

# Re: Understanding the (point of) the Wheatstone Bridge

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- *From:* Nobody <nobody@xxxxxxxxxxxx>
  - *Date:* Fri, 21 Sep 2007 04:54:36 +0100
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On Thu, 20 Sep 2007 21:42:36 -0500, Dave wrote:

My son and I are working through some circuits from a Forrest M. Mims / Radio Shack learning lab. We got to a Wheatstone Bridge circuit, but I'm trying to understand the usefulness of it.

Let's use this diagram, for reference:  
[http://en.wikipedia.org/wiki/Wheatstone\\_bridge](http://en.wikipedia.org/wiki/Wheatstone_bridge)

Well, so far as usefulness of this circuit is concerned, I used to work on high-speed printers (mainframe environment like banks and oil companies) that used the Wheatstone Bridge (they called the actual 'box' that housed the circuit an H-switch) to drive the servo motor that moved the paper at incredible speed and stop on an instantaneous command.

That's an H-bridge, not a Wheatstone bridge.

A bridge is any circuit with that "shape", i.e. two "legs" joined at the top and bottom, an input applied between the top and bottom, and an output between the centres.

A Wheatstone bridge has resistors, a bridge rectifier has diodes, an H-bridge typically has MOSFETs (although they could be BJTs or even relays).

An H-bridge allows you to vary the magnitude and direction of a current through a load, typically a motor. The name arises from the fact that the circuit is normally drawn with the legs vertical, rather than the diamond shape which is commonly used for the Wheatstone bridge or a bridge rectifier.