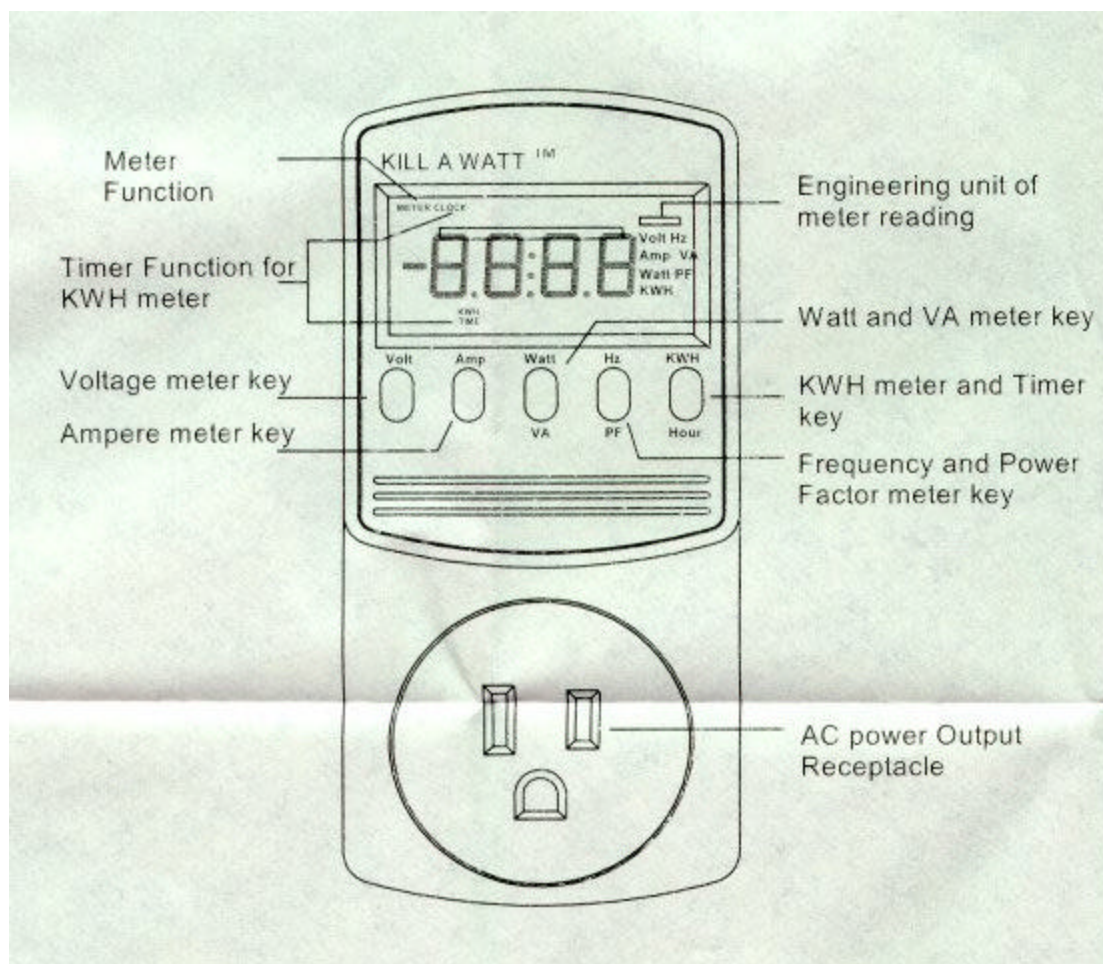


# Kill-A-Watt Power Meter Report

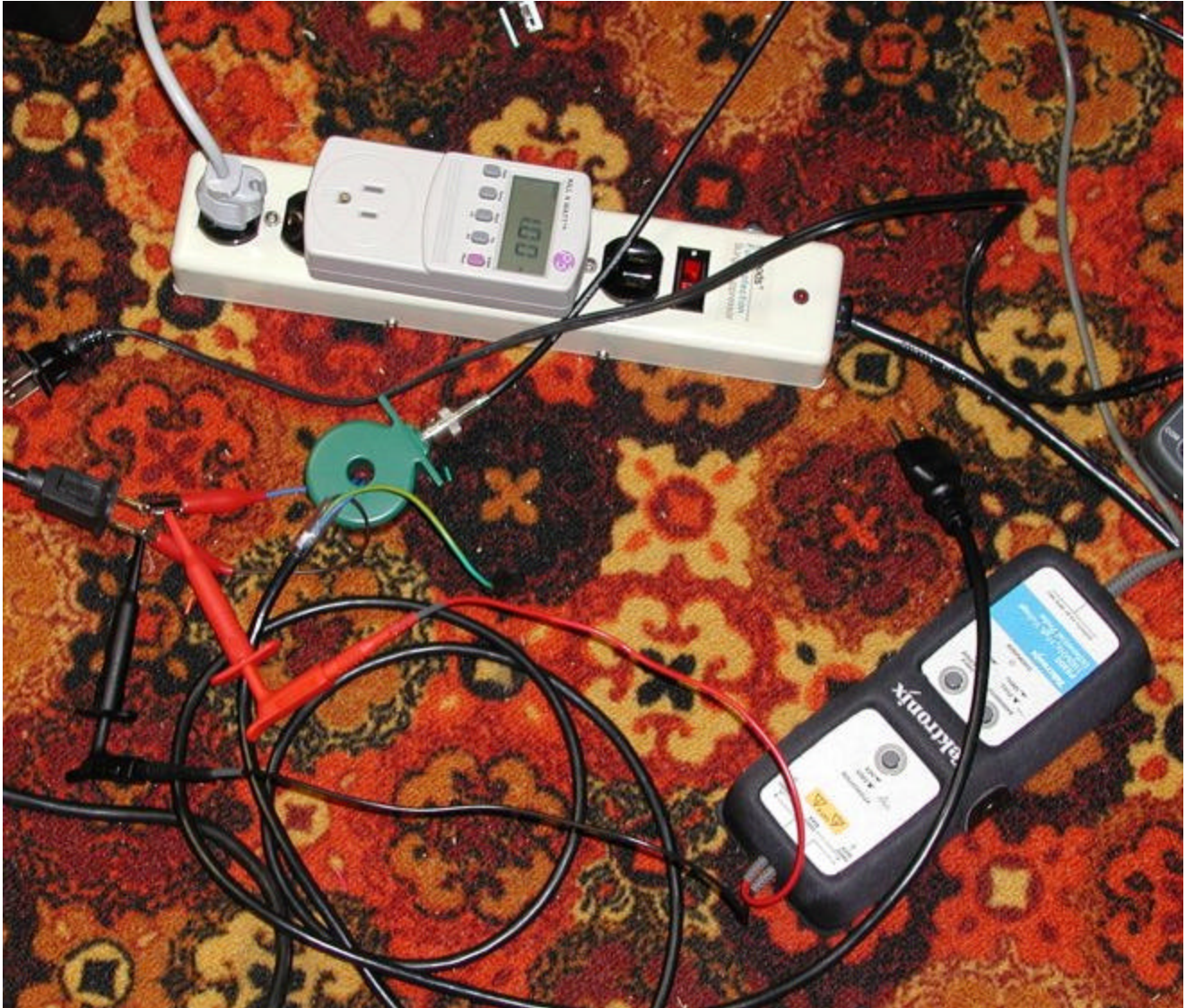
Terry Fritz March 11, 2003

After hearing of the "Kill-A-Watt" \$50 power meter that could measure voltage (true RMS), current (true RMS), power (real), power factor, VA, and KWH with 0.2% accuracy. I got one from Radio Shack (#63-1152) to try out. They are