DAC Converter

Describes the converter's abilities and limitations

23 Comments Dennis Schrute

Preface

The personal computer brought in a whole new era of electronic sophistication. With it, we have immense amounts of digital computing power located right at our desk.
Computers work well when they are connected to each other, and digital data can be transferred quite reliably from machine to machine.

However, the minute you wish to connect a digital computer to some “real world” device (such as a wind speed indicator or fuel level sensor) you need to design a circuit that interfaces an analog device to the digital computer. In many cases, this involves the conversion from an analog voltage to a digital representation of that voltage.

This set of Stamps in Class experiments will explore many of the basic principles of interfacing analog devices to digital microcontrollers. Many times this involves the use of easy-to-use commands built right into the BASIC Stamp, and at other times requires the use of a an “analog to digital converter”.

Why should we be interested in converting from analog to digital? Many different aspects of our lives are dependent upon this conversion process. Some are not too critical to our survival like compact disc players, telephone systems, and music. Others, however, might
be critical. Medical equipment and sensors often require analog to digital and digital to analog conversion.