

AN INTRODUCTION TO MAP & COMPASS NAVIGATION

 **BACKPACKINGLIGHT**
MEMBERS Q&A

COMING SOON

MAP & COMPASS NAVIGATION

COMPREHENSIVE TECHNIQUES FOR LOCATING YOUR POSITION, TERRAIN
ASSOCIATION, OFF-TRAIL ROUTEFINDING, AND GETTING UN-LOST

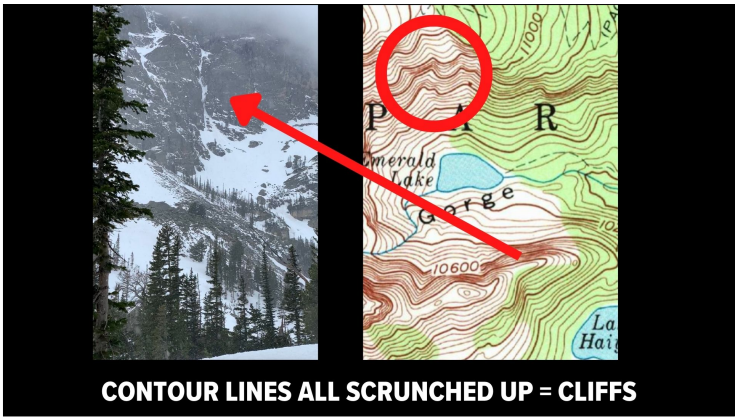
 **BACKPACKINGLIGHT**
MASTERCLASS

- **Terrain association**
- **Fixing your position without a compass using LOPs**
- **The compass**
- **Magnetic declination**
- **Orienting a map**
- **Using a compass to identify lines of position**
- **Fixing your location on a map**
- **Q&A**

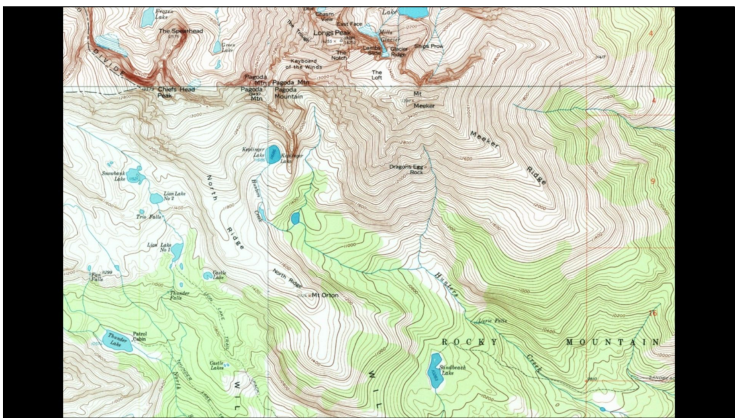
"Terrain Association"

The practice of correlating topographic (contour) lines
on a map to visible terrain features.









"Line of Position" (LOP)

A line on the map where you know with **100% certainty** that you are somewhere along that line.

An LOP may be:

- straight or nonlinear
- a manmade or natural feature

LOP Examples

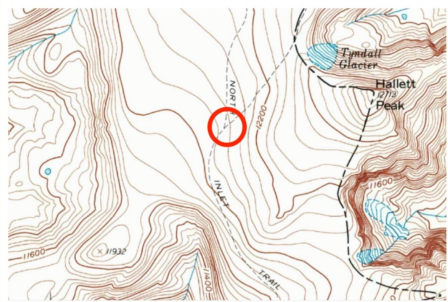
- trail (nonlinear, manmade)
- powerline (linear, manmade)
- ridges (nonlinear, natural)
- valleys/drainages/streams (nonlinear, natural)

Position FIX

Where two LOPs intersect = a position fix

1. Trail LOP intersects another trail LOP at a trail junction

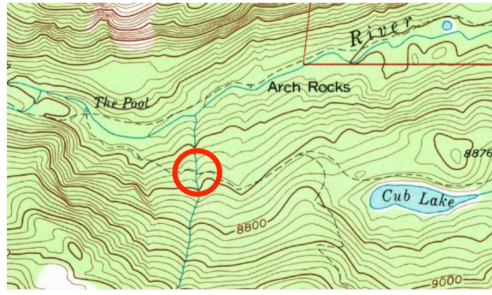
In most National Parks and other popular hiking destinations, we can enjoy the informative benefit of signed trail junctions. In the absence of signs, we can still use the information reliably – assuming our maps are up to date!



Position fix: trail junction, LOPs: two trails.

2. Trail LOP intersects a stream LOP at a bridge

This method is most reliable for significant streams that flow year-round, are mapped, and travel through topographically-obvious valleys that we can visually identify in real life.



3. Trail LOP intersects a vegetation boundary LOP when it enters a meadow

This method requires updated maps. Be cautious of wildfire-burned areas that have appeared before the printing date of your map – vegetation cover can change significantly with wildfire.



BACKPACKINGLIGHT

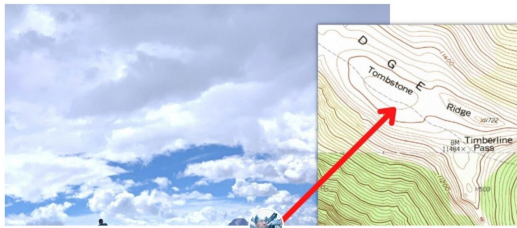
ARTICLES EDUCATOR GEAR COMMUNITY MEMBER ACTIVITY ACCOUNT

Tips, Tricks, and Hacks

Using lines of position to fix your location on a map



Learn how to identify and use lines of position to help fix your location on a map while traveling in the backcountry.



By Ryan Jordan

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BUTTON



BASEPLATE



MIRRORED



BASEPLATE



HOUSING



BASEPLATE DETAIL

DIRECTION OF TRAVEL ARROW



BASEPLATE DETAIL

RULERS



SCALE BARS



BASEPLATE DETAIL

MAGNIFYING LENS



STRAIGHT EDGE



LANYARD ATTACHMENT POINT



MAP & COMPASS TIME

orienting a map

transferring a bearing from field to map

transferring a bearing from map to field
