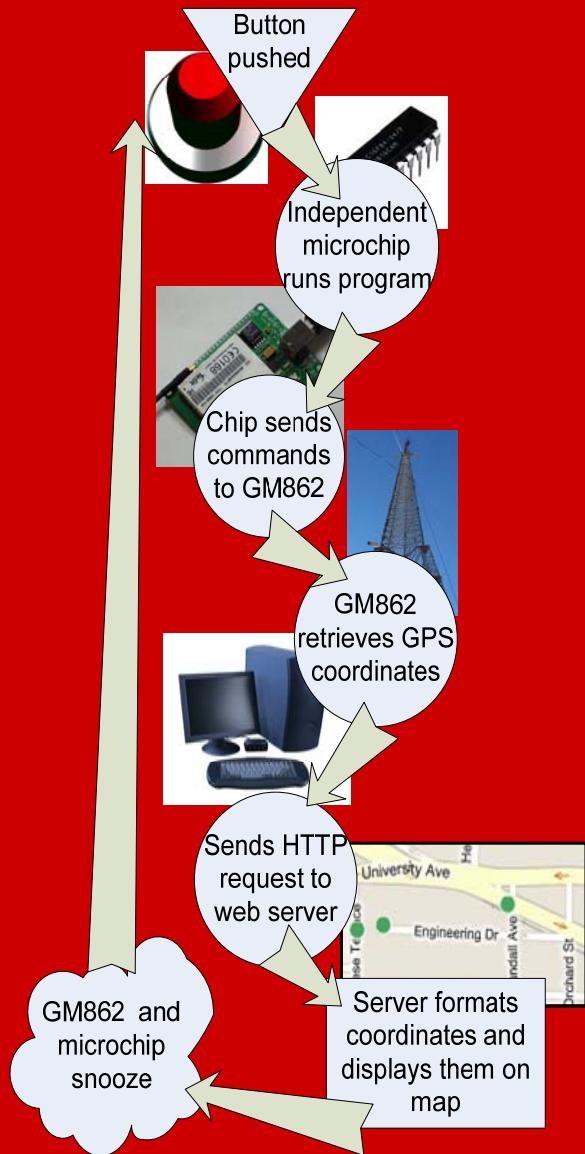


How it works:



Models:

- Small versions (ID #1&3): most components housed inside case, external GPS antenna and battery connectors.
- Larger version (ID #2&4): all components housed inside case except battery connectors (longer battery life).

Troubleshooting:

1. Activations won't show up on the map:

- Make sure that the connection between the battery and the module (the connection outside of the case) is secure and that you are pressing the button on the top completely.
- Make sure that your battery is charged. Life between charges varies by the specific device you have received and should have been indicated when you received the inhaler.
- To test your device:
 - 1) Go to an area where you get good cell phone reception
 - 2) Activate the device (this can be done without activating your inhaler, just remove the cap and squeeze)
 - 3) Wait a few minutes and check the website.
- If it still did not detect the activation, you should contact David Van Sickle.

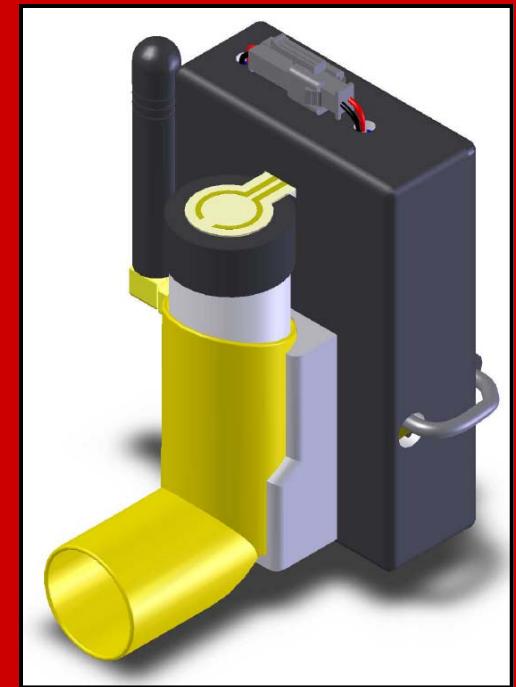
2. You cannot log onto the website:

- Make sure you are using your correct patient ID and password (check to be sure that the caps lock is not on). If you cannot login, please contact David Van Sickle.

3. Your asthma medication is not dispensing properly:

- Check the inhaler for debris that may inhibit it from functioning properly.
- Try removing all GPS equipment by taking the cap off and dismounting the box from the inhaler body.
- If the inhaler still does not function properly, contact the physician who prescribed it immediately.

