

Rev	Description	By	Date
1.0	Initial Release	SV	06 March 2018
1.1	Product name change	SV	13 March 2018
1.2	Added 47 CFR 15.19 and 47 CFR 15.21	SV	30 May 2018

Users Manual
For SpotOn VSF-001-1

Prepared by:
Sung Vivathana
OnPoint Systems, LLC
292 Route 101
Bedford, NH 03110
sung.vivathana@ops.tech

Rev 1.2



Quick Start Guide

WARNING: SpotOn has been tested and meets applicable limits for human radio frequency (RF) exposure per the FCC.

Specific Absorption Rate (SAR) refers to the rate at which the human body absorbs RF energy. The SAR limit is 1.6 watts per kilogram in countries that set the limit averaged over 1 gram of tissue. During SAR testing, SpotOn radios are set to their highest transmission levels and placed in positions that simulate typical worst-case use conditions when near the body of a person.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. **See 47 CFR Sec. 15.19.**

OnPoint Systems, LLC has not approved any changes or modifications to this device by the user. Any changes or modifications could void the user's authority to operate the equipment. **See 47 CFR Sec. 15.21.**

Proper Collar Use:

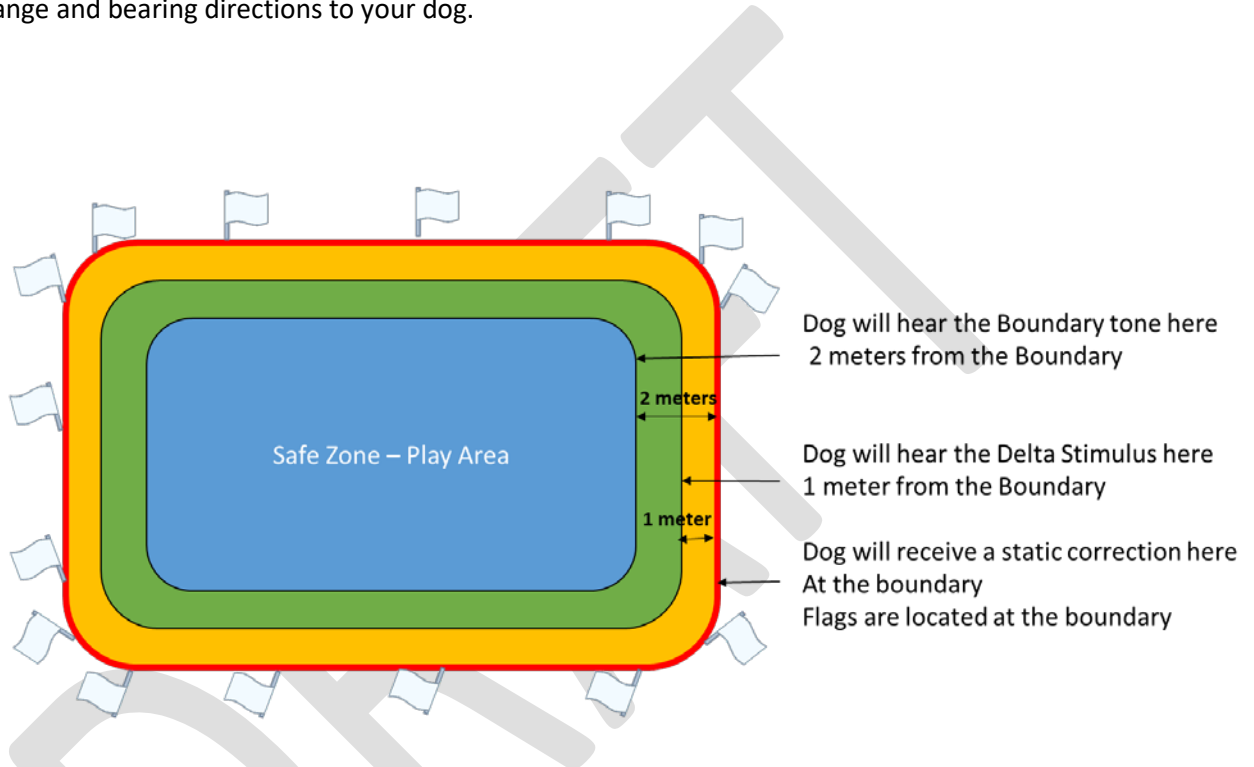
The SpotOn Virtual Smart Fence is intended for use on dogs as a containment and tracking system. The system is not intended for use on humans or other animals. OnPoint Systems, LLC or any of their affiliates or contractors do not assume any liability for the improper use of the SpotOn System.

Helpful Hints:

- We strongly urge you to read the owner's manual in its entirety, and watch the video tutorials for a comprehensive understanding of your new product.
 - Fully Charge the system before use. Charging time is typically 1 hour.
 - Do not attach a leash to the collar or use the collar to physically restrain your dog. This will cause added pressure of the contact points against your dog's neck. Use a separate leash and collar placed below the SpotOn collar to control your dog.
 - Register your collar with your dog's name and valid contact information and update it periodically. Your Smart Collar doubles as an ID tag so be sure that it stays updated with the most current information.
 - Pets should be properly trained before leaving them unattended in a containment area. Failure to do so is unfair to your dog and may cause them to breach a containment area.
 - As described in the owner's manual, use the static correction feature only if necessary and at the lowest effective setting. Use the probe tester to verify the presence of a static correction. The probe tester can also be used to install and remove the probes.
 - We do not recommend creating maps in yards less than $\frac{3}{4}$ of an acre.
 - Do not create a containment area within 15 feet of a hazardous area, or side of a home.
 - Do not use the Smart Collar in downtown areas surrounded by tall buildings. The system is not intended for use in major cities because system accuracy is degraded by tall buildings.
 - Using the Smart Collar in densely wooded areas will likely result in a slight degradation of accuracy.
 - Always remove the Smart Collar from your pet when not in use.
 - Frequently inspect your dog's neck. If you notice irritation, discontinue use temporarily to allow the irritation to subside.
-

HOW DOES IT WORK?

