

# GPS for the Search Function

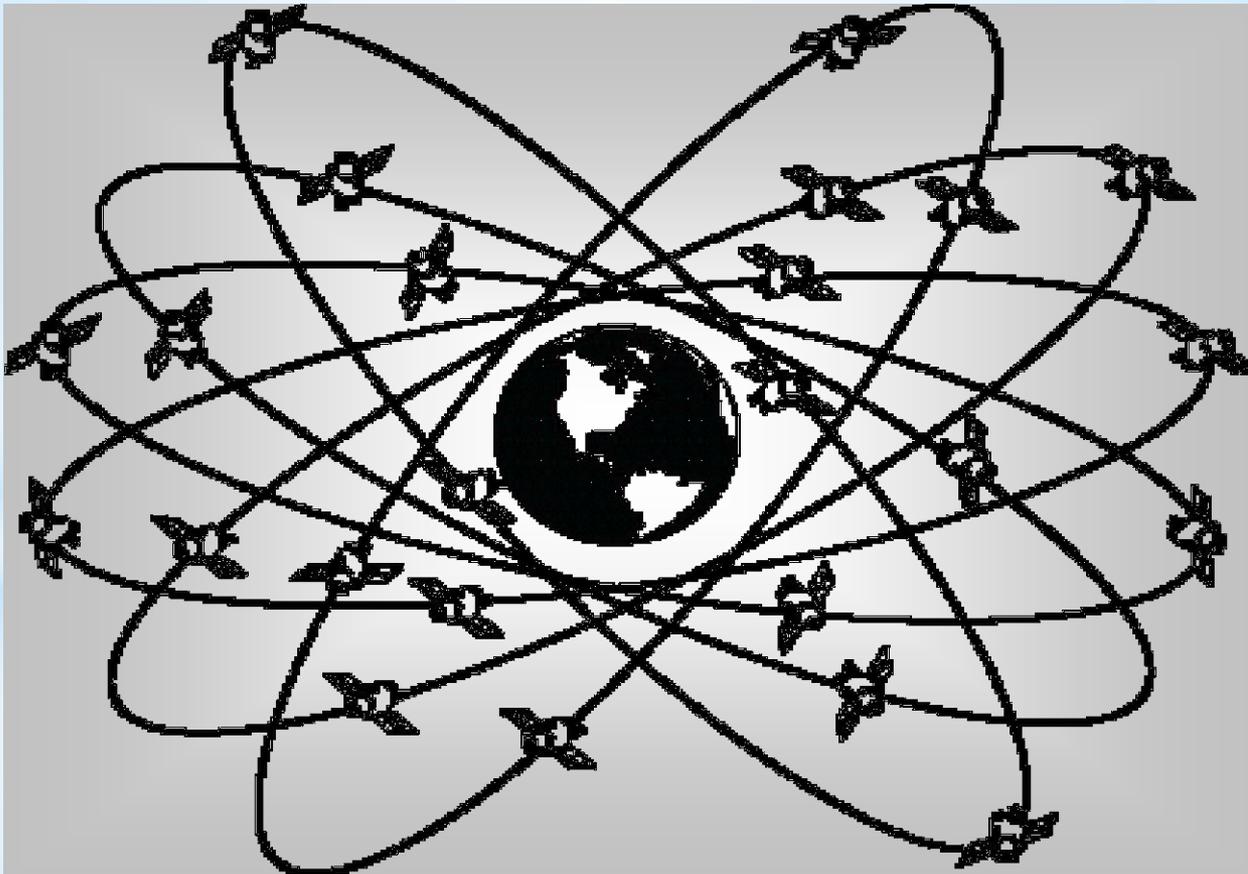
Nevada County Sheriff's Office  
Search and Rescue Team

# Things we'll cover today

- \* What is a GPS and How does it work
- \* Things to always remember about your GPS
- \* Calibrate your Compass
- \* Turning Tracks ON/OFF
- \* Creating a Waypoint
- \* Creating a Route
- \* Things to consider when using a route outline
- \* Following a track, contour, terrain feature, etc.
- \* Turn your TRACKS OFF at the end of your search
- \* Saving and labeling a TRACK
- \* Down loading your GPS at the IC

