

# CAROLINA MOUNTAIN CLUB

## Guide to Using Motion-X GPS and AllTrails

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This brief guide covers the basics of Motion-X GPS and AllTrails as hiking tools. Both apps have many more features than described here. The best way to learn about those features is to read the built-in Help files, experiment at home, and use the apps real-time when you hike.

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### Introduction

This guide covers four topics: (1) using Motion-X and AllTrails on a hike; (2) importing and exporting gps tracks to and from the two apps; (3) using AllTrails on your PC or Mac to modify old hikes or create new hikes; and (4) adding and accessing your personal hikes to and from the CMC website. But before we begin with Topic I, let me offer four quick tips:

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<sup>1</sup> Questions? Contact Bob Levy, rlevy@cato.org, 240-604-5000.

**Tip #1:** Gps apps on your smartphone do *not* require Internet access or even cell towers. Accordingly, while hiking, you can put your phone on Airplane mode to conserve battery life.

**Tip #2:** To be sure of sufficient battery power, I carry a lipstick charger, which will more than double your capacity. A number of brands are available. I use an Anker PowerCore+ Mini, which is available from Amazon for less than \$20.

**Tip #3:** Each of us has our favorite Internet weather forecast. I use the National Weather Service, [www.weather.gov](http://www.weather.gov), because I can pinpoint the specific place where I'm hiking. As you know, temperature, wind, and rain forecasts are quite different depending on area and elevation. Suppose you'd like to hike Lookout Mountain in Montreat. First, go to the NWS website. Second, enter Montreat, NC as your location. Third, scroll down to the map. Note that the elevation is about 2500'. Fourth, enlarge the map until you see Lookout Mountain. Fifth, move the green rectangle by clicking on Lookout Mountain. Note that the elevation changes to roughly 3600'. Finally, scroll down and click on Tabular Forecast to get hour-by-hour temperature, wind, precipitation, humidity, and other statistics.

**Tip #4:** Carolina Mountain Club has created a CMC hiking group on Meetup.com. There, you'll find numerous hikes to supplement CMC's regularly scheduled hikes. Just follow these steps: (1) Go to Meetup.com. (2) Login; or, if you haven't already signed up, create an account (it's easy to do and free); then login. (3) Click on "Groups," then click on the photo for the Carolina Mountain Club. (4) If you haven't joined the CMC Meetup group, click "Join this Group" and answer (optionally) a few quick questions. (5) Click on "Meetups," view the list of hikes, and select the ones you like. That's all you have to do to enlarge your CMC hiking experience. To make the process even easier, there's a Meetup app for your smartphone.

## **Topic I: Using Motion-X and AllTrails on a hike**

### **A. Comparing Motion-X and AllTrails**

The website for Motion-X Gps is [gps.motionx.com](http://gps.motionx.com). A link there will take you to the iTunes app store, where you can download the app to your iPhone. It costs \$1.99. Currently, Motion-X is not available for Android phones.

The website for AllTrails is [alltrails.com](http://alltrails.com). The app is available for all smartphones. You can signup for free; or get the Pro version for \$30 per year, or \$100 lifetime. The free version lets you explore 1000s of trails worldwide, with features, reviews, statistics, profiles, ratings, photos, and directions to the trailhead. The Pro version does all of that – plus allowing you to upload and download gps tracks, download various maps and overlays, print trail maps, modify existing hikes, create new hikes, and automatically sync your data between your smartphone and your computer.

By contrast, Motion-X has no built-in database – only the trails you load into the app. Still, I use Motion-X while hiking because it offers real-time statistics on speed, ascent, and descent. AllTrails has much better maps, but doesn't offer accurate stats until you save the track when the hike is over. Even then, it doesn't offer descent footage. That's okay for out-and-back hikes and loops, where the ascent and descent are the same; but it's not okay for one-way hikes, where ascent and descent can be very different. For me, the ideal combination is to follow the trail using my AllTrails map while recording the hike using Motion-X. But, if you don't have an iPhone, you can use AllTrails for both following the trail and recording.

### **B. Using Motion-X on a hike**

**Step 1:** Touch the Motion-X icon on your iPhone. Wait for the spinning globe in the upper right-hand corner to turn blue, which means you have gps access. Touch “Menu,” then “Tracks”; and select one of your stored tracks. (I'll discuss shortly how they can be stored. If you don't have any stored tracks, return to this step later.)

Touch “View Details” to see the information stored for each track. Then return to “Menu” and “Tracks,” re-select your track, and enlarge the map by touching the arrows in the lower left corner. To enlarge or contract the map, pinch or spread the screen with thumb and index finger.

