VERVE 2 First Time User Guide

The VERVE2 is THREE awesome products in one. First, it is a sensor system that you can use to easily control your favorite games or apps with the world around you. Second, it's a full blown, easy-to-use data acquisition system that lets you collect and monitor data for your own research projects. Third, it's a web data server that lets you read sensor data through the internet.

This guide will help you set up your VERVE 2 and show you how easy it is to control your computer using sensors (along with a couple fun demos!).

What's in the box?
Here's what you get with the VERVE 2 starter kit…

Welcome to VERVE 2!

Remove all contents of your VERVE 2 kit.

Your VERVE kit contains everything you need to get started: (1) VERVE 2, (8) 3.5mm sensor cables, (8) sensors, (1) USB thumb-drive, (4) cable extenders, (2) alligator cables, (1) USB cable.

VERVE Set-up

1. Plug the USB thumb-drive into your computer and open the Windows or OSX folder. Drag-and-drop the VERVE app to your desktop or preferred location on your computer.

2. Plug the mini-USB end of the USB cable into the back of the VERVE and the other end into your computer. **It may take up to 5 minutes for the drivers to load the first time.**

3. Start the VERVE app. Some Mac or PC users may have to option-click, or change security settings to allow apps from unidentified developers.

4. Pick a sensor and connect it to a VERVE cable. **We recommend starting with the turn sensor.**

5. Plug the other end of the cable into port labeled **1** on the VERVE2 hub.

6. In the VERVE app, the blue bar shows you the response of the sensor. As you rotate the turn sensor left to right you will see the Sensor 1 bar move up and down.

7. Try plugging in these other sensors to see how they respond. For more information, see the sensor guide on **pages 9, 10**.

Control your computer with the VERVE 2

Now that you are familiar with how each sensor works, we will show you how to use these sensors to send a keystroke to your computer. We will use the turn sensor as an example.
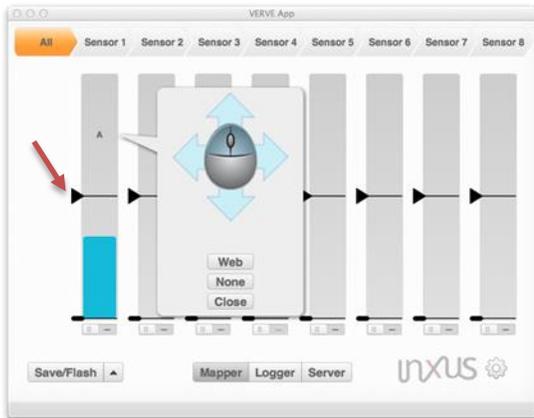
8. Click on the top zone of the first sensor with your mouse and press the 'A' button on your keyboard. You should now see the letter 'A' appear in the active zone.

   Then, move the threshold bar up or down to set your threshold. Click the **Save/Flash** button. Name and select a location for your VERVE profile.

9. Press the black button on the VERVE 2; it should glow blue. This indicates that the VERVE 2 is in keyboard emulation mode. When your sensor value goes into an active zone, the keyboard action gets triggered.
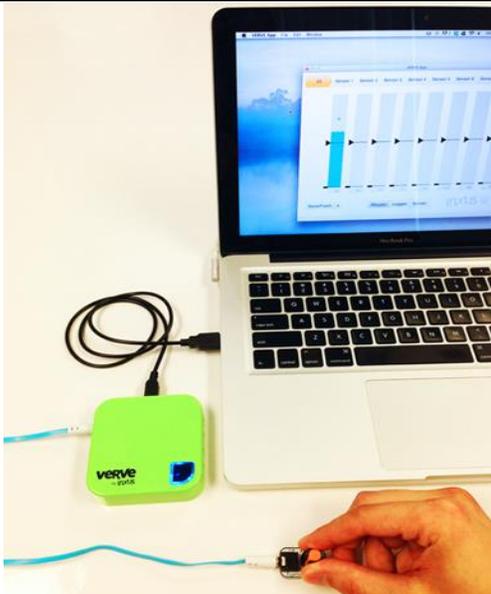
10. Open up a text editor like Notepad or Microsoft word. When the turn sensor enters the range you specified, the VERVE 2 will send the 'A' keystroke to your computer.

    Congratulations, now you can control almost any app or game with your sensor!

    Hint: Instead of clicking the letter 'A', try pressing one of the mouse arrow buttons shown in step #8 to control your mouse direction.