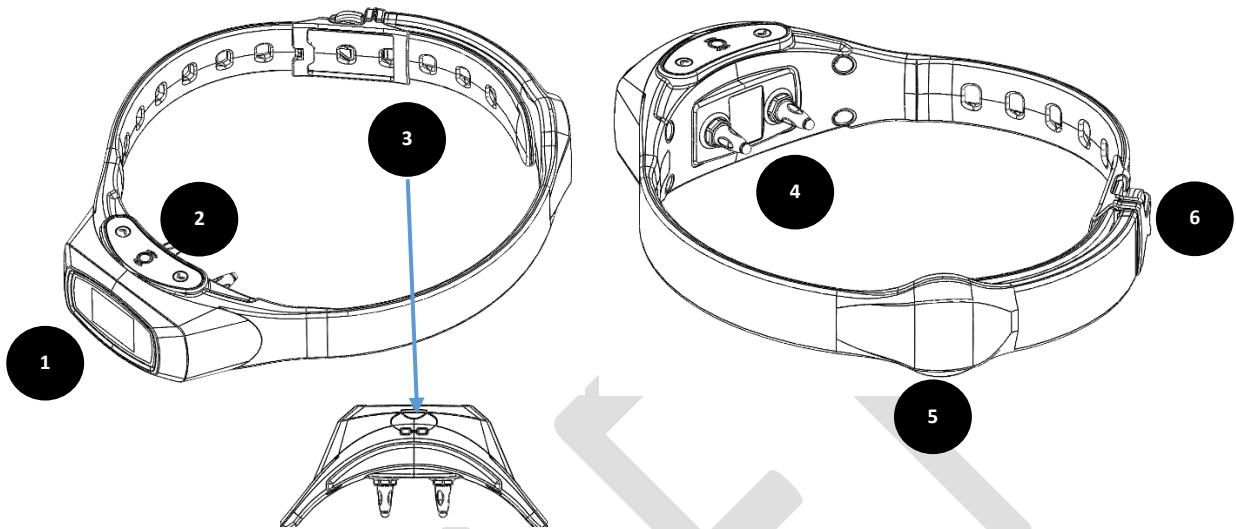
SpotOn is a dog collar that uses GPS signals and inertial navigation technology which enables you to provide custom designated containment areas for your dog. As your dog approaches the boundary of the designated area, the collar produces a “good dog” tone. If the dog progresses further to the edge of the designated area a “bad dog” tone is produced. Continued progression beyond the boundary after hearing the “bad dog” tone results in a static correction. If your dog remains outside the designated area for more than 6 seconds, an email message is automatically sent to your smart phone. You can then locate your dog on a map, and receive driving direction to your dog, or you can call up a compass mode in which you will be given range and bearing directions to your dog.



- Navigation systems, like GPS, use a combination of satellite signals and geometry to determine your position. They typically require a minimum of 4 satellites before a position will be calculated. At any point during the day the number of satellites (up to 24), satellite geometry and the local environment can impact the location accuracy of the received signal causing variations in the reported position. SpotOn minimizes these variations by using 3 navigation constellations (GPS, GLONASS, Galileo) and a minimum of 8 satellites at any given time to determine a position. Although these variations should be minimal, it is not unusual to see some variation in position reading. Because of this, you may notice that the location of the perimeter you have created slightly varies from time to time. Variations can be as great as 10 feet, but are typically much less.

About The SpotOn System

SpotOn Smart Collar Features:



1	Multi-Color OLED Display provides collar status information	4	Contact Points
2	On/Off Buttons & Menu Selector	5	GPS Antenna
3	Battery Charging Port	6	Collar Clasp

Proper Fit

A loose fit can allow the collar/antenna to move around on the dog's neck. When this happens, the contact points may rub and cause irritation, not make proper contact with the dog's neck, or interfere with stimulation. When fitting the collar, be sure that the contact points press firmly against the dog's skin and the GPS antenna is pointed up toward the sky. You should be able to fit 1-2 fingers between the collar and your dog's neck. It is recommended that you remove the collar from your pet when not in use. The collar IS NOT to be permanently left on your dog. The area under the neck where the contact points come into contact with the skin should be periodically washed and inspected for irritation. If irritation is discovered you should discontinue use until the irritation is gone. Before using the collar again, perform another fit check to ensure the proper fit. It is recommended, to aid in irritation prevention, that the contact points are cleaned on a regular basis with warm, soapy water.

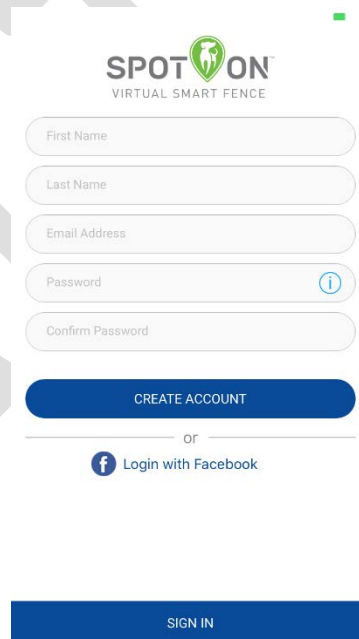
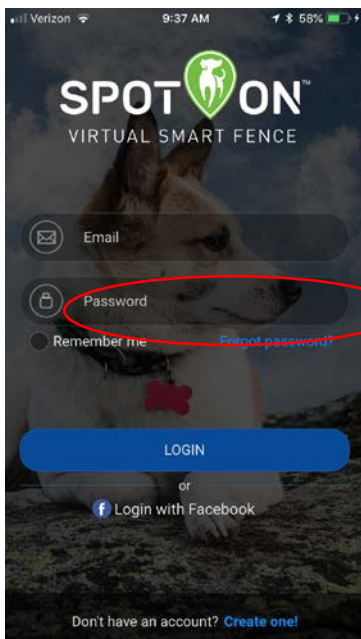
Prepare the Collar for Use

Warning: Prior to any use, you must fully charge the collar battery. A complete charge will take less than an hour.

To charge the collar, plug the power cord into the smart collar USB connector and plug the other end into the wall charger provided as part of the system kit. Plug the wall charger into the wall. The smart collar will now charge.

