

What's New in "What's a Microcontroller? v3.0"

For all "WAM v3.0" related software, documentation downloads, select sample code, and YouTube video resources, visit the What's a Microcontroller Resource Page <http://www.parallax.com/go/WAM>.

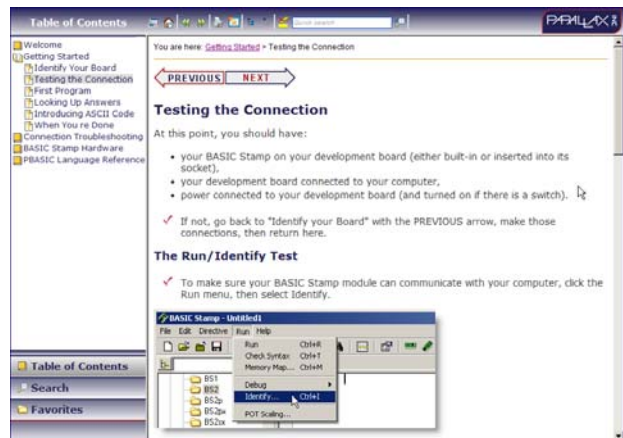
The What's a Microcontroller? v3.0 text (#28123) and Parts Kit (#28122) are included in the following kits:

- BASIC Stamp Activity Kit (#90005)
- BASIC Stamp Discovery Kit - Serial with USB Adapter (#27207)
- BASIC Stamp Discovery Kit - USB Only (#27807)
- What's a Microcontroller Parts & Text Kit (#28152)

WAM 3.0 Text Features

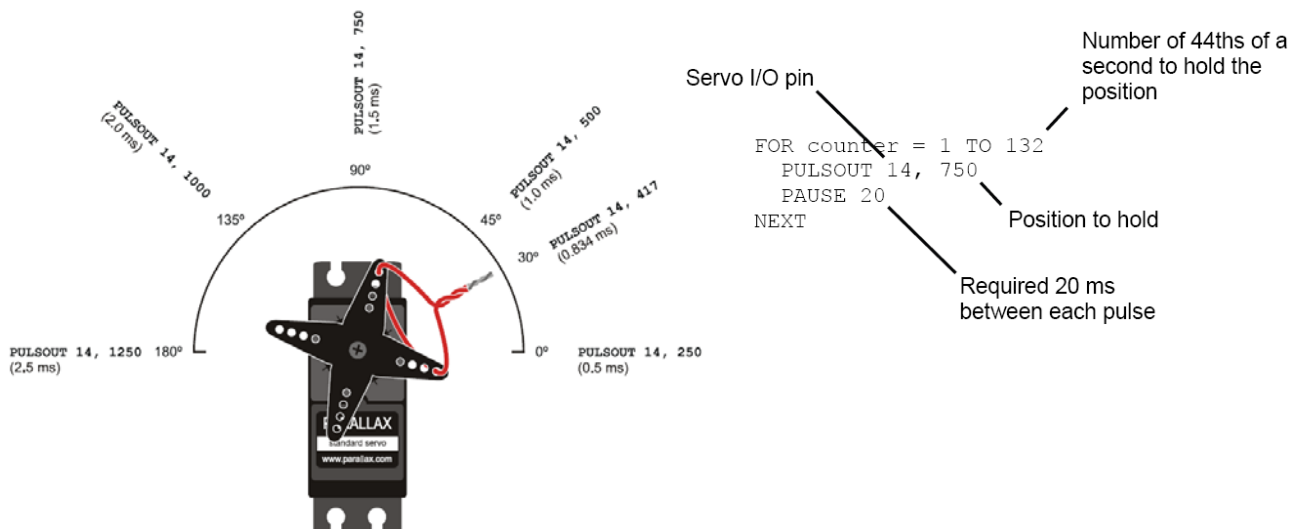
Chapter 1: Setup and Testing. Once the software installation is complete, the reader is directed to the BASIC Stamp Editor software's Help file for the hardware setup and first programming activities. This keeps hardware setup directions synchronized with our development board and programming connection options. In addition, a connection troubleshooting guide has been added to the Help so new users can quickly and easily solve the most commonly encountered connection issues.

The software is a free download from <http://www.parallax.com/basicstampsoftware>.



Chapter 4: Servo Control. This chapter has been rewritten with improved illustrations and expanded explanations to make standard servo control easier to understand.

Figure 4-18: Servo Horn Positions, PULSOUT Commands, and ms Pulse Durations



Chapter 7: Measuring Light. This chapter now features a phototransistor instead of a photoresistor, and the topic of light is visited with greater depth. All of the same programming techniques are introduced, and the reader will build a light sensor and write programs for both analog and binary modes. A bonus activity uses a common LED put in “backwards” to measure outdoor light.

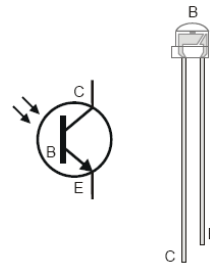


Figure 7-3
Phototransistor Schematic and Part Drawing

Chapter 10: Prototyping Your Own Inventions. This chapter helps readers apply what they just learned to their own projects to solve real-world problems. First, readers prototype a micro security system, then learn how each component used from the kit can be seen as a “stand in” for sensors and other devices that use the same interface and programming techniques. A Stamps in Class Mini Project that rebuilds the micro security system using a PIR sensor (#28027), Flexiforce pressure sensor (#30056), IR Remote Kit (#29122) and 2x16 Serial LCD (#27976) is posted on the What’s a Microcontroller Resource page. Other Stamps in Class Mini Projects that can be completed with just the parts included in the kit are posted there as well; some include YouTube videos.



Kit Contents Changes

What’s a Microcontroller Parts Kit (28122): The non-RoHS CdS cell photoresistor has been replaced with an RoHS compliant phototransistor and an additional 0.01 μF capacitor. Cadmium sulfide is no longer exempt for use in photoresistors by the European Union’s Restriction of Hazardous Substances definitions. An additional 0.01 μF capacitor has also been added to the kit for use in the phototransistor circuit.

- **If you want to keep using the v2.2 text** but need new parts kits, simply order one CdS cell photoresistor (#350 00009). The v2.2 will continue to be available as a free download.
- **If you want to use the v3.0 text** but you have the older parts kits, simply order one phototransistor (350 00029) and one additional 0.01 μF capacitor (#200-01031).



BASIC Stamp Activity Kit (#90005): The contents and packaging have been updated:

- What’s a Microcontroller V3.0 Text and Parts Kit, so the kit is now RoHS compliant.
- Box with color-printed box sleeve and shrink-wrap: no more plastic “clamshells” to open!
- The popular Parallax USB to Serial Adapter and USB A to Mini B cable replaces the standard serial cable.
- The reader downloads the latest version of the BASIC Stamp Editor installer from the Internet to make sure the most recent software and USB drivers are used; a CD is no longer included. The instructions for setting up and testing the hardware are now included in the BASIC Stamp Editor Help.