Application #1: Use a fruit to play "Sensor Jam"

This example shows how you can use VERVE 2 to control a video game, resulting in fun and unusual experiences. In this case, you can make sounds by touching fruit. If you don't have fruit try using a piece of aluminum foil or anything conductive like a key or a coin.
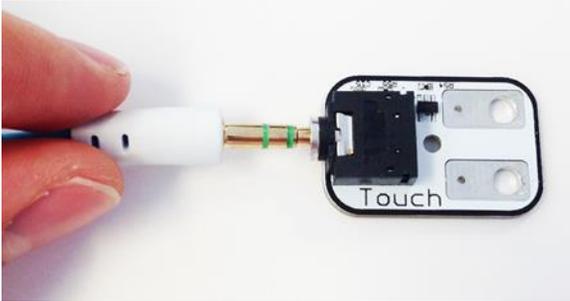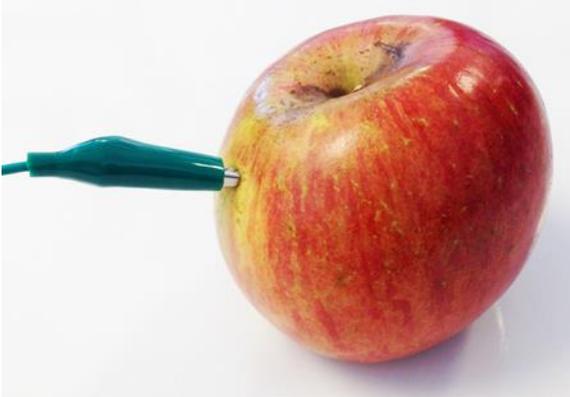
Select the touch sensor
Connect the "Touch" sensor to your VERVE 2.

Connect alligator clips
Clip on one side of each alligator clip to the "Touch" sensor.

Make electrical contact with the fruit
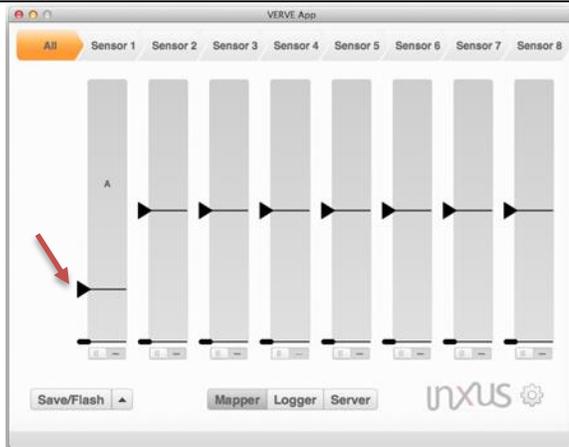Push one alligator clip into your fruit.

Make electrical contact with yourself
Hold the other alligator clip with your fingers.

Measure yourself touching the fruit
Touch the fruit with your other hand. Observe how the sensor responds on the VERVE app.

Map the keyboard to the action zone
Adjust the threshold bar so that when you touch the fruit, the sensor value will enter the action zone. Select "A" for the keyboard action.

Play the game
Open Sensor Jam app. Press keyboard "A" to see what happens. The app should make a drum sound.

Now, with your VERVE 2 engaged (blue light on), touch the apple to do the same thing (VERVE 2 sends keyboard button "A"). Feel free to map keystrokes "B" through "H" to the VERVE 2 and plug in additional sensors.
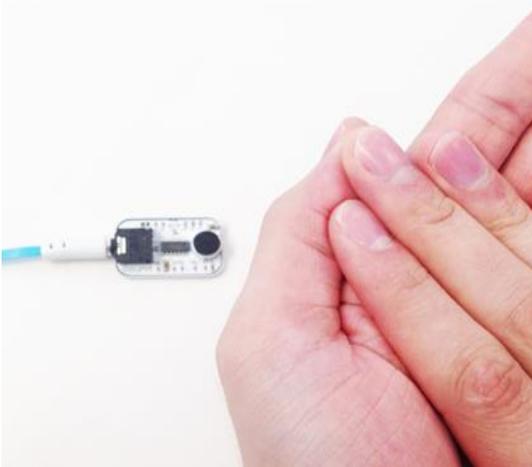
Explore the sensors and jam away!

Application #2: Make a Clap-to-Text system

This example shows how you can detect a noise (such as a clap) and send a text to your cell phone. This might be used to send a text when an intruder makes a noise in your home while you are away, for example.
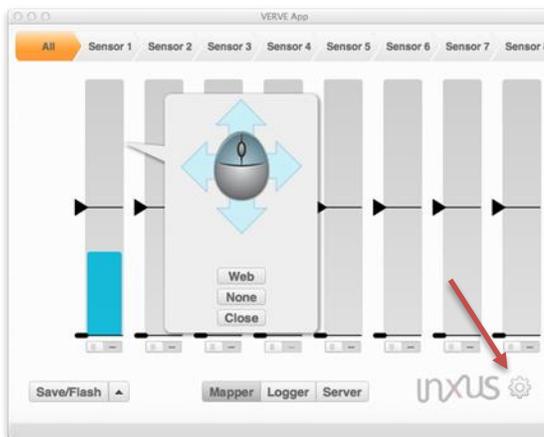
Select the sound sensor
Connect the "Sound" sensor to your VERVE 2.

Test the sensor
Try clapping your hands together to see the sensor response on the VERVE app.

Set up your account
Text messaging will use your email account to send text messages (SMS) to people's phones. To set up the text feature, click the gear button on the button right of the screen.