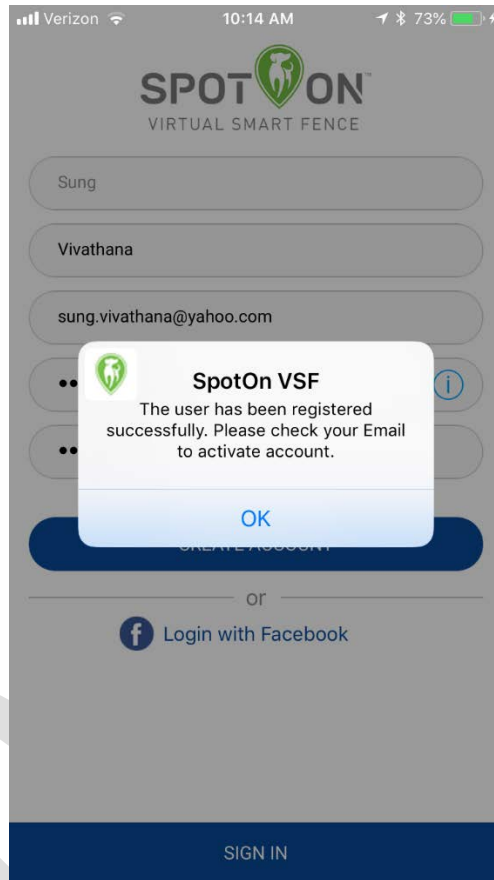
Create a SpotOn Account

Once the smartphone app is downloaded, create a SpotOn account to register your collar, receive notifications, view maps, etc. Open the smartphone app and below the account login you'll see "Don't have an account? Create One". Select "Create One" to create an account. (app screen shown below on left)



From here, complete the Account Information screen (shown to the right) to create an account.

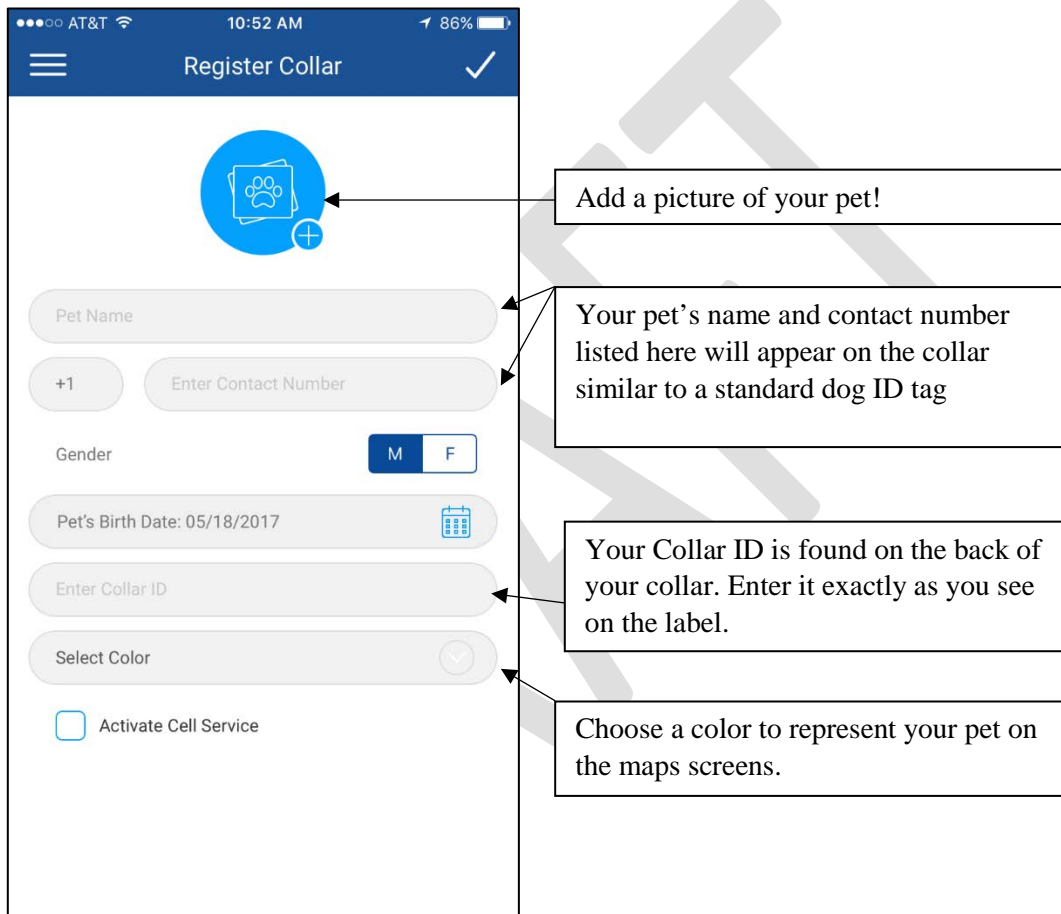
Once your account has been created, activate your account through the link sent to your registered email. Once activated, you can use the SpotOn app to access your collar/pet detail, maps and more.



Registering your Collar

The first time you log into the SpotOn app you will be brought directly to the **Register Collar** screen. Before using your SpotOn collar, you will need to register the collar on your app to ensure full functionality of the app with your collar.

Note: Please be sure to turn on Location Services and Notifications for the SpotOn app.



The screenshot shows the 'Register Collar' screen in the SpotOn app. The screen has a blue header with a hamburger menu icon, the text 'Register Collar', and a checkmark icon. Below the header is a blue circular button with a white paw print icon and a plus sign. Below this are several input fields: 'Pet Name', '+1 Enter Contact Number', 'Gender' (with 'M' and 'F' buttons), 'Pet's Birth Date: 05/18/2017' (with a calendar icon), 'Enter Collar ID', and 'Select Color' (with a dropdown arrow). At the bottom is a checkbox labeled 'Activate Cell Service'. Five callout boxes with arrows point to these elements: 'Add a picture of your pet!' points to the blue button; 'Your pet's name and contact number listed here will appear on the collar similar to a standard dog ID tag' points to the 'Pet Name' and 'Enter Contact Number' fields; 'Your Collar ID is found on the back of your collar. Enter it exactly as you see on the label.' points to the 'Enter Collar ID' field; 'Choose a color to represent your pet on the maps screens.' points to the 'Select Color' dropdown; and 'Your pet's name and contact number listed here will appear on the collar similar to a standard dog ID tag' also points to the 'Pet Name' field.

