

## Monitoring Air Quality (And Your Conscience) – Personal Air Tracker Plume Labs Flow 2 Put to The Test

By Lynn Walford - March 23, 2021



**🕒 Reading Time: 6 minutes**

Plume Labs Flow 2, a personal air quality monitor, helps transportation users see the air quality and make transportation choices. The founder and CEO of Plume Labs, Romain Lacombe, noted in his TED talk that people do not know that air quality changes by block and location. He believes, when given a choice, people will choose the cleanest and safest option.

I tested the device to see how it works and its effects on my life. Most air pollution is invisible to the human eye. The Flow can detect what we cannot see. It's a personal air-quality tracker that senses pollutants. It detects nitrogen oxides, auto exhaust gas, and particulate matter that may get into bloodstreams and create strokes and heart issues. It also detects volatile organic compounds.

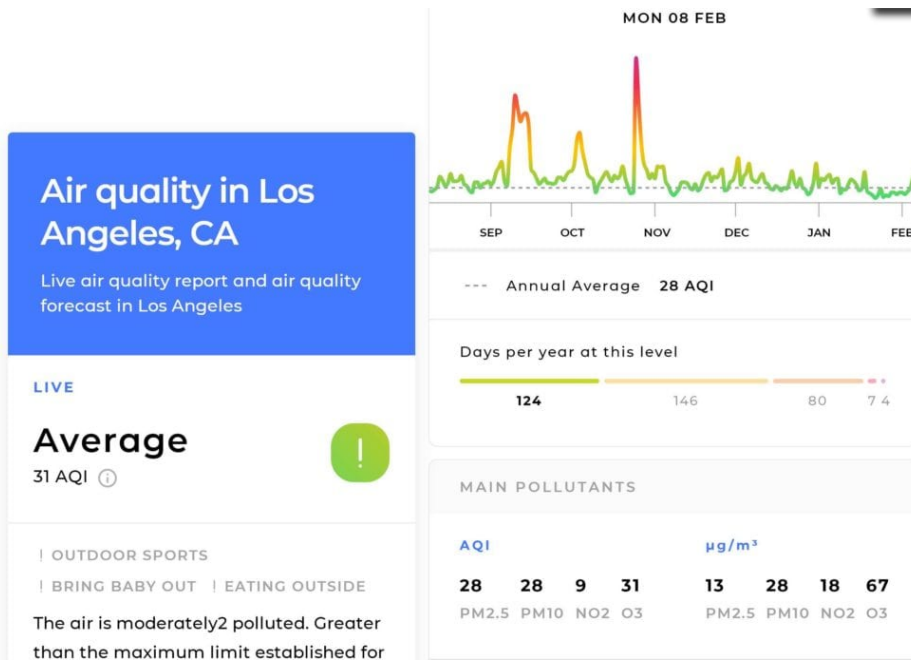
The Flow 2 device uses Bluetooth BLE (Bluetooth Low Energy) to pair with a smartphone -the GPS location comes from the phone. The Flow can be attached to a purse, backpack, bag, bike handlebar or stroller. There is a flexible strap with holes that connect to a pin. The band stayed attached to my purse, most of the time. However, twice the device either got caught in my purse straps or keys and fell off in the parking lot.

I heard it drop and was able to find the Flow. However, it's black, making it harder to see on black asphalt. I then placed a rubber band on the area to make sure that it would not come loose and a red lanyard so that I did not lose it again.

Phone GPS does not show the exact location. In most cases viewing the map you can estimate your exact route taken. It's a good idea to check the app after any trip, to note the pollution warnings.