# Space Segment

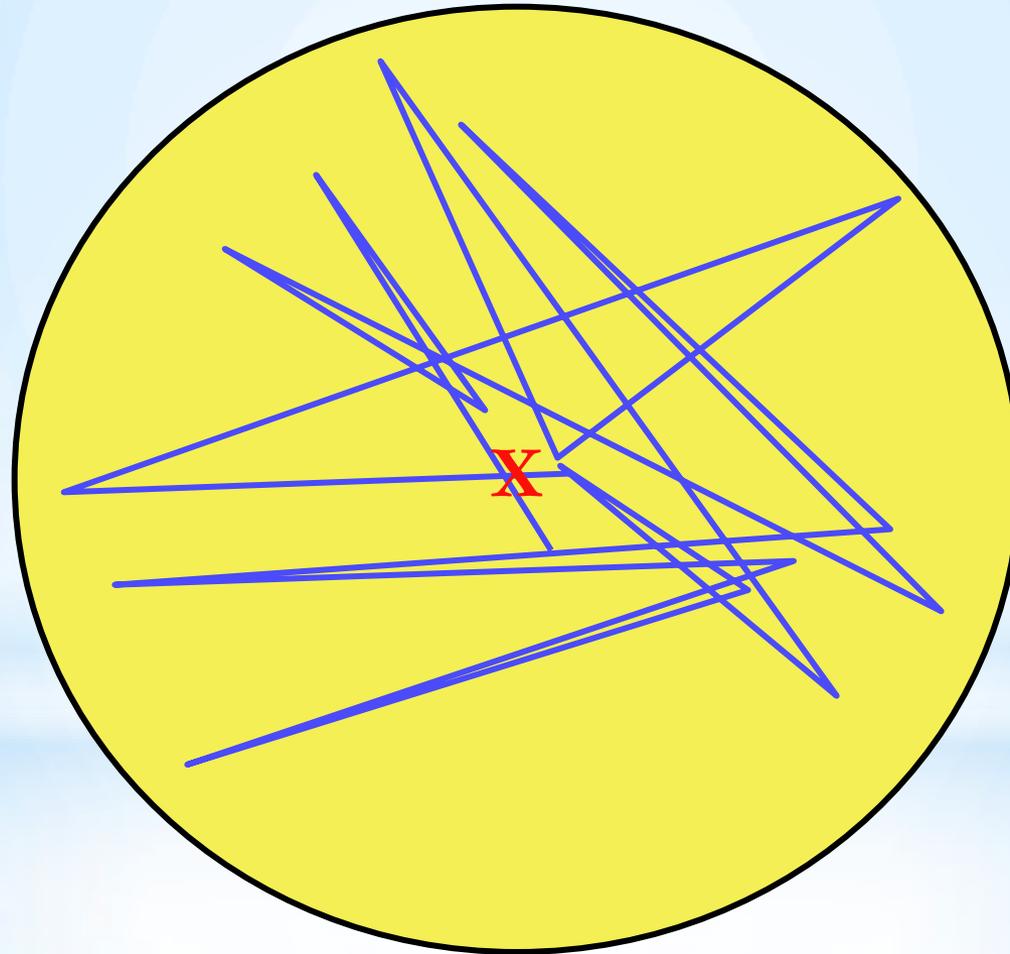
- \* 24 satellites in 6 inclined orbits (27 w/3 in reserve)
- \* 4 satellites per orbit - 12 hour revolutions
- \* 12,600 miles (20,000 km) altitude