Register Collar Screen on the App

Charging the Battery

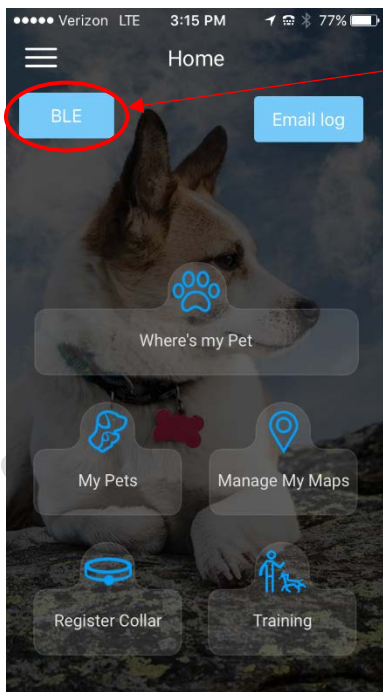
The SpotOn Virtual Smart Fence comes equipped with a rechargeable battery. The collar's charge is reflected on the top right hand corner of the collar's screen as both a numeric value and a battery icon. Plugging the collar into any standard wall outlet using the provided USB charging port can charge the unit in approximately one hour. We recommend taking off the collar to charge the battery at the end of each day.

Pairing SpotOn with the Mobile App

Your first step in the training process will be to pair your smartphone with your collar. This will enable you to initiate the various tones in the collar and set the static correction level for the collar.

To pair your phone to the collar:

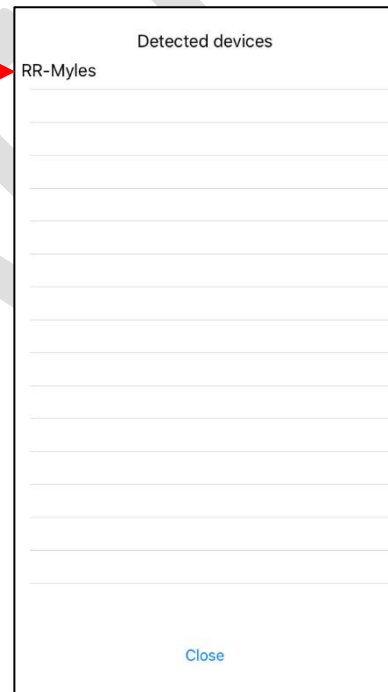
1. Power up the App. Once in the home screen, select the “BLE” icon in the top left portion of the screen.
2. When your collar is connected, you will see a listing of Bluetooth devices that are currently being accessed by your smartphone. Select RR-[your pet’s name].
3. Once you select the collar that corresponds with the pet that you would like to train, the phone and the collar will be paired. The phone and collar will remain paired for up to 30 minutes of no activity but will stay on indefinitely if the Bluetooth communications are being used. After 30 minutes of inactivity, you will need to re-pair the collar.
4. Confirm that the collar is paired with your phone by checking that the white BT symbol is shown on the collar display.



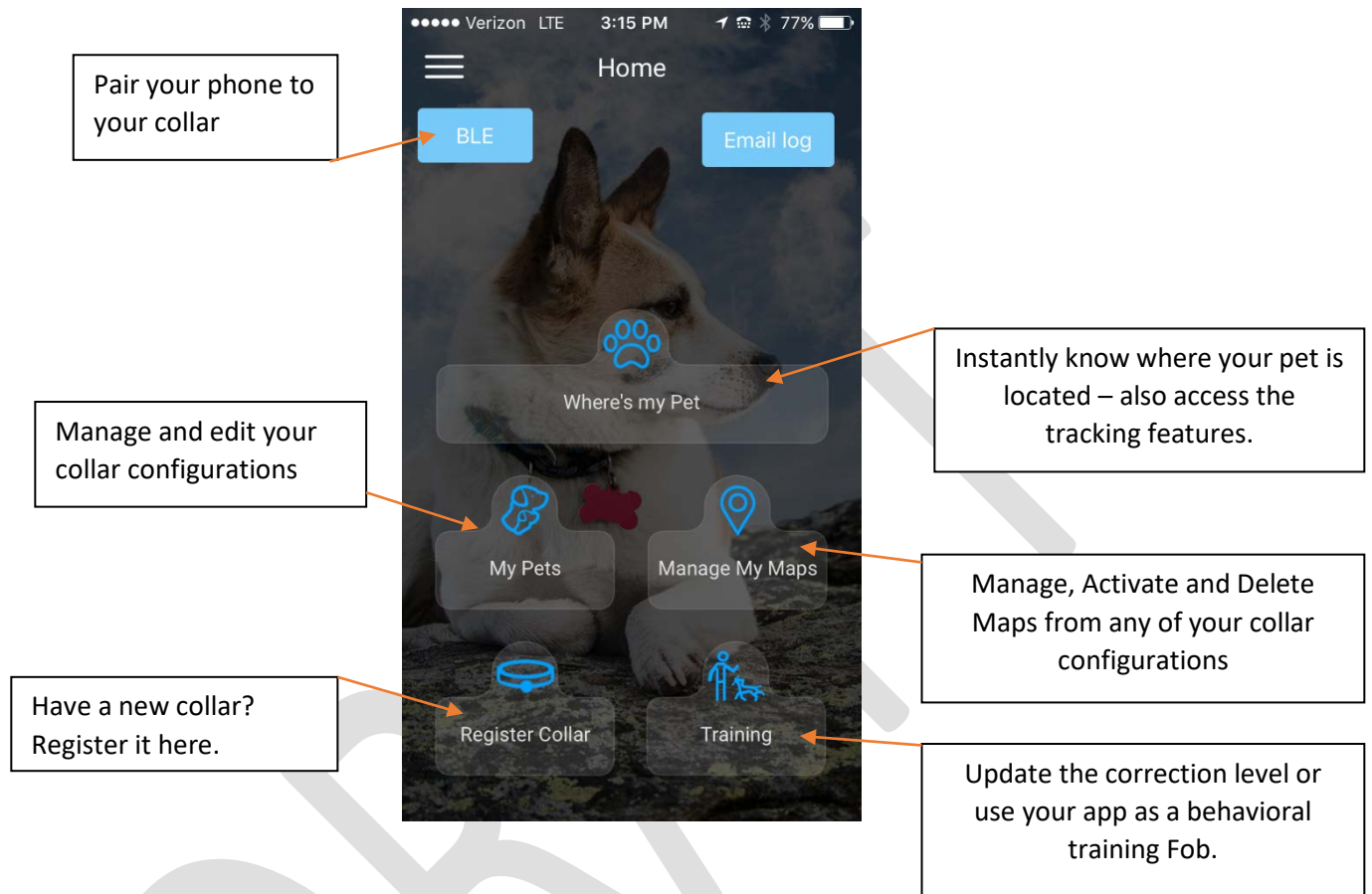
BLUETOOTH

To pair your phone to the collar using Bluetooth, select the **BLE** button

You will see a list of available collars. Select which collar you



The app offers the following features:



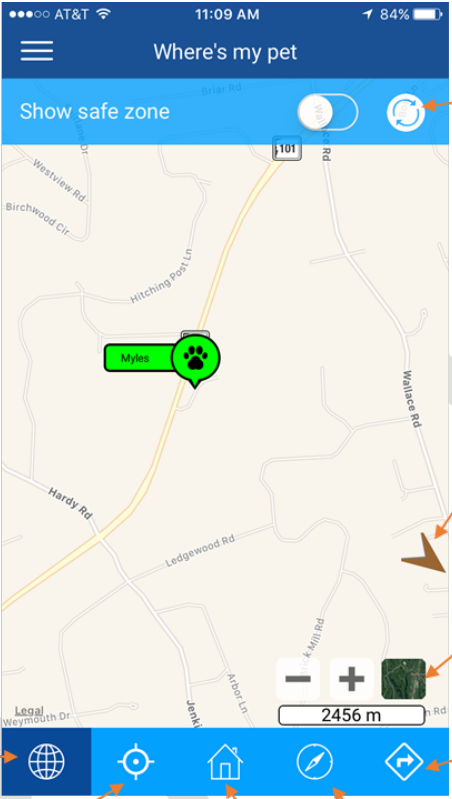
- **Where's My Pet:**

The "Where's My Pet" function provides on demand location information for your pet. Your pet can, but does not need to, be in a containment area to use this function.

From the main screen of "Where's My Pet" (shown on the next page) you can access the SpotOn Tracking features where you can (see corresponding "Track my Pet" image on page 14)

1. Track your pet using breadcrumbs on a graphical or satellite imagery map
2. Track your pet using a compass, which tells you direction and distance to your pet.
3. Access turn by turn directions to your pet's location

WHERE'S MY PET SCREEN
Entering the screen gives you the location of your pets



Refresh the location information

If you zoom in, an off screen indicator tells you where your other pets are located

Choose graphical mode or satellite imagery

Get driving directions to your pet

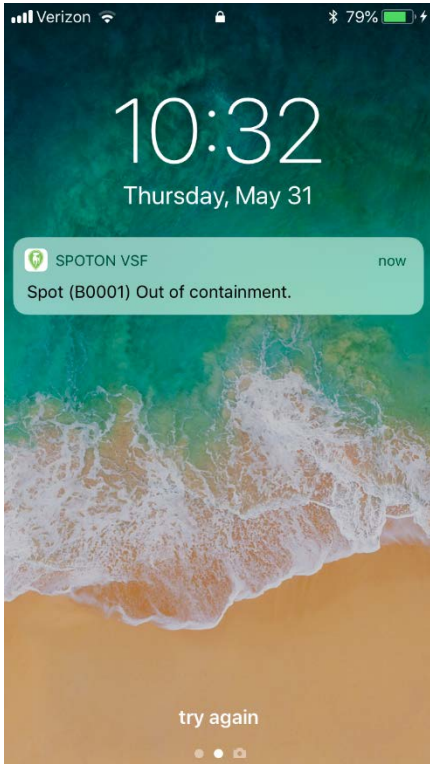
Access Where's my Pet

Track your pet by getting a location status update every 6 seconds (impacts battery performance)

Access the Home Screen

Track your pet using the Compass mode (impacts battery performance)

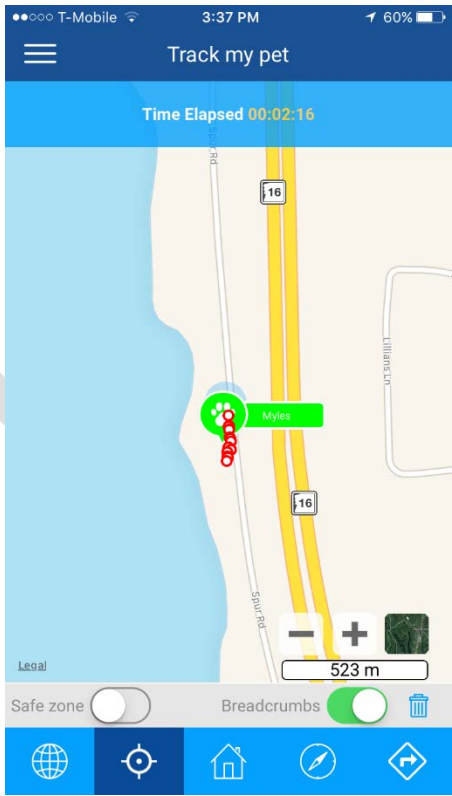
If you receive an “out of containment” notification for your pet, the “Track my Pet” screen will automatically open from the smartphone notification message:



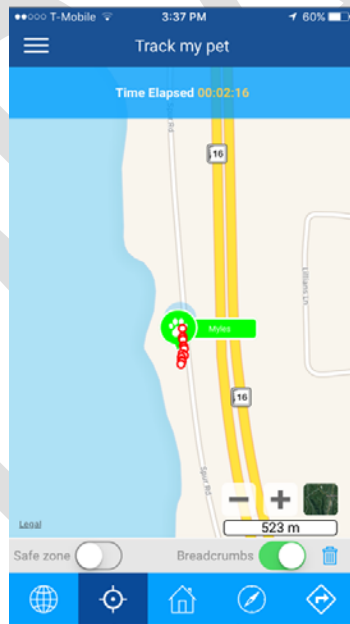
TRACKING MODE

The collar will automatically enter tracking mode if the dog breaches the containment perimeter.

You will receive a notification on your smartphone that the dog as breached the containment
(Shown on Left)
Opening the app from the notification will open the **Track My Pet** screen
(Shown on Right)



Warning: Due to the increase in system functions during Tracking Mode, your battery life may be diminished when using this mode. The system provides a reminder after 10 minutes of tracking to ask if you would like to continue tracking.