As you hike, a blue arrow will appear where you are on the trail. That's how to determine if you're off-track. If you want to measure the distance between any two points, touch the three parallel lines in the upper left corner, then touch “Measure Tool.” Move the red and green circles as desired, and check “Distance” in the upper left corner. Then touch “X” to close the Measure Tool.

**Step 2:** To record the trail you're hiking, touch “Menu,” then “Record Track,” then “Start.” (I set Motion-X to pause automatically when I'm not moving, but that can be changed in the app's settings.) When you're done, touch “Pause.” Then touch either “Reset,” which will delete your recording and allow you to start over; or “Resume,” which will continue your recording; or “Save,” which will store your track (and optionally share it with others using Facebook, Twitter, or email). After you've saved your track, be sure to “Reset” the recorder.

**Step 3:** To access a saved track, touch “Menu,” “Tracks,” “Recently Added,” and the track that was saved. Then touch “View Details,” and then the track name if you want to change it to something more descriptive. Finally, touch “Back” in the upper left corner, then “Back” again, then three parallel bars in the upper right corner. You can then “Export” the track using email, “Delete” the track; or, if you've setup folders to organize your hikes – a process not covered in this guide – you can “Move” the track out of the “Recently Added” folder into a different folder. Simply touch the

option you want – for example, “Move” – touch the circle next to your track, touch “Move,” touch the name of the appropriate folder, and confirm the “Move.”

### **C. Using AllTrails on a hike**

**Step 1:** Touch the AllTrails icon on your phone. Wait for the maps to load. Then enter a trail or location in the search box, and select the trail you want to see. Note the expansive information that’s in the AllTrails library. Scroll down to see “View Full Map.” If you touch “View Full Map,” a blue dot will appear where you are, and it will move as you move. The green dot denotes the beginning of the trail and the black dot denotes the end. To enlarge or contract the map, spread or pinch the screen with your thumb and index finger.

An elevation profile appears at the bottom. It can be hidden or shown by touching the green bar. Note that moving your finger along the profile will tell you the mileage, elevation, and slope at all points along the track.

If you’re going to follow the map as you hike, be sure to *download it first* – or else you’ll need Internet access on the trail. Just touch the blue “Download” bar, then the blue down-arrow next to the map layer you prefer. My choice is the one provided by AllTrails. Wait until the arrow turns grey, then green; and then touch “Close.”

**Step 2:** To record the trail while you’re hiking, touch the three dots in the upper right corner of the map, touch “Load into Recorder,” and then touch the red dot. The clock will show total time. If you later save the recording, it will show both total and moving time. Other statistics are available by touching the circled “i” in the upper right corner. The “Avg Pace” shown is based on moving time, not total time. My experience is that “Elevation Gain” is grossly inaccurate unless and until you save the recording, after which the gain is recalculated correctly. When you’re done, touch the two parallel pause bars, then “OK.” Then touch either the red dot to resume your recording, “Clear” to delete your recording, or “Save” to store it. If you save the recording, you’ll be asked to enter a title, then confirm by touching “Save” again. When asked if I want to share my recording, I just touch “Close.”

To keep the saved track on your phone, not just in the Cloud, download the track. Touch the blue down-arrow, then a second blue down-arrow next to the map layer you prefer. Wait until the arrow turns grey, then green; and then touch “Close.” (Downloading will also save the track to alltrails.com on your computer.)

**Step 3:** To access a saved recording, touch “History” at the bottom of the screen, and then touch the track you’d like to access. To delete the recording, touch the three dots in the upper right corner, then touch “Delete.” To access a saved map, touch “Plan” at the bottom of the screen, touch the down arrow at the top next to “Favorites,” touch “Maps,” and then the map you’d like to access. To delete the map, touch the three dots in the upper right corner, and then touch “Delete.”

## **Topic II: Importing & exporting gps tracks to & from Motion-X & AllTrails**

So far, we've discussed two sources of gps tracks: (1) tracks already pre-recorded and saved on Motion-X and AllTrails; and (2) tracks that are part of the AllTrails library. Now we're going to discuss exchanging tracks between the two apps and importing tracks from the CMC website, a computer, or another source. [Note: filenames for gps tracks end with ".gpx"] The key to understand transferring .gpx files is that your computer is the middle-man. First, export the file from app #1 (or a website) to your computer. Then import the file to app #2 from your computer.