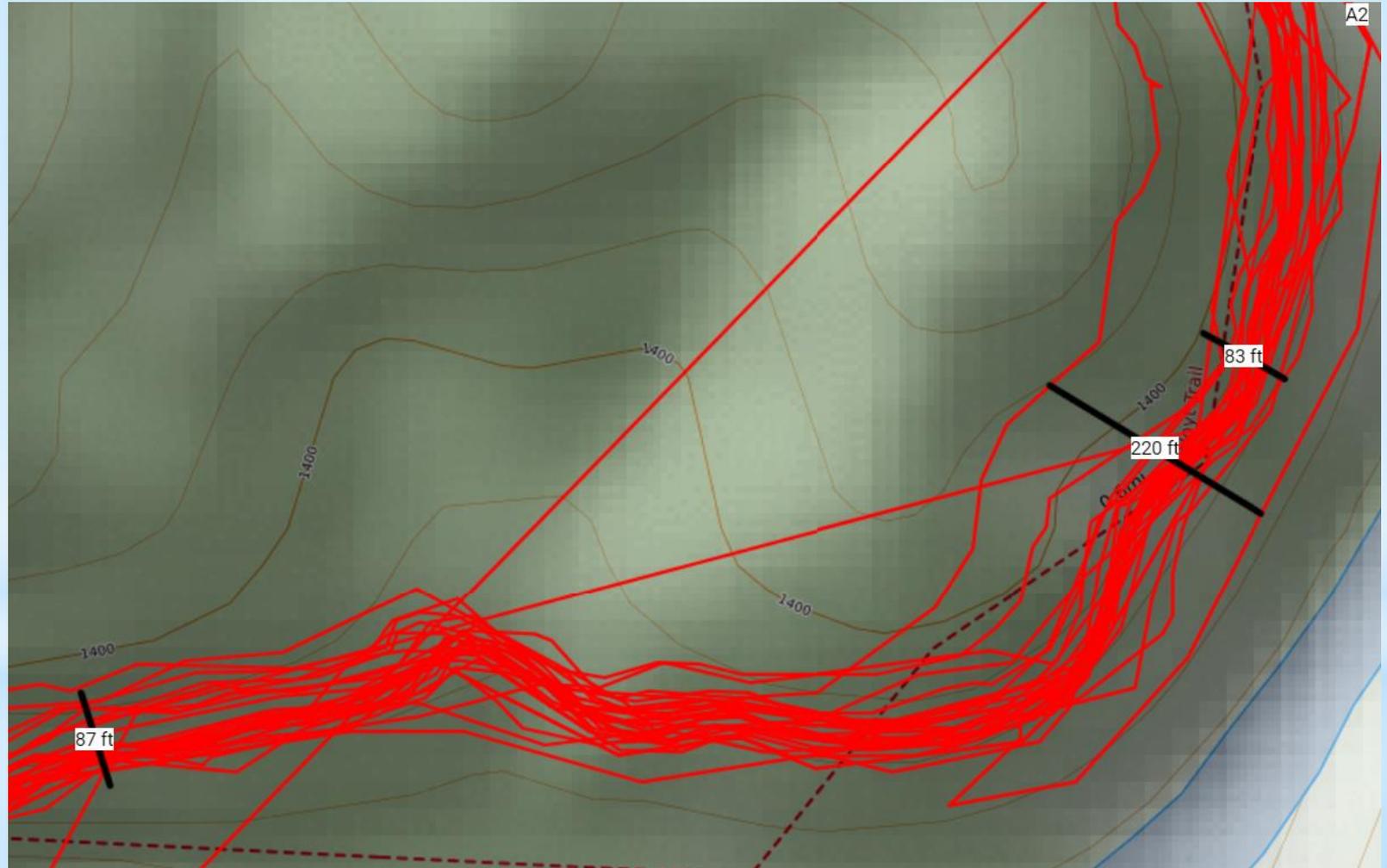
# Position Fix

- A position is based on real-time satellite tracking.
- It's defined by a set of coordinates.
- It has no name.
- A position represents only an *approximation* of the receiver's true location.
- A position is not static. It changes constantly as the GPS receiver moves (or wanders due to random errors).
- A receiver must be in 2D or 3D mode (at least 3 or 4 satellites acquired) in order to provide a position fix.
- 3D mode dramatically improves position accuracy.

# GPS Waypoint Circle of Error



# GPS Error



# Classroom Exercises

- \* Calibrate your Compass
- \* Turning Tracks ON/OFF
- \* Clearing Tracks
- \* Creating a Waypoint
- \* Creating a Route
- \* Doing a Go To
- \* Doing a grid search with Tracks on
- \* Saving and labeling a TRACK
- \* Down loading your GPS at the IC
- \* Following a track, contour, terrain feature, etc.