The Flow companion app rates air pollution as low, moderate, high and very high. Tapping on the rating shows the World Health Organization's (WHO's) advice on the number of hours to limit

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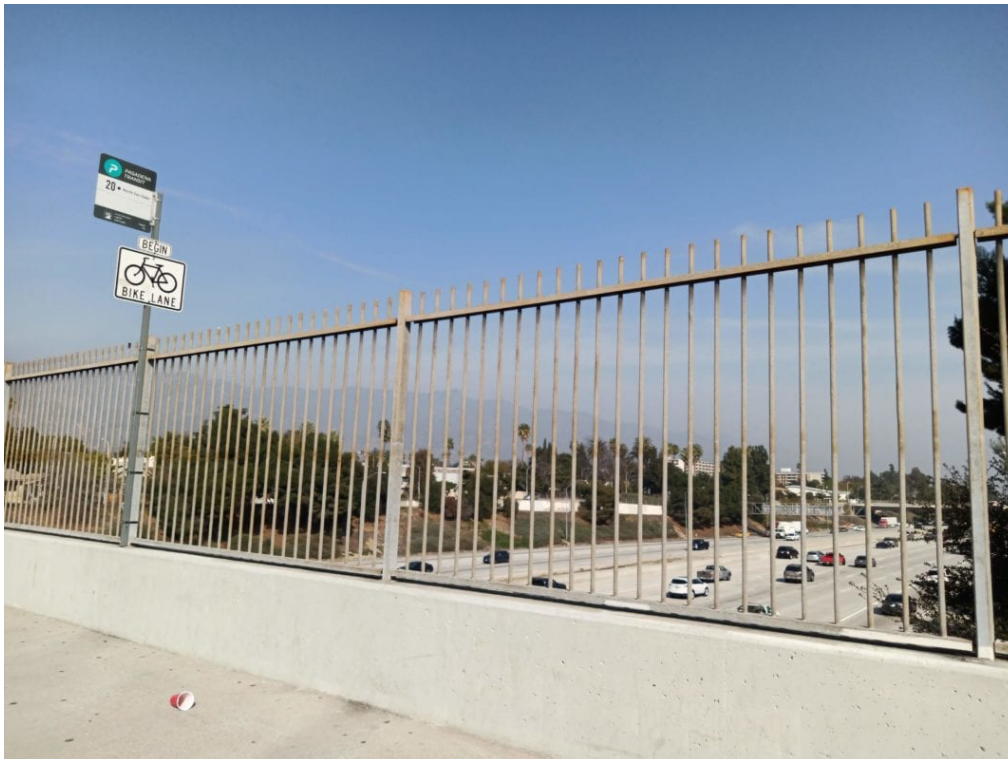


## Going with the Flow 2

I carried the Flow 2 with me on bicycle trips, drives, dog walks and then did a non-scientific ICE experiment.

The Flow will give an alarm notice on your phone when the air quality is poor. Bicycling over the freeway bridge triggered the alarm. I also heard it go off on some busy streets. After the notices, I have kept my bicycle trips on the north side of the freeway bridge.

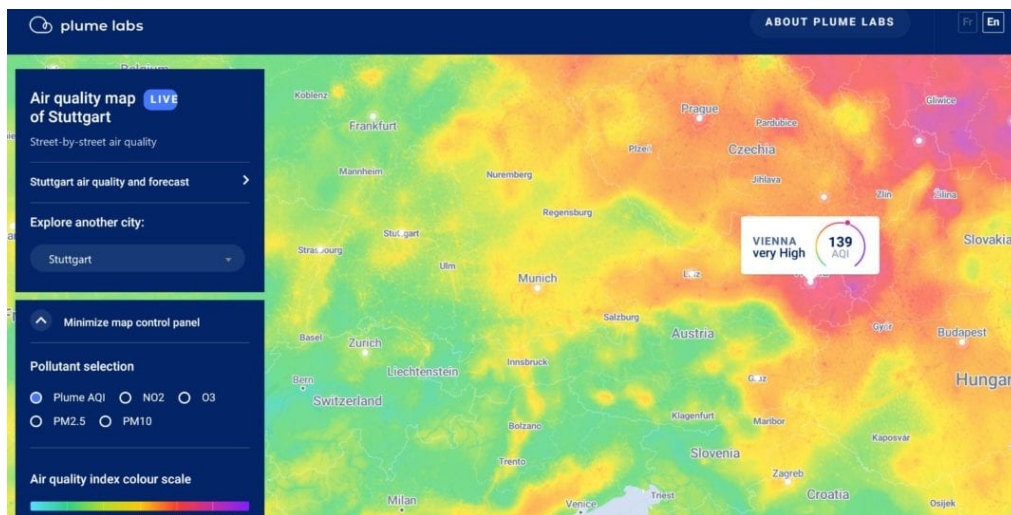
I noticed in the Los Angeles basin the smog builds up later in the day. Therefore, I try to take trips earlier in the day.