sold by many on-line retailers too. Search on the key word "Kill-A-Watt". It is a 120VAC 15 amp unit with the usual world wide safety approvals.

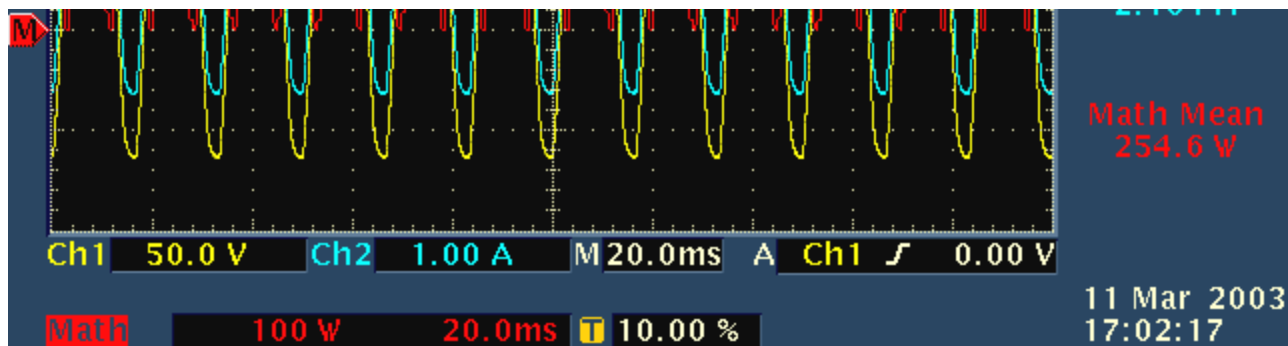
The unit is just a simple plastic box that plugs directly into an outlet on one side and has a plug on the other side. It has five buttons to quickly and easily select the functions.



