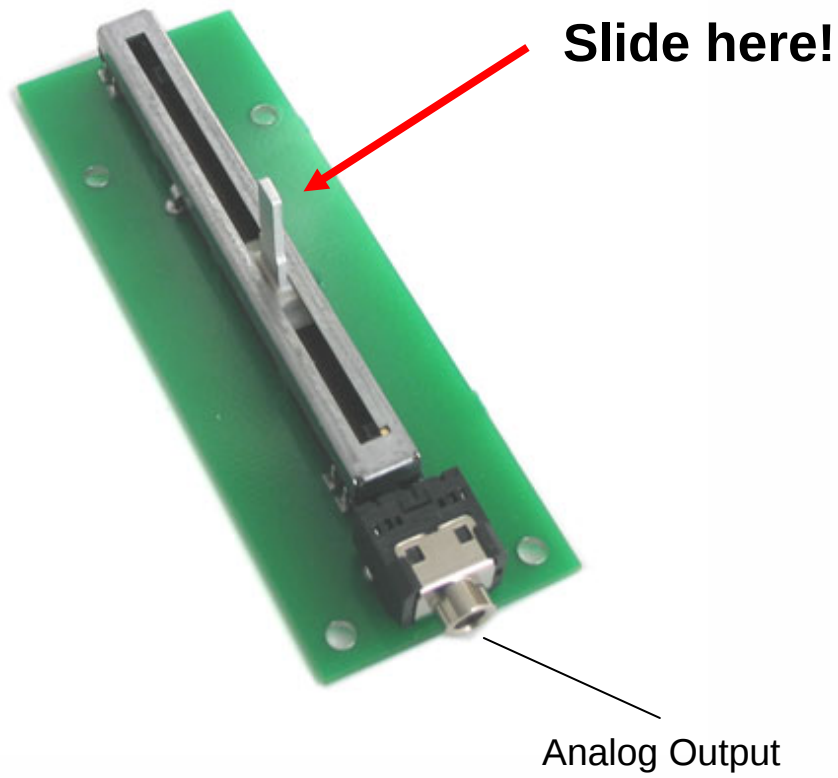
Phidgets

- ❑ Mini Joy Stick Sensor
 - Two axis joystick with momentary switch



Phidgets

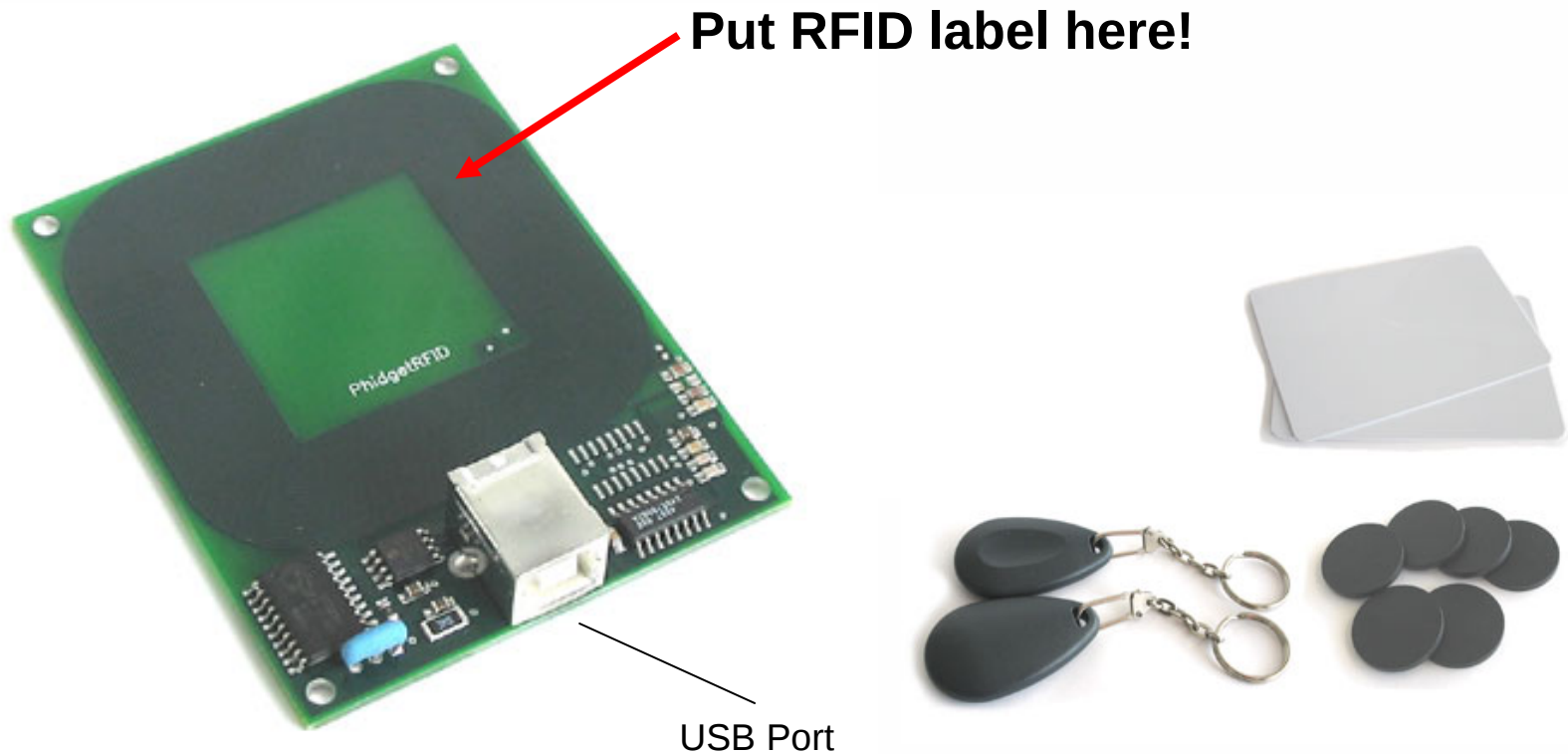
- ❑ Slide Sensor
 - 60mm Slider



Phidgets

❑ RFID Sensor

- Reads RFID tags that are brought in close proximity, within 3 inches.