The alarm also went off at a local market where, for Covid disinfection, they spray the shopping carts with alcohol. It was due to high VOCs (volatile organic compounds). All of the same brand markets rated high on VOCs and I received warnings. When I applied hand sanitiser in my car the VOC alarm went off. Since then, I have tried to apply hand sanitiser outside the car.

The good news is that, in wooded green areas such as parks and even my yard, the air quality is much better. Low pollution areas are shown with green lines in the Flow app maps. At certain times, even in a closed-windowed electric car, the pollution rating was high or very high.

Another surprising detail was frying hamburgers in the kitchen set off the alarm. I stopped frying burgers. The device also alerted me that my 1978 gas furnace heater is emitting NO<sub>2</sub>, VOCs and particulate matter. I placed the Flow 2 over the floor heater for horrifying results.



## Non-Scientific Garage Test

Monday, I took my electric car to the shop. So now I'm driving a brand new shiny red 2021 loaner vehicle. I wanted to see how much a car pollutes by doing something I often see people do. They sit in their cars with the motor running. They listen to the radio and/or look at their phones.

My garage is a converted carport with most of it closed but has sections of open spaces such as the entry door which is like a fence with spaces between the slots.

I kept the device in the car at first. The pollution was low. I took screenshots of the events. Then I put the device on the back of the roof of the vehicle after a few minutes. The air pollution was moderate in a very short time in the garage. Moving the Flow closer to the ground reduced the ratings slightly. The numbers were higher when the device was higher.

Then I took the Flow 2 inside the car and the air quality was better with a low pollution rating. I thought I'd open all the windows to see what happens. Many advise that, to prevent Covid, you should open all the windows. But numbers don't lie – I'm sorry Auto Futures readers – I couldn't expose myself to all those pollutants knowing what they do.

In cold areas, to warm up cars, they do something called puffing, in which they leave the cars running. Say someone ran an ICE truck for several minutes in an enclosed garage they could expose themselves to moderate to high levels of pollution.



## Possible Uses of Flow Devices

Just one little ICE experiment has changed my driving preferences completely. I was thinking about going to a store about twelve miles away – I cannot, in good conscience, drive there now even in a new car.

I will have an electric vehicle in a few days when I plan to drive there.

A new vehicle that meets EPA standards can be dangerous in just a few minutes. I am unable to see that pollution but with the Flow I know what is happening.

A question a car seller may ask car buyers is: 'Would you rather work in a garage listening to the radio of a clean EV or to a radio of an ICE vehicle with the motor running?'

The Flow would also be helpful to delivery people such as Postmates bike riders. I saw one on a recent trip who was wearing a full respirator to protect himself from pollution.



“  
 Together we can act to bring an end to our pollution.  
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During the massive wild fires here in Los Angeles, I was mistakenly going outside during the worst polluted times of the day. I am not a doctor or researcher, but I do know, during the fires, my eyes were itchy and I felt lethargic.

At night the fog rolls in and it can hold toxic chemicals. With a Flow 2 attached to my purse, I walked past many on-the-road dining areas.

After seeing the high pollution, I don't want to eat at the tables on the street.

I walked into an underground parking garage at a Target store.

The air pollution went up in the lower-level parking garage and close to the traffic.

### Making Air Quality Transparent

In his TED Talk, Lancombe said: “You can change the products you use at home. You can find the best route to cycle to work. You can run when pollution is not peaking. And you can find the best park to bring your children out.”

