



GOLDEN STATE GUIDING // TRAD 101 PROGRAM

Instruction and hands on training for placing active and passive protection and building 3-point anchors while traditional climbing.

Active & Passive Gear Placement Topics:

- **Active Gear:** SLCD – Spring Loaded Camming Device (Cams).
- **Active Gear Components:**
 - Trigger, axels, lobes, slings and ratings. Each cam, nut and hex has a kn rating. 1kn = 224.8lbs.
- **Passive Gear:** Nuts, Hexes and Tri-Cams.
- **Gear Manufacturers:**
 - Black Diamond - Camalot, Ultralight Camelot and X4's (double-axel standard cams)
 - Metolius Power Cam (single-axel standard cam)
 - Off-Set Cams – Blackdiam X4 off-set and Metolius TCU off-set (for flared cracks)
 - Black Diamond C3's / TCU's (three cam unit)
 - Other brands: DMM, Omega Pacific (tri-axel camming unit)
- **Active gear retraction range by brand:**
 - Black Diamond recommends 50 - 90% retraction as the acceptable range for a cam.
 - Wild Country recommends 25% - 75% retraction as the acceptable range for a cam.
 - Metolius uses color coding for cam retraction range (green good, yellow ok, red poor).
- **Rock Quality:**
 - Quality of rock should always be your first consideration. Soft rock such as sandstone and or loose/brittle rock can compromise the placement of a cam so make sure the rock you are placing a cam or nut in is solid.
 - Do not place a cam behind hollow or loose flakes. If the cam is loaded on a fall it could potentially break the flake that it's placed in.
- **Gear Placement:**
 - All lobes of a cam or nut should be evenly contacting the rock when placed.
 - Place a cam, nut or hex in the direction of the fall when possible.
 - Do not place a cam where it has the potential to walk in any direction. The placement should be in a parallel crack, not flaring at either end of the placement.
 - When placing a cam, nut or hex extend with runners/slings to prevent walking of the gear.
 - The outside lobes of a cam should be placed on the bottom of a crack if placed horizontally.
 - Sometimes flipping the cam will allow for a better placement.
- **SOS Acronym:**
 - **S:** Structure – the structural integrity of the rock
 - **O:** Orientation – Direction of pull
 - **S:** Surface Contact

Additional Notes:

- If a cam is at the lower end of its retraction range we call it “tipped out”.
- Pitons are fixed protection or anchors (also called pins)
- Nut tools are invaluable. Always carry one!

Gear Anchor Topics: *The above information is the foundation of the gear anchor portion of the program.**

- Building a traditional 3 point anchor using a cordelette and equalizing each strand.
- Building a self-equalizing 3 point anchor using a cordelette and equalizing each strand.
- Discussion around different master-point options if multi-pitch climbing (traditional master-point vs. using the shelf as your master-point).
- Traditional anchor location if multi-pitch climbing (try and avoid building anchors around your feet when climbing any multi-pitch climb, you want the anchor to be chest level for ease of belaying).
- Extending traditional anchors with additional pieces of material if needed.
- **SERENE Acronym:**
 - **S:** Solid/Secure – is my anchor I just built solid and secure?
 - **E:** Efficient – did I build my anchor quickly and efficiently?
 - **R:** Redundant – is my anchor redundant in case of a failure in any part of the system?
 - **E:** Equalize – is my anchor properly equalized in the direction of the climb? No greater than 60°taking into consideration the outside strands.
 - **NE:** No Extension – will my anchor have any type of extension if the system were to fail at any one point.