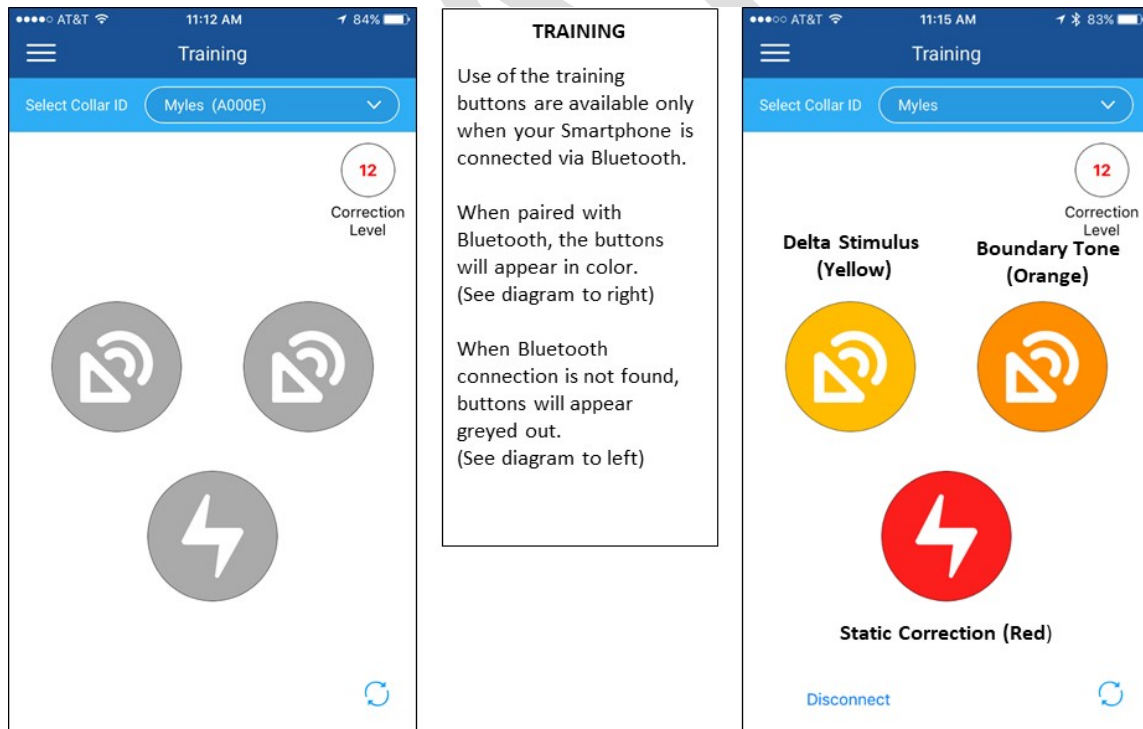


TRACKING MY PET

At any time you can initiate tracking of your dog. There are three ways to enter Tracking. Once in Tracking Mode, the system will track for 10 minutes and then ask you if you want to continue:

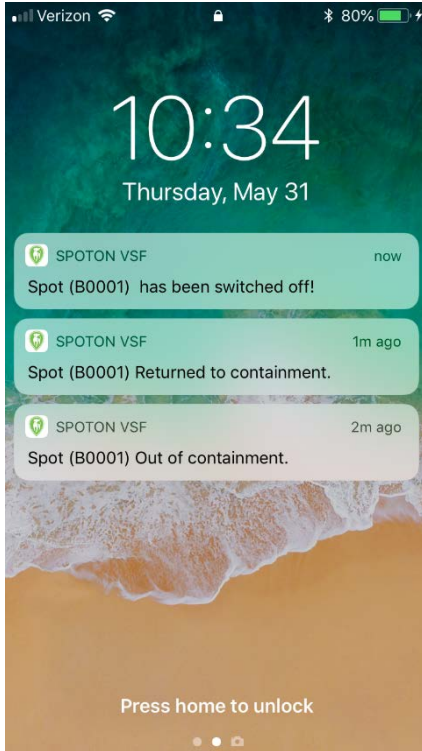
1. Track my Pet (shown) which provides the location of your pet on a graphical or satellite map image and a breadcrumb trail of where your pet has been (red circles)
2. Compass Mode – use RingRover's in-app compass to find the direction and distance to your pet
3. Driving Directions – Use the app to initiate driving directions direct to your pet

- **My Pets:** In the My Pets screen, you will enter and be able to access some basic demographic information about your dog. This will include their name, birthdate, collar id, contact information, and the battery status of their collar. Should you choose to expand your system for use with multiple pets, each pet will have their own collar and corresponding screen.
- **Manage My Maps:** On the Manage My Maps feature, you will be able to store up to 10 unique maps that you have created. In this section, you may activate or deactivate any of the maps or pair multiple collars to a map in the system. You will also be able to delete a map altogether if you decide you do not need to use it anymore. The Manage My Maps feature allows you to choose between seeing a line drawing or a satellite view of each map.
- **Register Collars:** The Register Collars feature allows you to add a new collar to your existing SpotOn Containment System. The details of the Register Collar screen are discussed in the earlier “Register Your Collar” section.
- **Training:** The Training feature allows you to simulate the tones that you will find on your collar and adjust the level of stimulation for each collar that is paired with the system. The following images illustrate the buttons for initiating the two tones and static correction. When there is no Bluetooth connection to the collar, the buttons will be greyed out. The correction level can be adjusted from the circular “Correction Level” area.



SpotOn Notifications

The SpotOn smartphone app provides several collar notifications to ensure that your dog is safe.