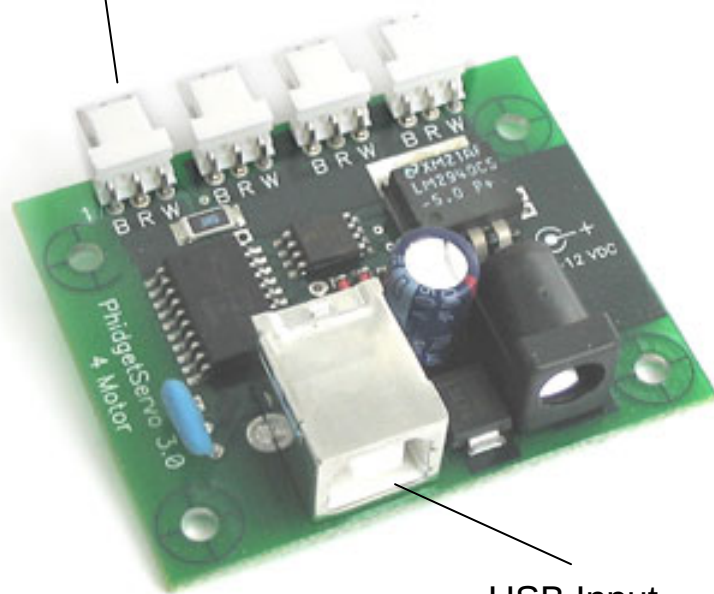


Phidgets

❑ Servo Controller

- Controls up to 4 servo motors
- Tower Hobbies TS-53 S3K Standard Servo

Motor output plugs



USB Input



Mounting Hardware

Phidgets

- ❑ Other simple Input and Output stuff

Watch here ;-)



LED Lamps

Push here ;-)

