

### SENSOR CAPABILITIES

Velocity (speedometer)  
Position (odometer)  
G-force (accelerometer)  
Acceleration (accelerometer)  
Rotation (gyroscope)  
Direction (magnetometer)

### DEVICE COMPATIBILITY

Uses Bluetooth 4.2  
Wireless Range: 20 meters line-of-sight (60ft)  
Connects to almost any Mac computer, Windows computer, Chromebook, iOS device, or Android device.

### BATTERY

Rechargeable Li-Poly  
Connect via micro USB  
40 hour life  
(wireless, full data rate)

### BATTERY CHARGING

Use a micro USB cable to charge. LED blinks red every 10 secs while charging, stops when fully charged.

### PRODUCT CARE

PocketLab G-Force is NOT waterproof. Keep it protected from the rain. This sensor is durable, however, some components may break when dropped on hard surfaces.

# Need Help?

We're here for you!

Log in to PocketLab Notebook for tutorials, a knowledge base, and chat support. Visit [thepocketlab.com/notebook](http://thepocketlab.com/notebook)

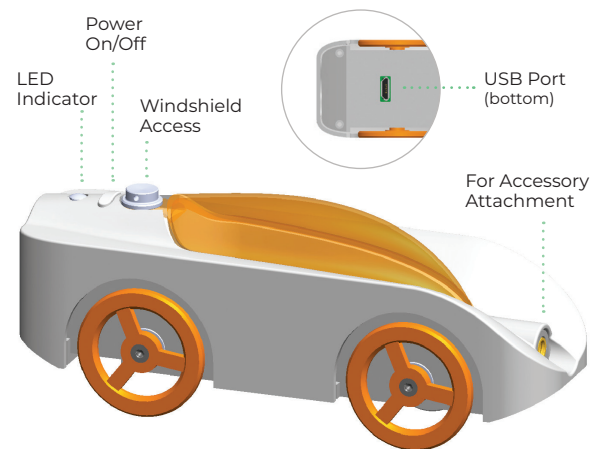
Questions? Send us a message: [thepocketlab.com/contact](http://thepocketlab.com/contact)

Explore detailed instructions and exciting experiments at [app.thepocketlab.com/g-force](http://app.thepocketlab.com/g-force)



# G-Force

SENSOR USER GUIDE



# Let's Get Started:

## GO TO: [app.thepocketlab.com](http://app.thepocketlab.com)

in Google Chrome/Microsoft Edge or use "the PocketLab" app on iOS/Android

## CONNECT POCKETLAB SENSOR:

- Click "Connect a PocketLab"
- Turn on PocketLab (short press top button)
- Select your sensor in app window

**\*Important:** For Bluetooth pairing, use the app only, not your device settings.

## CREATE FREE NOTEBOOK ACCOUNT:

Save data, access interactive lessons, manage classes and student accounts, and more!

- Click "Teachers: Login or Create Account"
- For tutorials visit [thepocketlab.com/training](http://thepocketlab.com/training)

BUTTON FUNCTIONS	
Short Press	Start Bluetooth pairing
Long Press (5 secs)	Power Off
LED CODES	
RED-GREEN Flash	Ready to connect (fast) Disconnected (slow)
GREEN Flash	Bluetooth pairing initiated (3X) Connected to app (1X per 5 secs)
RED Flash	Low Battery (1X per sec) Disconnecting from app (solid) Battery Charging (3X per 10 secs)
ORANGE Flash	Downloading data to app

# G-Force Expeditions!

## ROLLER COASTER ENERGY DYNAMICS

Explore roller coaster physics hands-on! Students construct tracks, predict energy changes, and use velocity sensors with G-Force racecar data to study gravitational potential energy conversion. It's a thrilling dive into energy conservation principles!

## MAGNETIC MAGIC

Unravel magnetic mysteries! Students investigate forces without contact, designing experiments with the PocketLab TurboTrack kit to reveal magnetic interactions and field strength factors. Experience the excitement of magnetism in action!

## CRASH CUSHION DESIGN CHALLENGE

Design safer highway cushions! With PocketLab G-Force, craft and test crash cushion models to lessen crash impact gradually. Dive into engineering, analyzing acceleration data to shape the future of highway safety.

## DISCOVER MORE!

Explore additional exciting and interactive G-Force lessons in the PocketLab Notebook Lesson Library!

[app.thepocketlab.com/g-force](http://app.thepocketlab.com/g-force)