

Kill A Watt

Saving Energy and Saving Money

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Why measure the electrical use in your home?

Most of us only have a vague idea of how much electricity we use each month and almost no idea of how much electricity an individual appliance uses. You may be wondering just how inefficient is that old refrigerator, freezer, or TV set? Also, how much electricity does the TV or computer use even when we aren't using them? It is estimated that about 5% of residential electrical use is for equipment in the "standby" mode. You can use the Kill A Watt meter to check all of these things in your home.

What does the Kill A Watt meter do? The Kill A Watt meter is a multi function electric meter that allows you to see instantly what is the wattage that an appliance is drawing at any time. It also calculates the total electrical use in kWh and keeps track of how many hours that appliance has been plugged in. From this, you can calculate how many kWh the appliance will use in a week, a month, or for the whole year.

How do you use the Kill A Watt meter?

1. Chose an appliance whose energy use you want to measure.
2. Plug the Kill A Watt into a wall socket and then plug the appliance into the Kill A Watt. If the wall socket is where it is hard to read the Kill A Watt meter, you can plug a heavy extension cord into the wall socket and the Kill A Watt meter into the extension cord before plugging in the appliance.
3. The LED screen will now display one of 5 things depending on the button you push
 - a. Press the **Volt** button, to display the voltage the appliance plugged into the Kill A Watt draws during operation.
 - b. Press the **Amps** button, to display the current (Amps) your appliance is drawing.
 - c. **Press the Watt button, to display how many watts your appliance is using.**
 - d. **Press the kWh (Kilowatt hours) button, the screen will display the kWh used since your appliance was plugged into the Kill A Watt.**
 - e. Press the **kWh** button again, the screen will display the time since your appliance was plugged into the Kill A Watt. The hour display looks like this when you first plug the Kill A Watt in, (00:00) which is (hours:minutes). Once the Kill A Watt reaches 99

hours since it was plugged in, the display will change and only list hours (up to 9999 hours). Once it reaches 9999 hours the hour will reset to (00:00).

4. You can record the kWh used by that appliance during the time it was plugged in. You can then calculate approximately how much the appliance is costing you to use. By checking your electrical bill, you can find out the cost per kWh. Multiply the cost per kWh times what your appliance uses and you then know how much the appliance costs to while it was plugged in. Knowing how long it was plugged in, you can calculate how much the appliance costs per day, week, month, or year.

Following is one example of electrical use of by one of the biggest users of electricity in our home.

1. Plug the watt meter into the outlet and then plug in your refrigerator to the watt meter.
2. Press the Watt button and you should be able to see how many watts the refrigerator is using.
3. You can open the refrigerator door and the watt usage should go up by 10-40 watts when the light comes on.
4. Depending if the refrigerator is running or not the wattage displayed may be anywhere from 0 to 400.
5. Let the refrigerator run for a day plugged into the watt meter. Press the kWh button to see how many kWh were used. Press the kWh button a second time to see exactly how long the refrigerator was plugged into the meter.
6. Say the kWh used was 3.43 and the total time was 24:30 (24 hours and 30 minutes or 24.5 hours). The monthly electricity use would = 3.43 kWh x (24 hr/d / 24.5 hr) x 30 days = 98.7 kWh. At 11 cents per kWh this would be \$10.86 per month.

The refrigerator is one of the biggest users of electricity in many homes. Large improvements in the energy efficiency of refrigerators has been made in the last 20 years. The following table shows the improvements that have been made for a top freezer 19-21 cubic ft. refrigerator. If your refrigerator is using more than about 100 kWh per month, it could pay you to update to an Energy Star model.

19 – 21 cubic ft refrigerator

Type and Year	Monthly electrical use kWh/Month	Annual Cost
Top freezer – before 1990	140	\$185
Top Freezer – 1990-1992	106	\$140
Top Freezer – 1993-2000	70	\$92
Top Freezer – 2001-2006	45	\$59
Top Freezer – Current Energy Star Model	34	\$45

Assumes \$0.11 per kWh for electricity

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