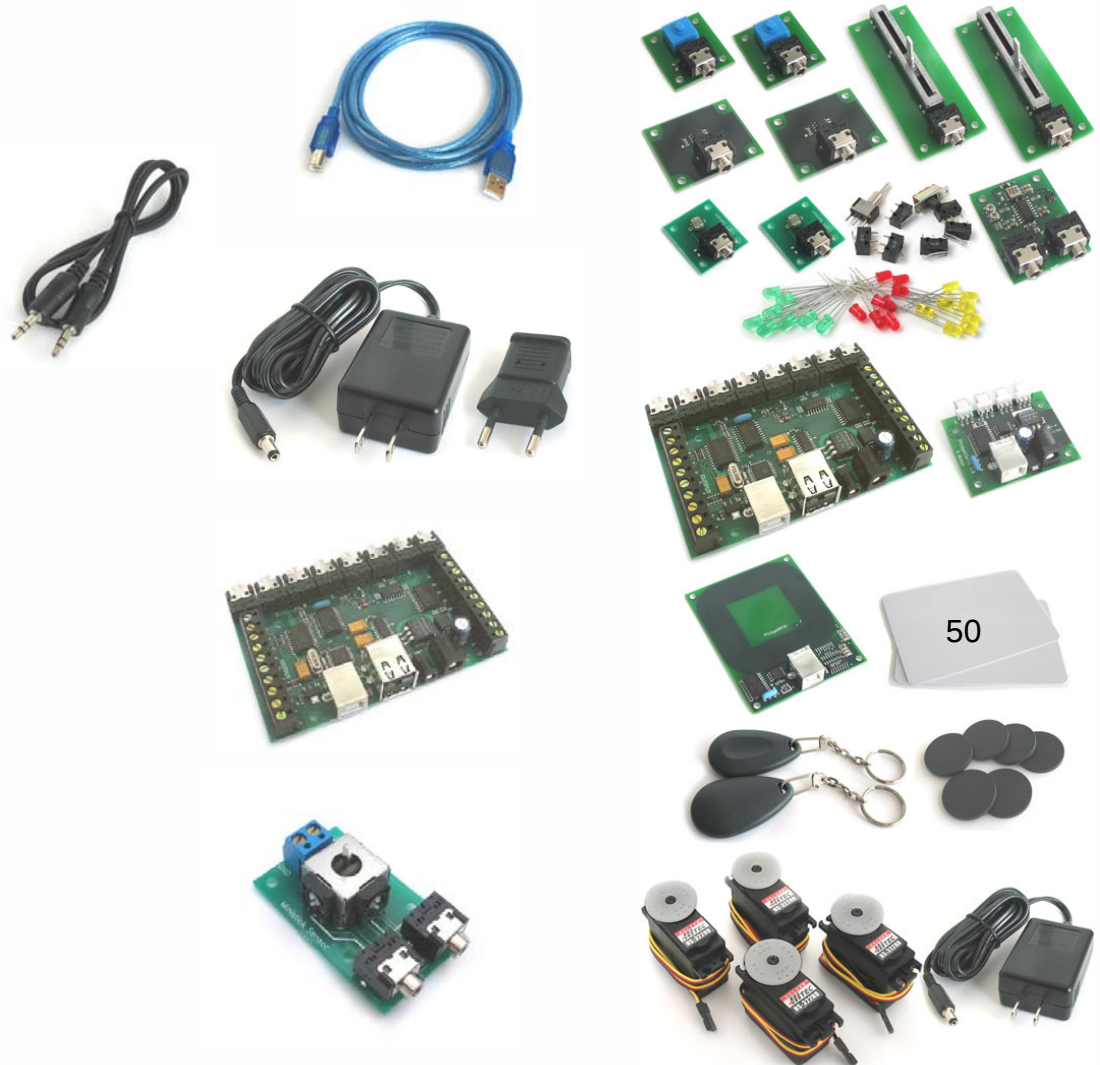


Push Buttons

Phidgets

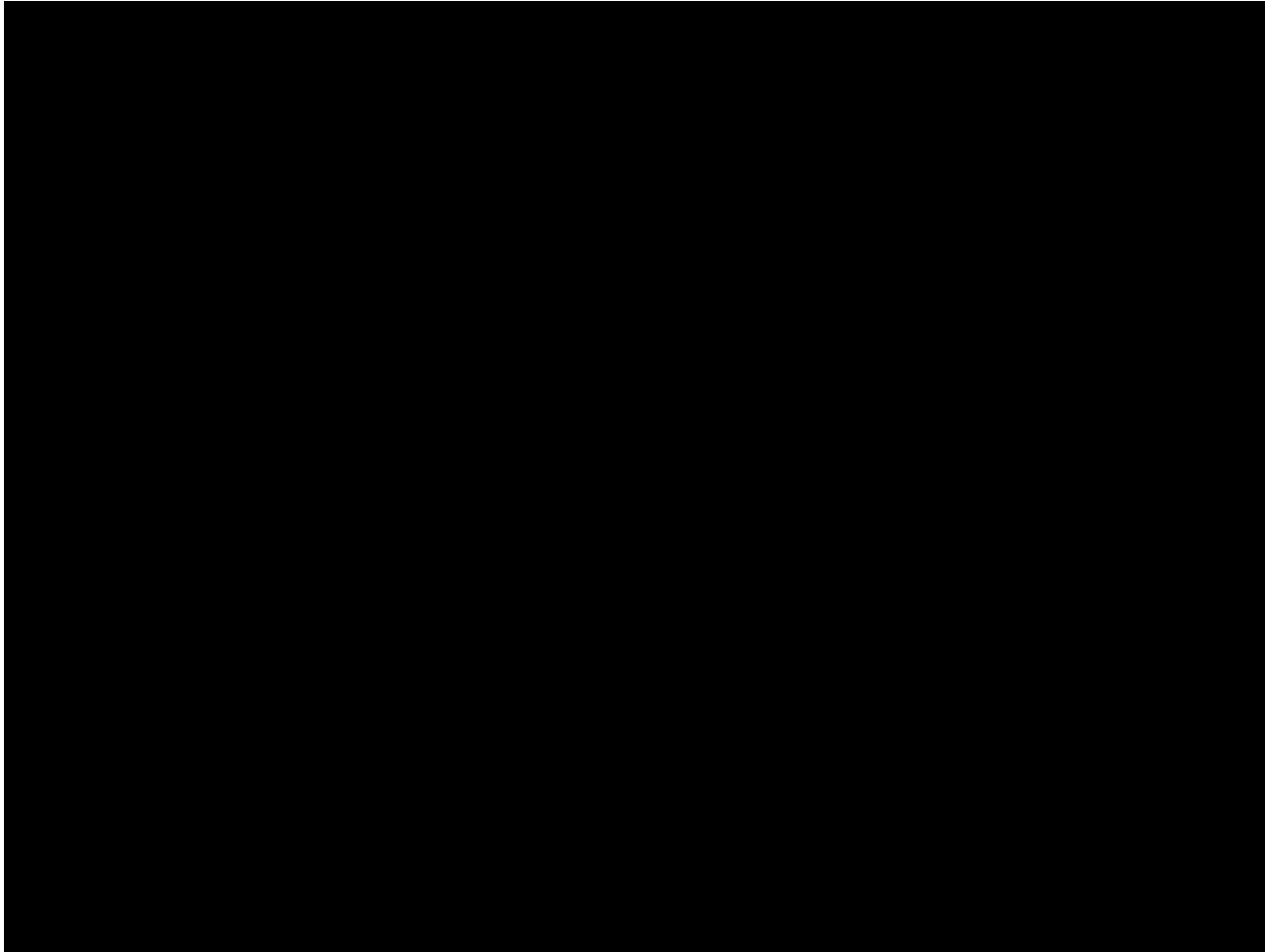
❑ So what's in the box ???

- 2 InterfaceKits 8/8/8
- 2 Touch Sensors
- 2 Force Sensors
- 2 Slider Sensors
- 2 Light Sensors
- 1 Mini Joy Stick Sensor
- 1 Dual Axis Accelerometer
- 8 Push Buttons
- 8 Red LEDs
- 8 Green LEDs
- 8 Yellow LEDs
- 1 RFID Reader
- 6 30mm Disc RFID Tags
- 50 Credit Card RFID Tags
- 2 Keyfob RFID Tags
- 4-Motor PhidgetServo Kit
- Cables