### **A. Exporting gps tracks from Motion-X to a PC or Mac**

**Step 1:** On your computer open iTunes and connect your iPhone – either using the USB port or wirelessly, if you've set that up. Click on the small icon resembling your iPhone in the upper left corner of your screen. Then select your iPhone from the devices shown and click on "File Sharing" in the left-hand column.

**Step 2:** In the Apps column, click on "Motion-X GPS." Under Motion-X GPS Documents, scroll down the list and click on the .gpx file you want to export. Then scroll to the bottom of the list and click on "Save." Select the computer folder (e.g., Downloads) where you want to save the file, then click the highlighted "Save" button.

### **B. Exporting gps tracks from AllTrails to a PC or Mac**

**Step 1:** On your computer, log on to alltrails.com.

**Step 2:** If you want to export a track from the AllTrails library, enter a trail or location in the search box, and select the trail you want. Move your cursor over the word "More," which is under the trail name, and click on "Download GPX." The .gpx file will be in the Downloads folder on your computer.

**Step 3:** If you want to export a track from one of your saved maps, move your cursor over "Plan" at the top of the screen, then click "Maps" and select the map you want. Click the blue "Download GPX" button under the map name. Your .gpx file will appear in the Downloads folder of your computer.

### **C. Importing gps tracks from the CMC website**

**Step 1:** Log onto the member's section of the CMC website and click on "Hiking" followed by "Hike Search." Using one of the search methods offered (e.g., by number, name, description), select the hike you'd like to import.

**Step 2:** In the middle of the page, click on "Download GPX Track." Your .gpx file will be in the Downloads folder on your computer.

**Step 3:** Follow part "D" below to import the file into Motion-X, or part "E" to import the file into AllTrails.

### **D. Importing gps tracks to Motion-X from a PC or Mac**

**Step 1:** On your computer open iTunes and connect your iPhone – either using the USB port or wirelessly, if you’ve set that up. Click on the small icon resembling your iPhone in the upper left corner of your screen. Then select your iPhone from the devices shown and click on “File Sharing” in the left-hand column.

**Step 2:** In the Apps column, click on “Motion-X GPS.” Under Motion-X GPS Documents, scroll to the bottom of the file list and click on “Add.” Select the file to be imported from your Downloads folder, and then click the highlighted “Add” button. When you open Motion-X, you’ll find the imported .gpx file by clicking “Menu,” “Tracks,” and “Import.” You can change the filename, if you like, by touching the name, then “View Details,” and then the name once again. You can also move the file to a different folder, as described on page 4 above. [Note: When you import a file into Motion-X, you will retain route details, including length, but you will lose time and speed data as well as ascent and descent footage.]

[Note: An alternative importing process is described in the Motion-X help files. It entails sending an email from your computer to [GPSimport@motionx.com](mailto:GPSimport@motionx.com), and attaching the .gpx file to be imported. You can access the email from your iPhone via Mail.app: Select the Motion-X link in the email. Motion-X will open, then select “Import Now.” You’ll find the imported file by clicking “Menu,” “Tracks,” and “Import.”]

### **E. Importing gps tracks to AllTrails from a PC or Mac**

**Step 1:** On your computer, log on to [alltrails.com](http://alltrails.com). Move your cursor over “Plan” at the top of the screen, then click “Maps.”

**Step 2:** Click on the blue “New Map” button at the top left of the screen. Enter a name for the map and click “OK.”

**Step 3:** Scroll down and click “Upload GPX,” then click the green “Upload” button. Select your .gpx file from the Downloads folder, then click the green “Upload” button once again.

**Step 4:** Halfway down the screen, click the blue “Save” button. The map and .gpx file will now be stored on your computer and automatically sync’d to your smartphone. Before you use your file on a hike, be sure to download the track (see page 4).

### **Topic III: Using AllTrails on your PC or Mac to modify or create hikes**

#### **A. Getting started**

**Step 1:** On your computer, log on to [alltrails.com](http://alltrails.com). Move your cursor over “Plan” at the top of the screen and click on “Create Map.” Then, next to “New Map,” click on “Edit,” enter a name for your new or modified hike and click “Update.”

**Step 2:** To create a gps track for a new or modified hike, begin by uploading a .gpx file already stored on your computer – either the hike you’d like to modify, or another hike in the same geographic area (so the map shows nearby trails you might want to use). We’ve discussed four ways by which .gpx files are stored on your computer. They can be exported from: (1) the CMC website; (2) a Motion-X recording; (3) the AllTrails library; or (4) a saved AllTrails map. Scroll down and click “Upload GPX,” then click the green “Upload” button. Find your .gpx file on the computer, and then click the green “Upload” button once again. To see more trail details, including trail names, try expanding and contracting the map using the “+” and “-” buttons in the upper right-hand corner.