# Basic To Do List

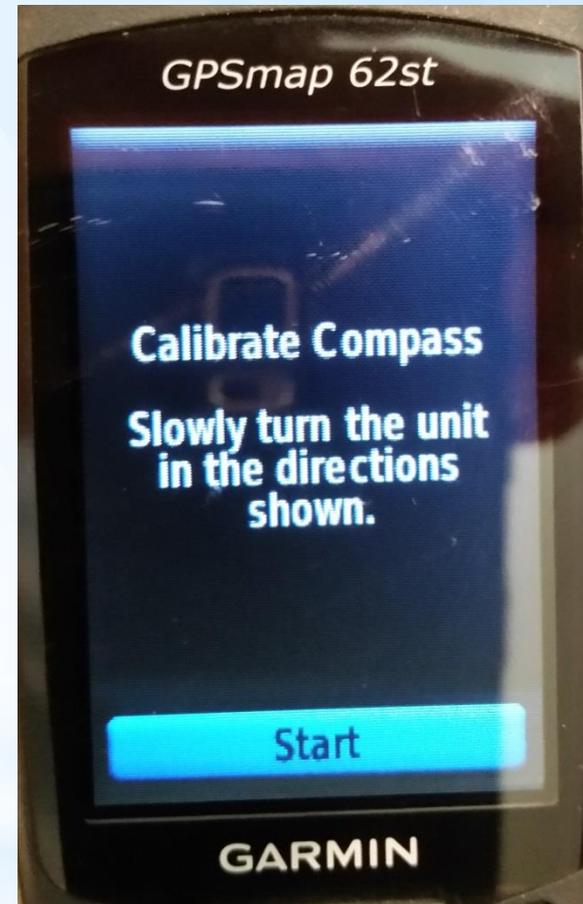
- \*Turn GPS ON (If you have changed location greater the 30 miles calibrate your compass)
- \*Go to COMPASS Page
- \*Press MENU

\* Select CALIBRATE COMPASS

\* Press START

\* Follow onscreen instructions

\* Press Done

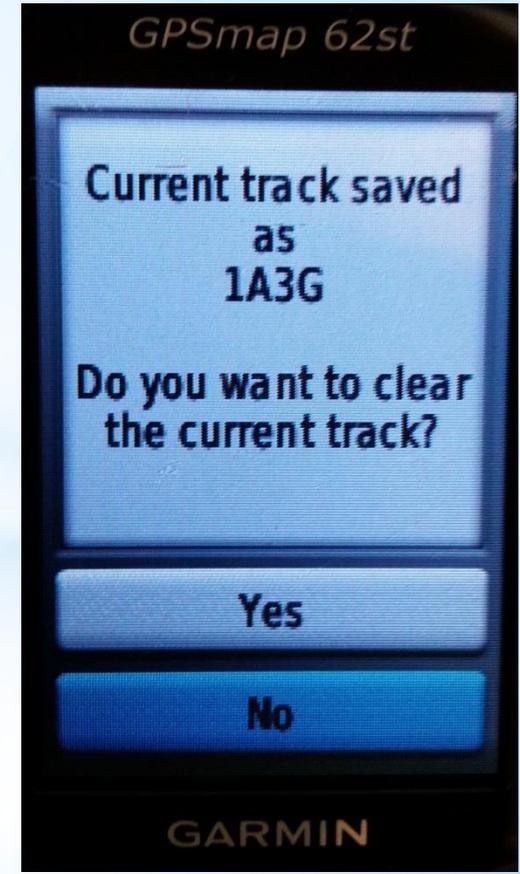
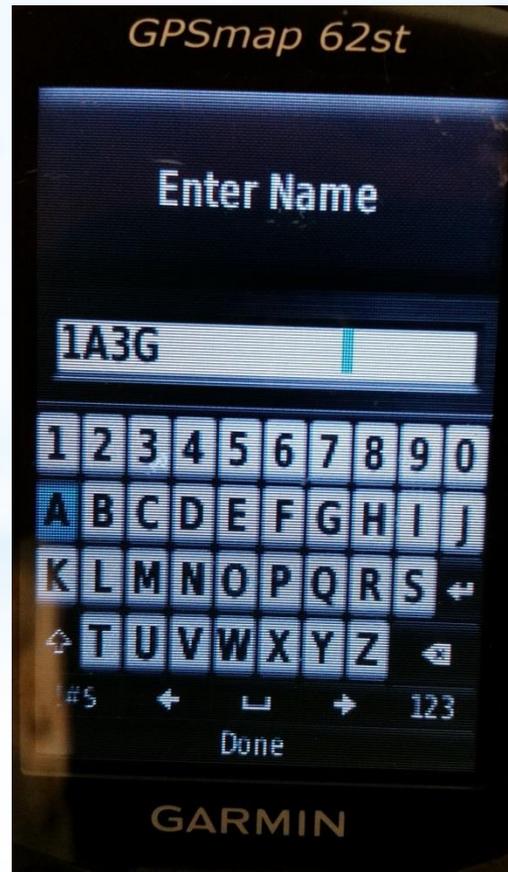