Of course, what counts is does it really work? To test it, I hooked it up with a Pearson 411 current monitor, Tektronix P5205 differential voltage probe, and a Tektronix 3012 Digital scope.



For the first test, I simply plugged it into a 250W flood lamp. This is what the scope said:



254.6 Watts

119 Volts

2.164 Amps

The Kill-A-Watt read:

254 Watts

118.3 Volts

2.13 Amps

252 VA

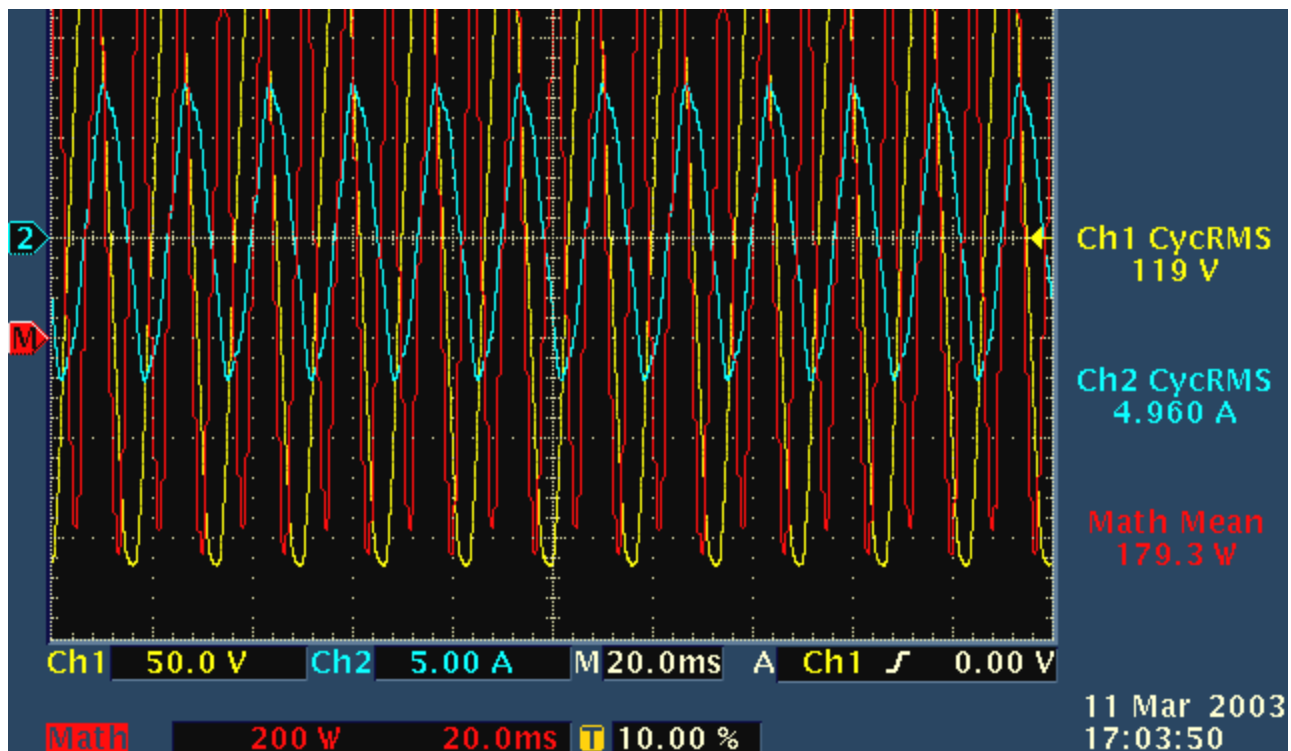
59.9 Hz

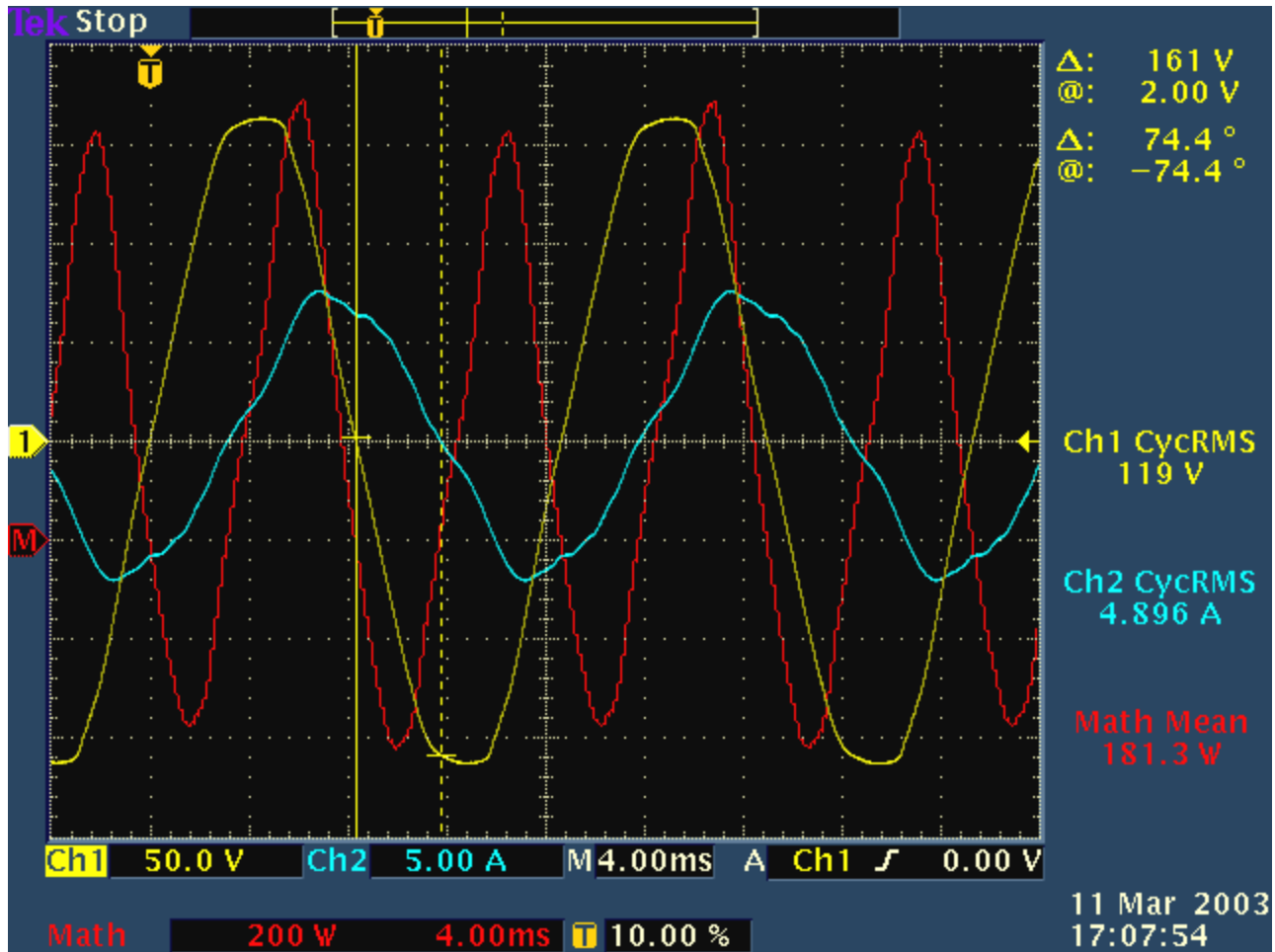
1.00 PF

Very Good! Some small error, but far below what one would care about.

Next I tried a 1/4 HP induction motor for a spark gaps that has four flats ground into the rotor:

The scope says:





119 Volts

4.960 Amps

179.3 watts

$\text{COS}(74.4) = 0.264 \text{ PF}$

$119 \times 4.960 = 590.24 \text{ VA}$

The Kill-A-Watt reports:

118.6 Volts

4.91 Amps

177 Watts

0.30 PF

584 VA

59.9 Hz

**Again, excellent results for a fairly complex load!!**

**Conclusion: Although this meter is very inexpensive and it's 0.2% claimed accuracy is hard to believe, it certainly does perform as advertised!! It is very simple to use and very accurate in all it's functions. For only \$50, it is a must have!**

**Cheers,**

**Terry**

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