Phidgets

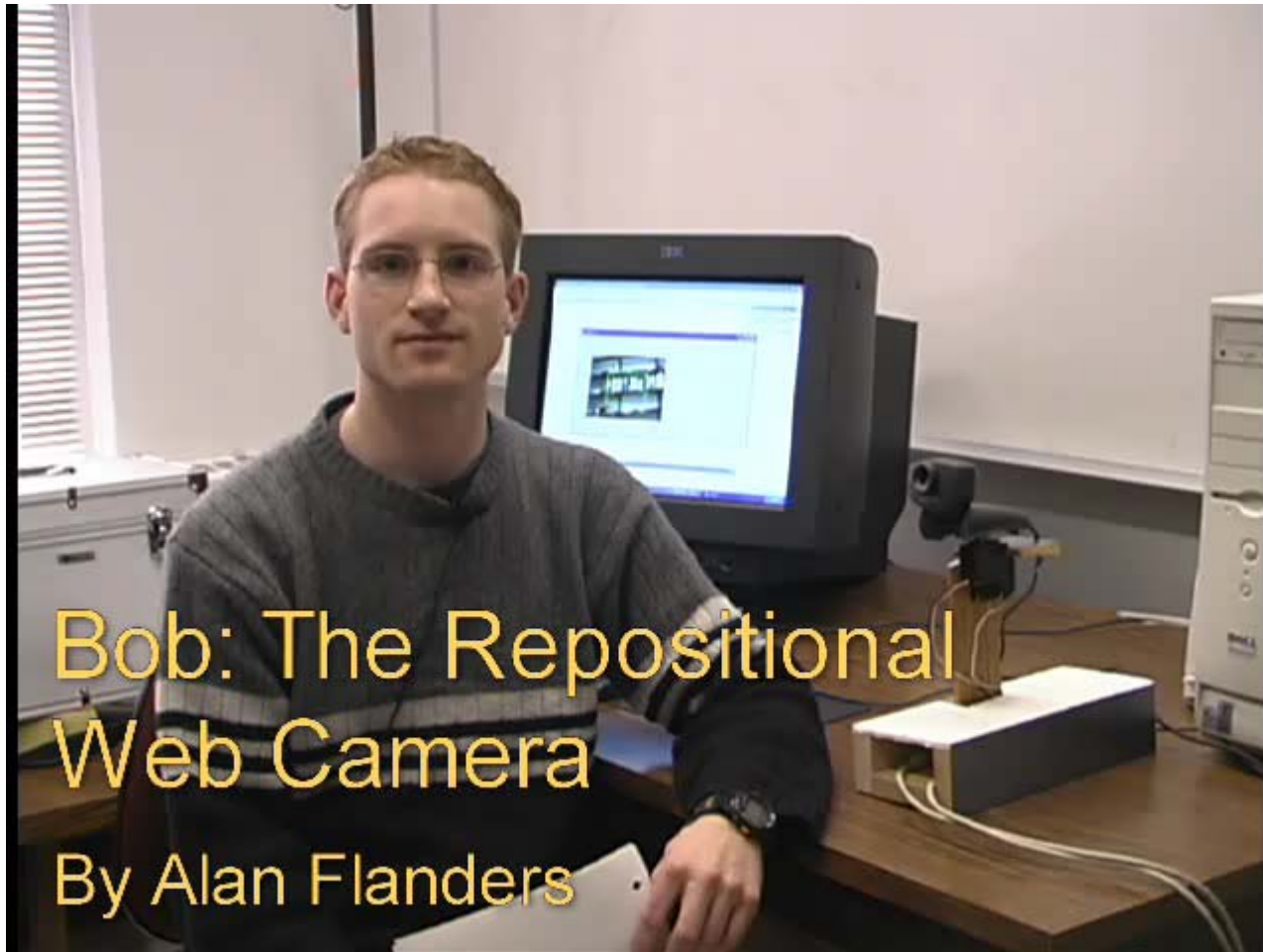
❑ General Overview



<http://www.cpsc.ucalgary.ca/group/lab/phidgets/gallery/phidgets.UIST01.html>

Phidgets

- ❑ Example: Bob – The Repositional Web Camera



<http://www.cpsc.ucalgary.ca/group/lab/phidgets/gallery/bobCamera.html>

Phidgets

❑ Example: Buddy Bugs



<http://www.cpsc.ucalgary.ca/group/lab/phidgets/gallery/buddybugs.html>

Phidgets

❑ Example: DartMail



<http://www.cpsc.ucalgary.ca/group/lab/phidgets/gallery/dartmail.html>

Phidgets

❑ Example: Mathletics

A screenshot of a video game title screen. The background is solid black. The word "Mathletics" is written in a large, bold, light blue font. Below it, in a smaller, bold, light blue font, is the text "By Russell Kruger".

Mathletics
By Russell Kruger

<http://www.cpsc.ucalgary.ca/group/lab/phidgets/gallery/mathletics.html>

Phidgets

❑ Example: Laser Pong



http://www.cpsc.ucalgary.ca/group/lab/phidgets/gallery/Laser_Pong.html

Phidgets

- ❑ Example: Monster Phidget



Phidgets

❑ Example: Fooswars



<http://www.cpsc.ucalgary.ca/group/lab/phidgets/gallery/fooswars.html>

Phidgets

- ❑ Controlling other applications

