

INTRODUCTION TO NAVIGATION

INTRODUCTION

There are two main methods of navigation used on club trips

- map and compass
- GPS (Giai or All Trails)

Example where GPS is extremely useful – whiteout on Kase and Claire Hut trip

GPS NAVIGATION (phone screen projected onto tv for participants to view)

A. Introduction

- We will use Gaia for our training today (All Trails and other GPS devices are similar).
- Navigating with GPS is a lot like using a map except it is electronic and has a lot of features that make it superior to using a map alone. GPS is prone to equipment failure (dropped cell phone) or dead batteries so it is a good idea to have a back up unit, spare batteries, and a map and compass.
- All of the features on our topo maps are also shown on our GPS (contour lines, hydrography, vegetation, man-made features).

Note – Gaia looks slightly different on iPhone and Android and some features work differently. Today's demo will be using an Android phone.

B. Getting Started With Gaia

- Download the program (free and paid versions)
- Free version is good for practising around town but does not allow maps to be downloaded for use when outside cellular range.
- Cost

C. Features of Gaia Maps

- Contour lines, hydrology, vegetation, man-made features (same as our printed topo maps)
- Also shows hiking trails
- Zoom in and out
- Pan
- Review bottom row icons (Map, Trip, Home, Saved and Settings)
- Review Settings in detail
 - Appearance – metric units, nautical miles, coordinate type, coordinate datum
 - Map Controls – True North Compass vs Magnetic Compass, font size, track width
- Review information boxes on top row (2) and how to change them
- Compass (show where it is located, how to change to true or magnetic)
- Review icons on left side (declutter, 3D, location arrow, maps)
- Scale
- Legend
- Measuring distance
- Centering map using Location Arrow
- Compass mode using Track icon on left side (Off, North up. Track up)
- Find Hikes using magnifying glass at bottom right of map screen. Type name of hike in box and then select (eg. Slesse)
- Add layers - Select Map icon (bottom left), Select +Add Layers. Select activity icon at top

D. Downloading Maps for Offline Use

- Maps are normally made available through cellular service or wifi.
- Since we are often out of cell range and don't have wifi, it is important to download maps for the area you will be hiking (downloading is only available with the paid version of Gaia)
- You should download maps when you have wifi available. The files can be large.
- Demo download - on map select Map icon, then select Save Offline Maps

E. Navigation With Gaia

- Prior to hike:
 - - download map for area you will be hiking
 - - check map to ensure trail is marked on map

- - go to Settings and select Appearance
 - - identify and set the Coordinate Type (UTM, Decimal Degrees, etc)
 - - select the Coordinate Datum (WGS 84 or NAD 87)
- At trailhead – put phone in Airplane Mode to avoid battery drain
- Press the Start button (top left corner)
- The position arrow shows where you are
- The track where you have walked will now be shown on map
- Set North Up or Track up
- Use zoom in and zoom out to show greater detail. Zooming right in can show you within several meters of your position.
- Distance and elevation can be shown in info boxes at top of screen
- Total time shown at top left of screen
- At end of hike press Finish Track
- Save
- Review trip stats (select Saved icon at bottom right of screen, select the hike you just completed then select Statistics).

F. More Training Info on Gaia

- **You Tube - Gaia GPS 1**