### **B. Modifying your track or creating a new track**

**Step 1:** Click on the blue “Draw Route” button. Select a color other than red to distinguish your new route.

**Step 2:** Move your cursor to the place on the map where you’d like your route to begin. The cursor symbol will be “+”; then click. A green and black dot will appear, denoting the beginning (green) and end (black) of your route. To re-position the map, move the cursor away from your intended route, then click and hold while moving the cursor up and down or left and right. To expand or contract the map, click “+” or “-” in the lower left-hand corner.

**Step 3:** There are two modes for drawing a route: “Routing” and “Drawing.” You can switch between modes either by clicking on the appropriate box in the upper right-hand corner or by pressing the Control key on your computer. In “Routing” mode, the computer will automatically extend your track along an established trail. First, be sure to select “Hiking” as your activity in the upper right-hand corner. Then click on the dashed black trail line at your next desired point. Alternatively, you can click and drag your end point along the line. In “Drawing” mode, the computer will draw a straight line from point to point. Just click anywhere on the map at your desired end point. Alternatively, you can hold down the shift key and use your cursor to free-draw a route.

**Step 4:** Try each of the methods described in Step 3. Note that the green and black dot turns all green and the black dot moves as your route takes shape. If you make a mistake, click on the left-pointing “Undo” arrow in the lower left-hand corner. If you decide to reinstate what you undid, click on the right-pointing “Redo” arrow.

**Step 5:** To save your new map and .gpx file, click on the blue “Save” button under the color chart. To delete the original route that you uploaded, click on the “X” to the right of its color bar. Then click on “OK,” and again on the blue “Save” button. Your new .gpx file has now been saved to your computer, and it will automatically sync to your smartphone. Remember to download the file on your smartphone before

you hike. On the left of the screen, AllTrails has computed your distance and elevation gain. The distance may be slightly understated because you've drawn the route in straight-line segments although you probably traverse trails to avoid rocks and roots when you actually hike. The elevation gain should be accurate, but only after the new track has been saved, not while it is being drawn.

**Step 6:** If you later decide to change the name of your new map and track, move your cursor over "Plan" at the top of the screen and click on "Maps." Then click on the map name, click on "Edit" next to the map name, change the name and click on "Update." Or, if you don't want to keep the map, click on "Delete."

### **C. Supplementing and printing a map of your new hike**

**Step 1:** To determine the length and elevation for a segment of, or potential addition to, your new hike: Follow the procedures just discussed for drawing a route – i.e., click "Draw Route," select a color, click on a starting point, draw the route, and click "Save." Then check the statistics for the new segment.

**Step 2:** To determine the elevation gain for a segment either in reverse or as an out-and-back hike, follow Step 1 but, before clicking "Save," click on the blue "Reverse" or "Out & Back" button, then "Save." Be sure to delete the new segment if you don't want to keep it – by clicking on the "X" to the right of the route color.

**Step 3:** To print your new map, click on "Print Map" on the right-hand side. Click on "+" or "-" in the upper right corner to expand or contract the map. Use your cursor to re-position the map. Select the "Orientation" that you prefer. Then click on the "Download PDF" button and follow your computer's usual print procedures when the image appears.

### **Topic IV: Adding/accessing personal hikes to/from the CMC website**

Now that you've stored .gpx files on your computer, you can share those files with other CMC members – and also access hikes that other members have shared.

**Step 1:** To add a personal hike to the CMC website: (a) Login to the member's section of the website. (b) Click "Hiking." (c) Click "Personal Hike Log." (d) Click the blue "+Add Personal Hike" button. (e) Enter a date, name, and miles, plus a hike description if you like, then click the blue "Add Hike" button; (f) Click "Choose File," select the relevant .gpx file from your computer, then click the blue "Update Hike" button. To share your files with other CMC members, be sure to click "Modify Profile" and check "Share Personal Hike Data" and "Share GPS Files."

**Step 2:** To access personal hikes added by other CMC members: (a) Login to the member's section of the CMC website. (b) Click "Member Search." (c) Enter the name of the member whose hikes you'd like to access. (d) Click "Search." (e) Click "Hike Log." (f) Using the drop-down menu at the top, select "All Years." (g) Click



the black "+" for a description of the hike. (h) Click the "Download" icon to copy the .gpx file to the Downloads folder on your computer.

**Happy hiking!**

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