# Things to remember about your GPS

- \* Check your Battery level
- \* Check your Datum selection (UTM WGS84)
- \* Check your tracks are in the OFF position until you start your search and that the active track log is clear
- \* MARK your Position at IC
- \* Make sure to label waypoints and tracks with the correct name
- \* This makes it easier for IC to find the pertinent info to down load when you return to IC

# Labeling tracks and waypoints

- \* 1A3G (1=operational period, A=Search Area, 3=Team Number, G=Ground Pounder)
- \* 2G12K (2=Operational Period, G=Search Area, 12=Team Number, K=Canine)
- \* G=ground Pounder
- \* K=K9
- \* A=ATV
- \* H=Mounted Team
- \* T=Tracking Team
- \* R=Ropes Team
- \* M=Motorcycle
- \* S=Snow Mobile
- \* SC=Snow Cat



# Create Way Points

- \* Find your corners and write down the coordinates
- \* Press the MARK key
- \* Edit the UTM to match the coordinates you want
- \* Press DONE
- \* Repeat above steps for the rest of your corners



# Create a Route

- \* Go to MAIN MENU
- \* Select ROUTE PLANNER
- \* Select CREATE ROUTE
- \* Select SELECT FIRST POINT
- \* This takes you to screen with one option of Waypoints. Select Waypoints and Press ENTER
- \* Select your first corner waypoint you entered
- \* Select USE
- \* SELECT NEXT POINT and Press USE
- \* Continue the same process for all the corners
- \* When your done entering all corners the last entry is going to be the first corner you entered
- \* Then press QUIT
- \* Select your route and press Enter
- \* Scroll to View Map
- \* You should now have a pink highlighted box on the screen of your GPS



# Things to Consider when viewing your route on your GPS

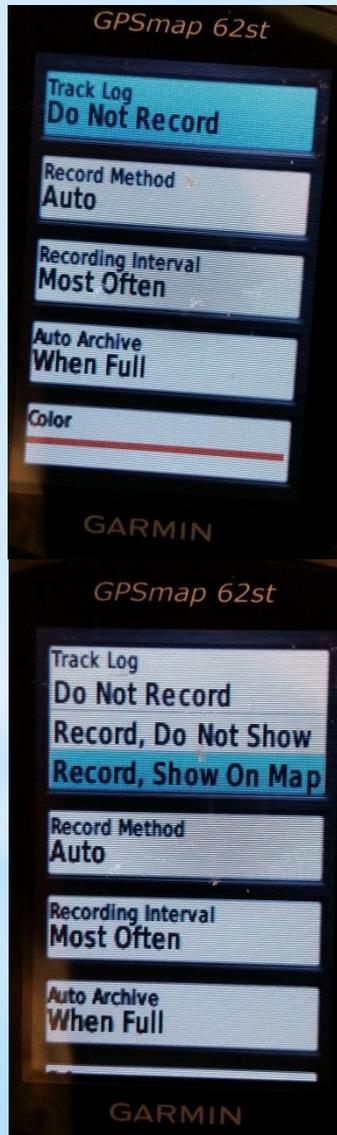
- \* Your MAP is not oriented (if your map is set to north up)
- \* Only your CURSER is pointing in the direction you are facing
- \* This is IMPORTANT so that you don't get DISORIENTED
- \* If you select Track Up your map is now oriented.

