ServoMaster: Observations on USB PhidgetServo v3.0

1. Summary

This USB controller is the most stable and reliable servo controller I was able to get a hold of so far.

Removable Device
Individual Servo min/max preset
Silent Operation

Table 1: Supported Features

2. Release Notes

Keep in mind that the hardware version for which this driver is provided is different (later) from the one described on the site. Since the Phidgets are evolving rather rapidly, the versioning, capabilities discovery, and support are expected to be a standard part of this driver. This document describes the hardware and the driver for USB PhidgetServo v3.0, for information on upcoming v4.0 look here.

3. Good Things

- Reliable as hell. The manufacturer wants me to make it fail, I couldn't;
- Simple to use. Plug in the USB, plug in the servos, go;
- Versatile. One of the servos is powered by the USB bus, so it is possible to start playing with it right away even without external power supply;
- Precise. The actual controller is controlled by the pulse timings it has to provide to the servos. Usable range for the servos is somewhere from 200us to 2100us, which makes the resolution of 1900 steps. If your servo is capable of working in a wider pulse range, you get more steps available;
- It is a USB HID device, enough said;
- The bandwidth is limited by the servo inertia, not by the protocol or interface;
- Flexible. You can control properties on per-servo basis;
- Customizable. To the best of my understanding, the manufacturer will provide custom

solutions - different number of servo outputs per board, different protocol support and basically whatever you need.

4. Bad Things

As of now, it's still a write-only device. I don't think it's such a big deal for this device - otherwise, it's near perfect. The only extra ability that I would like to see is the hardware level transition support, but admittedly, that's a lot to ask ;)

5. Conclusion

Beauty incarnated :)