NOTIFICATIONS

SpotOn provides important system notifications direct to you smartphone including:

1. Power Off
2. Returned to Containment
3. Out of Containment
4. Low Battery (not shown)

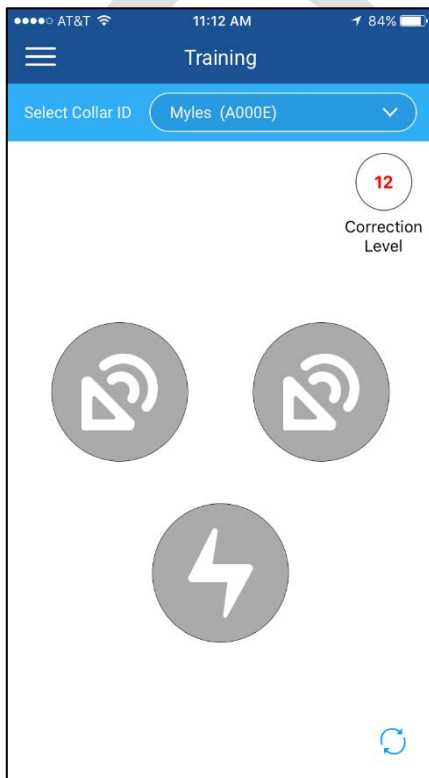
Finding the Right Stimulation

The level of stimulation appropriate for your dog depends on your individual dog's temperament and threshold for stimulation. You should begin on a low level, and work your way to a higher level of stimulation according to the sensitivity of your dog to the stimulation. Mild reactions will indicate that your dog is receiving stimulation and may include tensing of the muscles in the neck, shaking their head, or stopping and standing still. You should be using enough stimulation to make a point, but not enough stimulation to cause significant emotional distress to your dog. If your dog shuts down, shakes or acts fearful, or has a vocal reaction that seems to be more than just a startle response, the level of stimulation that you are using is likely too high.

Be aware that the amount of stimulation needed may directly correlate with the amount of distraction in the environment. In particularly distracting environments or new situations, the level of stimulation may need to be adjusted to a higher level.

You can change SpotOn's stimulation levels by accessing the training section of the mobile App. SpotOn has 30 stimulation levels (0=off, 1 lowest to 30 highest). In the top, right-hand corner, you'll find a circle labeled "Correction Level", tap on this circle and use your finger to slide the correction level to the right for a more intense correction or to the left for less intensity.

When finished, tap the check mark in the top right portion of the screen to lock in your correction level. The correction level of the collar can be adjusted at any time while the collar is active and connected to Bluetooth.

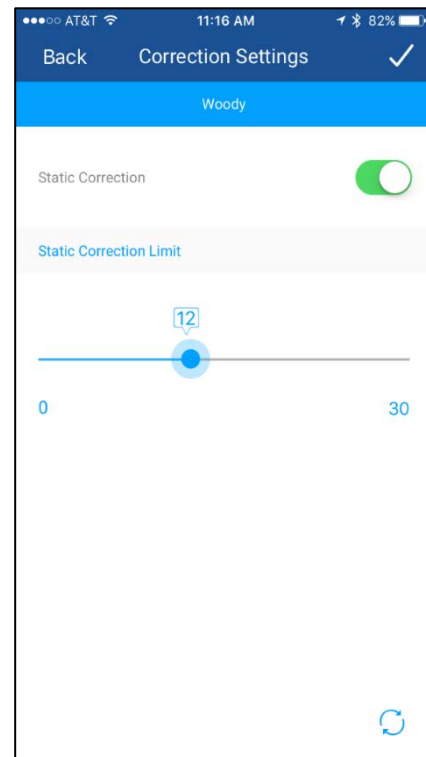


ADJUST STATIC CORRECTION

The static correction level can be adjusted in the **TRAINING** screen.

By pressing the Static Correction section of the Training Screen and opening the **CORRECTION SETTINGS** screen

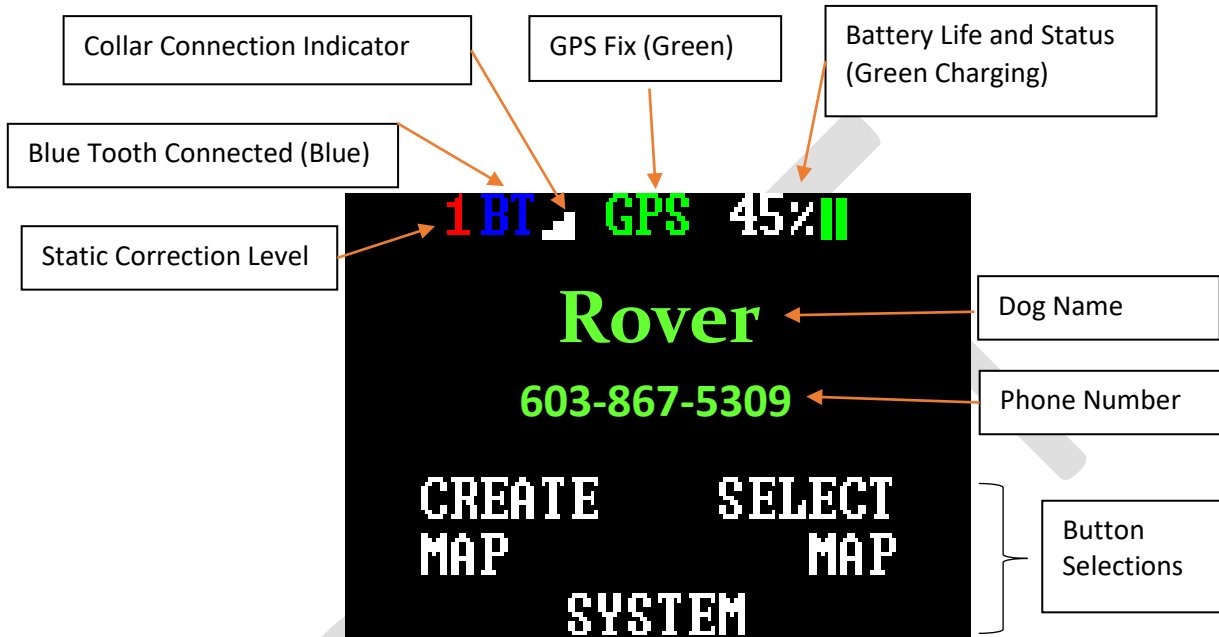
Static correction can be turned on / off and the level can be adjusted within this screen.



GETTING STARTED WITH THE COLLAR:

Press and hold the on/off button until you see the SpotOn splash screen and release.

You will then see the home screen which has the following information and options:



Use the collar's buttons to choose one of the three options:

- **Create Map** – Press the Left Button to Create a Map.
- **Select Map** – Press the Right Button to Select a Map that you have previously created and saved.
- **System** – Press the Center Button to enter System where you can share a map with another collar, upgrade software and view software and hardware versions.

Creating a Circle Map:

- Select "Create Map" on the collar
- You will be instructed to go outside, hold antenna up and acquire GPS signal
- Select Circle
- Scroll to enter the desired radius and select activate
- The collar creates a circular containment area around the collar's current position. The collar can now be placed on your trained dog, and the collar will act to contain your dog in the circle you created.