GPS-Enabled Inhaler: User Guide

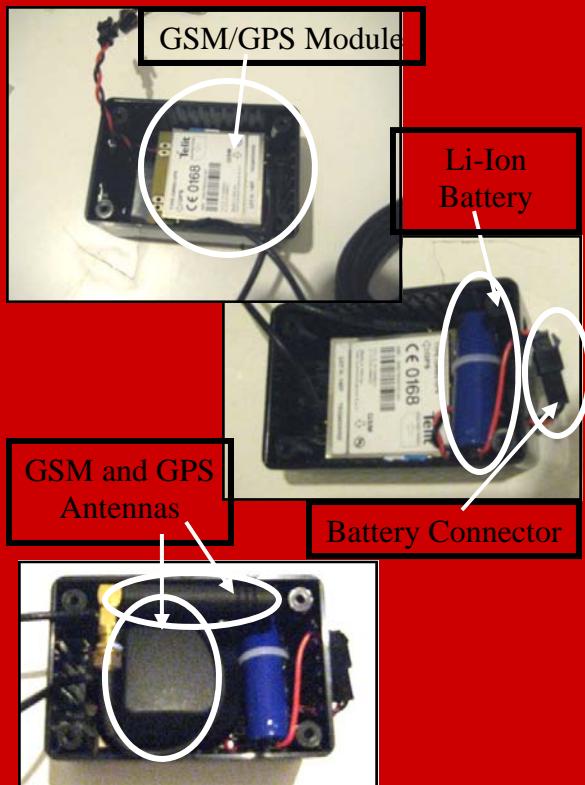


University of Wisconsin-Madison
Department of Population Health Sciences

c/o David Van Sickle
1007d Warf Office Building
610 Walnut St
Madison, WI 53726

(608) 261-1036
vansickle@wisc.edu

GPS Inhaler Components:



GSM/GPS Module

- Your device contains a combination module that can connect to the GSM (cell) network and query the GPS satellites. When you activate the inhaler, the module will get the GPS coordinates and send them to a secure web server over the GSM network.

Battery

- Your device contains a Lithium-Ion battery. These batteries have large capacities, which make them a potential fire and explosion risk. Keep reading for safety information.

Antenna

- Your device also contains both a GPS and GSM antenna, for retrieving coordinates and then sending them out.

GPS Inhaler Information

Connecting:

- To connect your inhaler to the device, all you need to do is slide your inhaler into the white holder and attach the cap to the top. When you need to use your inhaler, just shake and use normally.

Maintenance:

- It is recommended that the devices be fully charged after approximately 40 uses, or once weekly for average use (4-5 times daily). Those who use the inhaler more often may need to charge more frequently.
- To charge the device, unclasp the connection on the outside of the box. Then, connect the battery connector to the included charger's connector. Your battery should take about three hours to charge.

Proper Care:

- You should not leave your GPS Inhaler in places with extreme temperature fluctuations. This includes your car, near heating vents, or in direct sunlight for prolonged periods of time.

Safety Note: Your device contains a Lithium-Ion battery with a large capacity. This means that there is potential for the device to start a fire if the battery is damaged. If you think you may have damaged it, remove the back cover and inspect the battery. It should be cool to the touch and not show external signs of damage. This is especially important before you charge your device; that is when the battery is at the highest risk for causing damage. If you are unsure, unplug the battery leads, remove the device from the inhaler, and contact David Van Sickle.

Using Your Inhaler:

The device:

- When you activate your inhaler, the module will get the GPS coordinates from the satellites. It should do this only for the first puff if multiple uses are needed during asthma symptoms.
- The device relies on direct view of the satellites orbiting the Earth in order to retrieve a GPS location. Whenever possible, it is encouraged that you stand outside or near a window in order to increase the probability of a successful GPS fix.
- The antenna for your device is housed either inside the top of the case (large model) or to the outside of the case on the opposite side of the inhaler. This is the part that needs to be facing the sky.

The website:

- Once you activate your inhaler, it will send the GPS coordinates of the activation to a secure web server. At the end of each day you used your inhaler, you should log onto:
<http://www.asthmap.org/beta/test/> and sign in using your patient ID and password.
- If the device was unable to get the GPS coordinates (as may happen indoors), you will be asked to click the location on the map of where you used your inhaler. If the device did not even detect an activation, you should add a new activation to the map where you used your inhaler. If this is a consistent problem, it is likely that there is something wrong with your device.