



How It Works

Sugarbush Electronics' vacuum monitoring system uses a differential pressure system referencing a sealed vacuum chamber to sense changes in your tap lines, to make it easier to find a disruption!

Our solution will monitor your tap lines productivity giving you feedback on exactly which line is having an issue, reducing your time walking the lines looking for breaks. Additionally, you have instant access to important data and remote features in your sugarhouse production including:

- line production status
- storage tank levels
- remote control of vacuum pumps

All from the comfort of your own home, out in your maple grove, or anywhere in the world with your tablet and an internet connection.

Three Stages:

Obtaining Vacuum Sensor Readings

We place the vacuum sensors at the end of the lateral line, monitoring as many as 350 taps per sensor. We use a state of the art vacuum sensor that is capable of detecting minute vacuum changes. Because our sensor is so accurate, we average this data over a period of seconds to reduce the vacuum pump's impeller "noise" or "static" in your vacuum system. This ensures that the readings you receive are not only accurate but, pertinent to your needs. Our system is customizable, giving you the flexibility to decide how frequently each radio sensor unit will report back to your sugarhouse "base station" its vacuum line readings.

Getting the Readings Back to You

Your vacuum sensor readings are then sent though an extremely efficient and highly reliable mesh network via radio frequencies. We use license free, Industrial Scientific Medical (ISM) frequencies to transmit the

sensor readings though your sugarbush. Mesh networks self heal, so when one or more radios is lost due to tree branches etc., your readings still arrive at the sugarhouse. The mesh network allows radio propagation around obstacles such as hills, boulders, and underbrush. Once the readings arrive safely to your sugarhouse the base station records all readings as a back-up prior to converting them into an easy to read interface.

Displaying the Sensor Readings

Back in the sugarhouse, out in the woods, or even at home you can use our friendly reporting software to keep track of your sap production and the status of your lines. Our interface is color coded for quick glance updates. Click on a particular sensor and you can get detailed readings on the vacuum line including its GPS coordinates, latency, and vacuum pressure. Finally, you can change your reporting intervals and sensor parameters with only a few mouse clicks.

Why Purchase

The golden leaf difference us in how easy it is to set-up, use, and get assistance upgrading your current vacuum tap system to include Sugarbush Electronics' vacuum monitoring system.

Each sensor unit can monitor up to 4 main lines at a time. Relayed together our product can monitor your entire grove. Our hardware is sturdy, waterproof, easy to install, and comes with batteries that last in sub-zero temperatures. The hinged box design makes it easy to switch out batteries.

Back in the sugarhouse, out in the woods, or even at home you can use our friendly reporting software to keep track of your sap production and the status of your lines. Easy to use, simple reports, and remote features.

Our customer service is the best! We're invested in making our product work for you. Know that you will always reach a knowledgeable, friendly, and resourceful technician when you need assistance.

Competitive Prices

Product	Price
USB Base Unit	\$300
Vacuum Sensor Unit	\$400
Repeater Unit	\$200
AC Relay Unit	\$300
Tank Sensor Unit	\$400

About Us

The inspiration for this solution came from long-time friend, and owner of Erik's Sugar Bush, when Rolf visited Erik in the height of the sugar season. They walked the lines and spoke with Erik whose daily routine was to be in the Sugarhouse by 6 am; go off to his day job; return home to walk the lines; and then boil down sap till 2 or 3 in the morning. Only to get up to do the same thing the next day. Rolf thought, "There must be a better way..." and now there is with the Sugarbush Electronics' vacuum monitoring system.



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