Creating and Saving a Custom Map:

- Select “Create Map” on the collar
- You will be instructed to go outside, hold antenna up and acquire GPS signal
- Select Custom
- Hold antenna up and walk the desired path to create a custom map. When you have completed your walk press end. Note that you can end your walk prior to returning to the starting point and the collar will snap a line from where you end to where you started to create a closed path.
- To create a map that runs through your house, so your dog can enter and leave without getting a correction, start walking from a position at one side of your house and end at a position at the other side of your house.
- Once complete, select “End”, and then “Yes” or “No” to save the map to the collar’s memory

Activating a Saved Map:

- From the home screen choose “Select Map”
- Press the right button to scroll forward to highlight the desired map, and press the center button to select it.
- Choose “Activate” by pressing the center button
- Wait for the map to activate
- The collar can now be placed on your trained dog, and the collar will act to contain your dog in the custom map area you created.

- **Creating a Containment Area:**

A map is created by simply walking a customized boundary with the collar, or by using the circle map. While creating a map, the flexibility of the collar allows you start and stop at the sides of a home using the home as a physical boundary as shown in Figure 1 (left property) or walk the entire perimeter around a home starting and stopping at the same point, Figure 2 (right property).

Figure 1. Shows examples of boundaries that were kept a minimum of 15 feet away from the lake, property line and street.

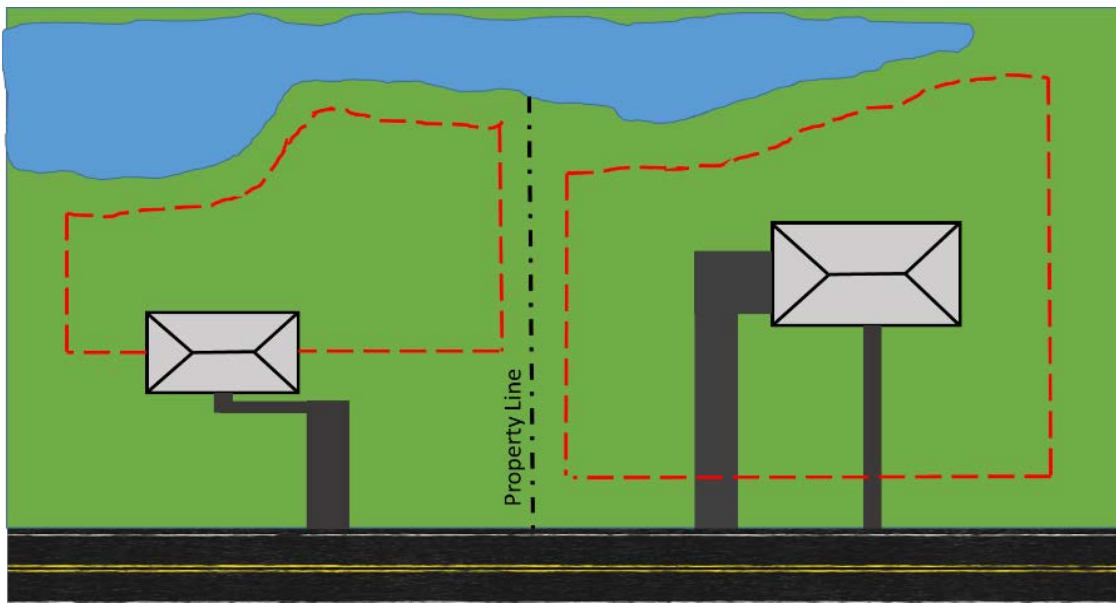


Figure 1.

Figure 2. Use the PAUSE/RESUME feature to avoid obstacles while creating a map.

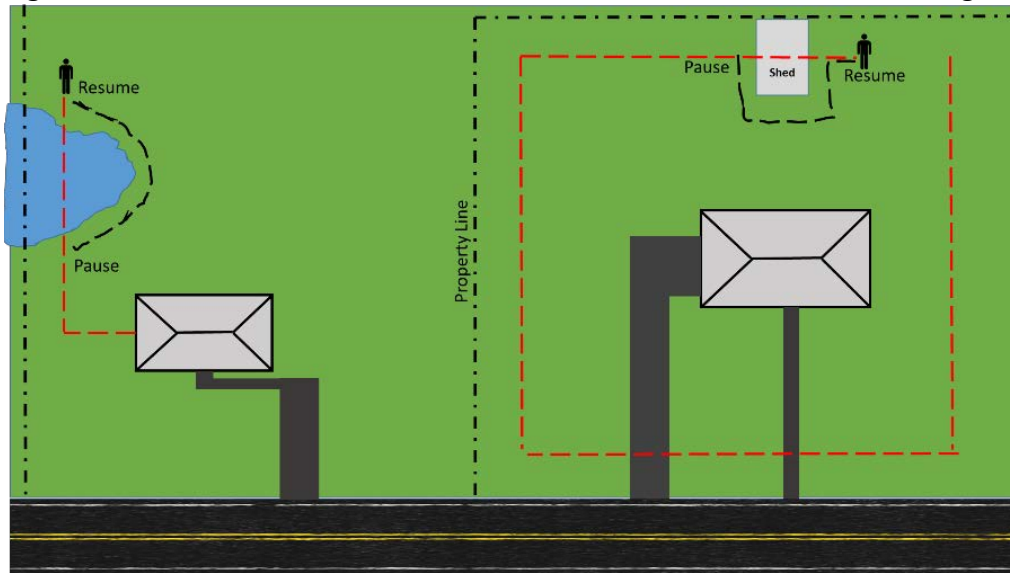


Figure 2.

AT THE END OF THE DAY:

When you are finished using the collar—such as when your dog comes inside at the end of the day—remove the collar from your dog. You do not need to turn the collar off if you plan to use it in the next day or two. Simply plug in the USB charging cable and let the collar sit on a suitable surface while not in use. The collar will go to sleep, and will wake back up when moved. The next time you want to use the collar, simply pick it up, unplug it and place it back on your dog. This can be done indoors or outside. The collar will quickly (typically within 30 seconds) reacquire a GPS signal and start working as soon as the GPS antenna has a clear view of the sky.

TURNING THE COLLAR OFF:

To turn the collar off, press and hold the center “ON/OFF” until you see the “SHUT DOWN?” screen, and press the right button to select “YES”.