Cat Tracker: Do-It-Yourself Instructions
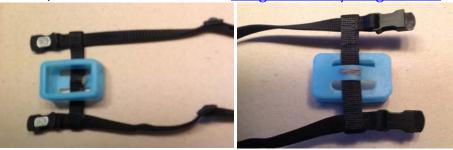*cats.yourwildlife.org* **| Questions? Contact cats@yourwildlife.org**

Equipment:
- i-gotU USB GPS Travel & Sports Logger - GT-120 (available through Amazon)
- H-Style Cat Harness (available through Amazon). *Note: Please take in consideration the size and weight of your cat when determining what size harness to purchase so you can ensure a proper and snug fit on your cat! We also ask that you please remove the bell from the harness for the duration of the study. The leash can be set aside.
- PC computer or partitioned Mac (a method of splitting your computer to run two different operating systems)
- Optional:
  -Needle and thread
  -Sturdy tape (Gorilla Tape, Duct Tape)
  -3D printer case for the GPS (sturdier and more "cat proof" than the soft gel case included with the GPS unit), available for free download at thingiverse.com/thing:564300. Have questions about 3D printed cases? Contact us by emailing cats@yourwildlife.org.

Before Beginning
- Charge the GPS for four hours using any computer.
- Place the GPS bumper case on the middle strap of the harness as shown. Consider securing the case to the strap with a few stitches and/or wrapping the entire unit (GPS and case) in sturdy tape after the GPS has been programed. You could also print a sturdier cover using our 3D printer case file, available for download at thingiverse.com/thing:564300.

- Install the igot-U software.
- Place the case and harness system onto your cat following the harness's instructions. **Allow him/her two days to acclimate to the equipment**. The actual GPS unit does not need to be in the case at this time. This will allow your cat to get use to the harness (which should only take about 24 hours).

After the two day acclimation period, with the GPS is programed, insert the GPS unit into the case and proceed to track your cat for a **10 day period.**

Syncing GPS
- Connect the GPS to the computer. (Software should open automatically)
- Do not download any data.
- Select hardware settings from the top menu. (Hammer icon)
- On the hardware settings "Welcome!" screen select "Configuration."
- Under "Choose Startup Method" select "Manual Control" and click "Next."
- Under "Set Tracking Interval," change the "Tracking Interval" settings to 0 min. and 1 sec. before selecting "Next."
- Select "Finish" and when the configurations are complete unplug the GPS.
- Go outside to an area that is away from tall buildings and where you can see the sky above you.
- Press and hold the button until a blue light appears, showing that the unit is trying to connect to a satellite.
- Wait for a red light to blink together with the blue light, to indicate that a satellite connection has been made.
- Connect the GPS to the computer. (Software should open automatically)
- Click Yes to Download data and check to make sure the GPS has shown the correct location
- You are now ready to program your GPS for your cat!

Programming to Track Your Cat
- Connect the GPS to the computer. (Software should open automatically)
- Do not download any data.
- Select hardware settings from the top menu. (Hammer icon)
- On the hardware settings "Welcome!" screen select "Configuration."
- Under "Choose Startup Method" select "Scheduled Control" and click "Next."
- Input the date you would like to begin the week of tracking.
- Select your time zone.
- If your area participates in Daylight Saving Time and it is between March 8, 2015 and November 1, 2015 leave the "Daylight Saving" box checked. If not, uncheck the box.
- Uncheck the box next to "Enable LED Indicator." The GPS's flashing lights may attract unnecessary attention while your cat is outside.
- Make sure the day you want to start is selected from the drop down menu on the right of the screen.
- Program the GPS for a **five day period** by clicking on each day and dragging the bottom line down until it shows 0 at the top left and 24 on the bottom right of the blue box for that day. Repeat until all five days have been programmed for 24 hours. (This means that the first day you select for tracking, after the 2 acclimation days, will start at midnight!). Click "Next."
- Set the "Tracking Interval" to 3 min. and 0 sec.
- Make sure that the "Power Saving" box is **checked.**

- Under "Smart Tracking Mode," check **"Enable"** and set the velocity to 10 km/hr and "Change Time Interval" to 10 sec.
- **Uncheck** "Enable Button Control."
- Click "Next" and "Finish" to configure the device.
- Unplug the GPS and place it in the case that is strapped to your cat. (There is no need to remove the harness while tracking your cat.)
- After the **five day period** is over proceed to the "Downloading the Track Data" step. After you download the data, charge the GPS unit for 4 hours or until the red light goes off (while connected to the computer). Then repeat the previous instructions on how to program your GPS unit for "Scheduled Control" for the last 5 days of tracking.

Downloading the Track Data
- When the week of tracking is complete, connect the GPS to your computer. (Software should open automatically)
- Download your data by clicking "Yes."
- After track data is done downloading click "Next."
- Under "Create Trip" select "Create a trip."
- On the "Start A Trip" page, your cat's file should be at the bottom of the list and automatically highlighted (If it is not, just select the trip with the dates that match the days you tracked your cat). Select it and click "Next."
- Name your file with your cat's name and verify that the selected style is "Classic Style" before clicking "Next."
- On the "Add Photo to Map" page simply click "Next."
- Click "Finish."
- A map will appear that displays your cat's trip!

Note: This GPS system is susceptible to error over short distances. Therefore, small, starburst patterns around your yard may not accurately reflect your cat's movements close to your home. The longer branches of your cat's outdoor treks will probably give a more accurate idea of where your cat goes when he/she wanders away from home. Below, we provide instructions that will help get rid of this GPS error; we will also apply another filter to the data once we receive them!

Sharing Your Data
- Right click on your cat's trip in the menu on the left of the screen.
- Select "Attributes."
- Verify that "Optimize Track" is **checked**. Click "OK." (You may see that multiple tracks disappear. This is because the optimize track feature is filtering out data points it believes are inaccurate.)
- Again, right click on your cat's trip and select "Export to CSV."
- Name your file something informative, for instance your cat's name and the dates that he/she was tracked.

- Visit cats.yourwildlife.org -> Participate -> Upload GPS Data to send in your cat's data.
- Once your feline's track has been received and successfully uploaded to the Movebank database and the Cat Tracker website (may take a week), we will send you a confirmation email. You can then view your cat's tracks on the "Cat Tracks" page.

Note: Please be aware that the nature of the data may reveal the location of your home.