# Clearing Your Active Tracks

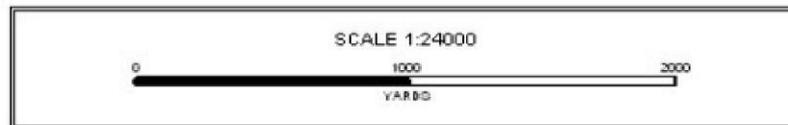
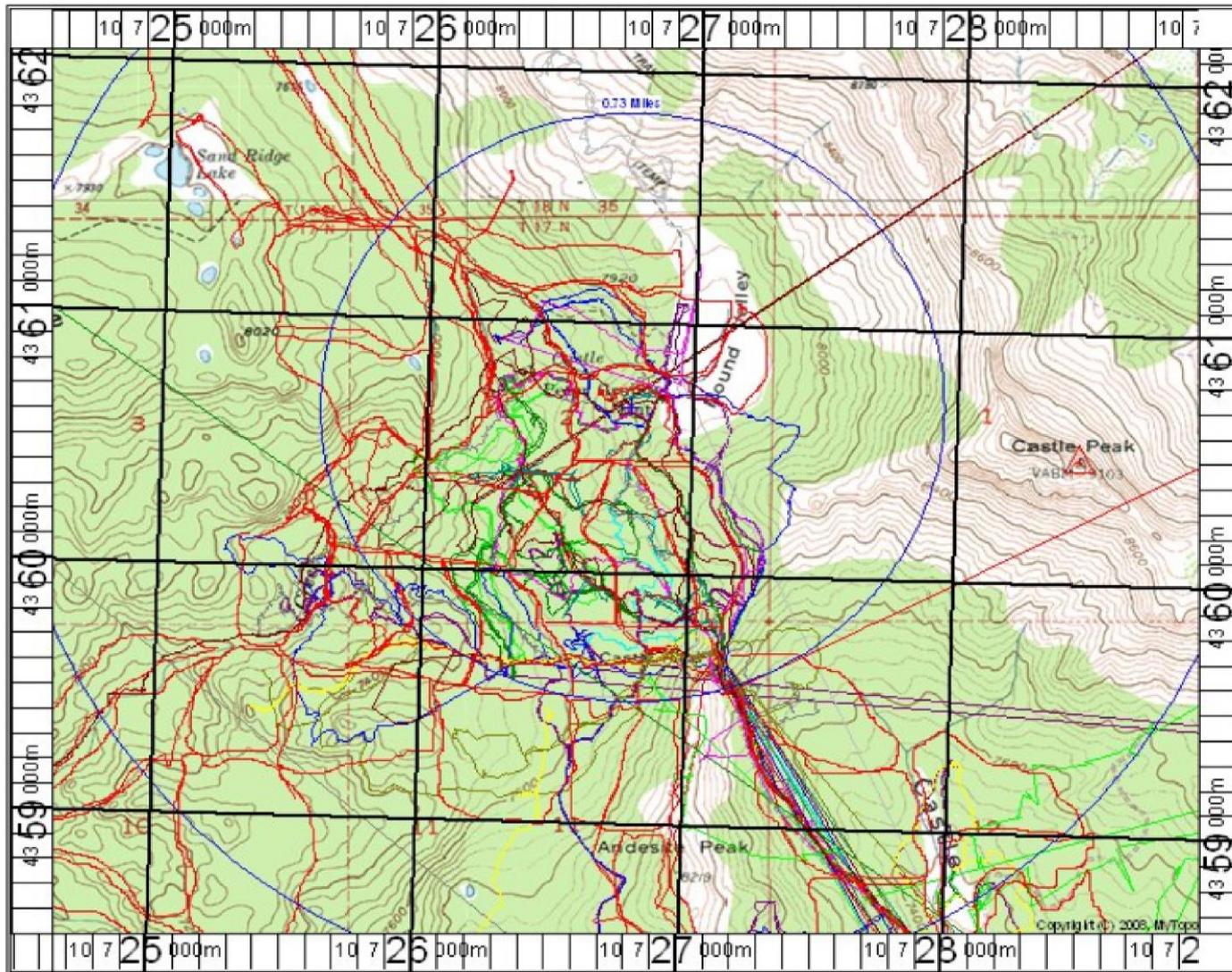


- \* When you arrive at your search area the first thing you want to do before turning your TRACKS ON is clear your active track log
- \* Go to Track Manager
- \* Select Current Track and Press Enter
- \* Press Enter again to Clear Current Track
- \* After Turning your Tracks On you will now start tracking your every move until you turn them OFF

# Turn Your Tracks On



- \* When you arrive at your search area the first thing you want to do is turn ON your TRACKS
- \* Go to Main Menu
- \* Select SETUP
- \* Select Tracks and make sure it says Do Not Record
- \* Press Enter
- \* Select Record, Show On Map. Press Enter
- \* Press Quit
- \* Your TRACKS will now start tracking your every move until you turn them OFF





**THANK YOU**

**BE SAFE OUT THERE &  
HAVE A BACK UP PLAN**