Configure your settings

Enter your email and password into the app settings. Then press save and close.
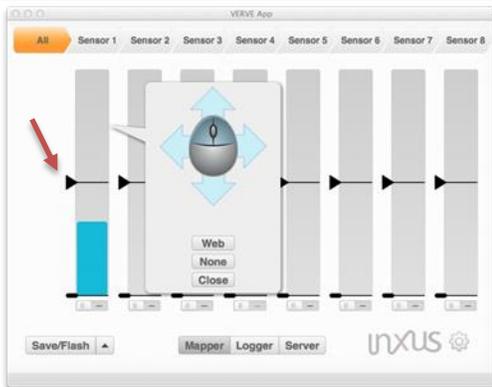
Map a web action to your sensor

Clap your hands to determine your threshold and adjust the threshold bar accordingly by sliding the small black triangle up or down. Click on the active zone of the first sensor with your mouse. Then, click the **Web** button to fill out the text message form.
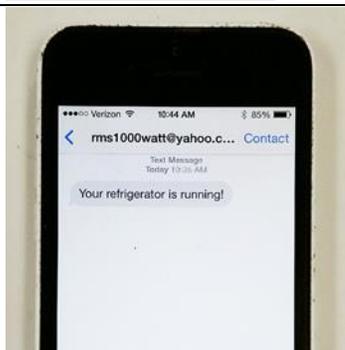
Enter phone number and message

Use the pop-up to configure your text message. Here is where you'll put the phone number of the person to call and the text message. You can also choose to send an email or even send data to certain websites by clicking the tabs on the bottom.

Clap to send a message!

When you clap your hands, the sound sensor response (blue bar) will move into the active zone in the VERVE app. When the sensor value goes into the active zone, a text message is sent. Its that easy!

Have fun sending messages! (Be careful, your carrier plan may charge you for SMS text messaging.)

Sensor Guide

Sensors measure what's going on in the physical world. VERVE 2 kit comes with eight (8) useful sensors for your projects. We are always adding new sensors so make sure to check out our site to see what's available. Here's what they do.
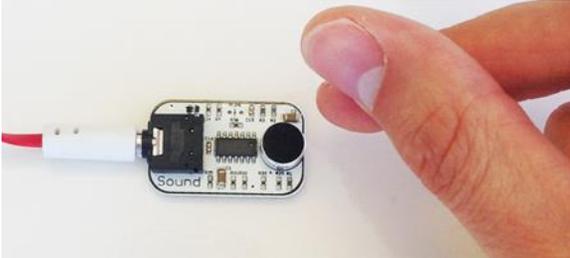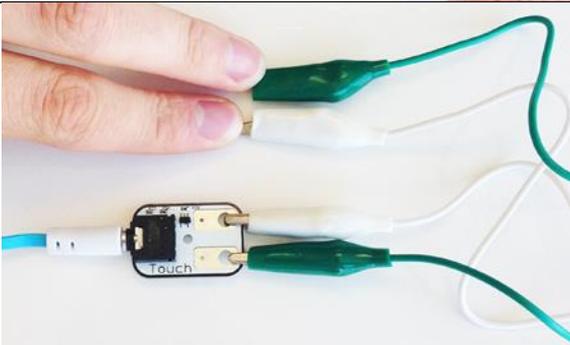
Sound sensor
The sound sensor measures ambient sound level. Click your fingers, clap, or shout near it to get a response.

Turn sensor
The turn sensor measures rotation of the turn knob. Spin it back and forth to get a response.

Touch sensor
The touch sensor measures small changes in electrical conductivity, such as when your body touches both contacts. Connect the contacts with your skin (and your friends) to get a response.

Light sensor
The light sensor measures ambient light. Shine a flashlight or create a shadow (by covering it) to get a response.
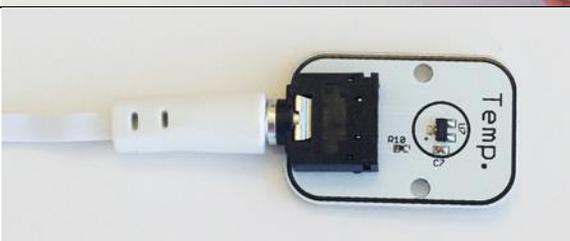
Temperature sensor
The temperature sensor measures ambient temperature. Put it in a warm place or cool place to get a response.
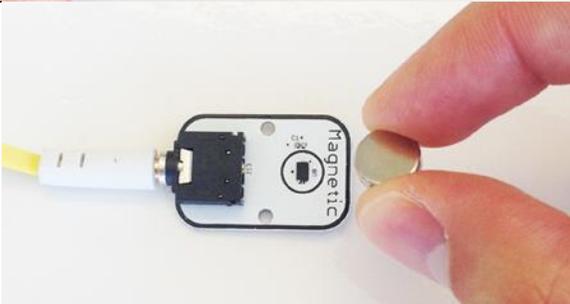
Button sensor
The button sensor makes a measurement when you depress it. Push the button to get a response.

Motion sensor
The motion sensor measures changes in velocity. Shake it left to right to get a response.

Magnetic sensor
The magnetic sensor measures magnetic fields. Bring it near a magnet to get a response.