“Technology alone will not solve climate change, nor will it make air pollution disappear overnight. But it can make the quality of our air much more transparent. If we can empower people to take action to improve their own health, then together we can act to bring an end to our pollution.”



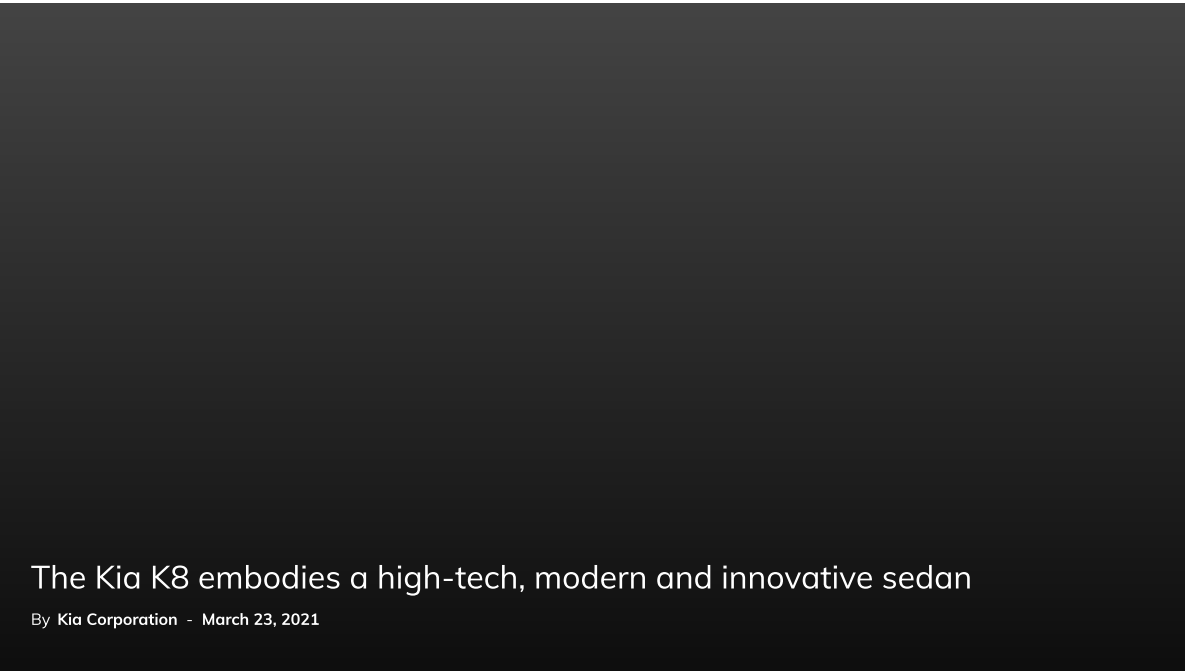
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Anyone who moves around outdoors could benefit from a Plume 2 (U.S. MSRP \$199).

For those who don't have a device, Plume Labs offers live, street-by-street pollution maps for hundreds of cities across the U.S. and Europe.

Lynn Walford

NEXT STORY



### The Kia K8 embodies a high-tech, modern and innovative sedan

By Kia Corporation - March 23, 2021



**🕒 Reading Time: 6 minutes**

- **K8 delivers a complete package that establishes new quality benchmarks**
- **State-of-the-art tech ensures a progressive, modern and light cabin**
- **Dynamic driving and handling performance thanks to a sophisticated AWD system and engineered suspension**
- **Choice of four refined powertrains offer smooth power delivery, improved fuel economy and reduced emissions**

The Kia K8 combines cutting-edge innovation and dynamic performance to establish new benchmarks for premium quality in the sedan segment.

Further demonstrating the recent rejuvenation of the brand, the K8 offers progressive and refined driving performance, cutting-edge Advanced Driver Assistance System, and a contemporary and clean interior space that provides the driver and passengers with a first-class lounge experience.

The K8 will go on-sale in selected global markets from next month, starting with the Korean market.

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