

# Tech Skills: Abseil stations by Dan Middleton

**What goes up must come down. And for longer routes this often involves using fixed abseil points - or 'stations'. A familiar sight on alpine routes, their safe use is an essential alpine skill. But back home many otherwise experienced climbers are less sure when it comes to using, and trusting, in-situ equipment. This is probably because British ethics have precluded their use for many years, but now they're becoming increasingly prevalent - you need to know how to use them.**

## What do they look like?

Abseil stations can be concocted from a wildly varying mix of components. A station might be anything from a twin bolt and chain lower off, to a piece of rope tied around a tree. Equipment used may be familiar to the climber (e.g. pegs, slings and wires), come from the industrial world (e.g. heavy-duty chains and wire strops) or even be homemade. To help decide if any of these are safe to use, apply some general principles.

## Metallic components

Metallic components such as pegs, wire strops, chains and bolts are generally the most durable choice for permanent stations. Checking these components is usually a case of looking for evidence of corrosion.

Chains and strops are fairly easy to inspect, as you can normally see the whole item. Pegs and bolts are more difficult, as most of the anchor is hidden. But if the part you can see is corroded then assume that the part you can't see is a lot worse.

## Textile components

Tape, cord and rope are often used to link several anchors together, or tied around big features such as chock-stones and trees. Whilst mostly less durable than metallic components, these are often the only option, particularly if the station has been established in an emergency. It's not possible to give definitive guidance on the effective lifetimes of various types of cord or tape in such situations, but treat them all with caution. The main degradation mechanisms are friction melting, abrasion, UV light, weathering and chemical attack.

## Making an informed decision

You'll never know the history of an abseil station, but an experienced climber should be able to use a systematic approach to form a judgement over whether they're happy to use it:

- Are the anchor points sound and in good rock? Use a 10-point scoring system, with 10 points and above adequate to abseil off. A huge tree or large rock spike with chain might be worth 10 points, a slightly rusty peg in good rock worth 6, a



WRONG: The 'Death Triangle' puts big forces on the anchors. Photo: Adrian Jebb.



RIGHT: Anchors are independent and equalised. Photo: Adrian Jebb.

# Expert Q&A



This issue's expert is Steve Long. Steve is the Chief Officer of MLTUK, producer of the Self Rescue DVD, author of Hillwalking by MLTUK and The Climbing Handbook, and no stranger to abseiling.

**Q. What's the best knot to join two abseil ropes?**

**A.** The one that doesn't creep undone! There are plenty of choices but for security it's hard to beat a reef knot with double stoppers on each end. However, this knot is likely to jam on any projecting rock ledges or cracks when pulled. An alternative is the overhand knot, which is less inclined to jam - just make sure you leave tails of about 50cm to account for any slippage.

**Q. Help. My rope is stuck - what are my options?**

**A.** Bad luck! This can usually be avoided by careful planning - looking out for and avoiding snags and tree routes etc. Pull the rope down with a slow and steady motion, and if you have to pull down hard on the rope make sure that you are firmly secured in case it releases suddenly. If it's jammed move away from the crag base to reduce friction, unravel any twists, stretch then release to 'ping' the rope and try a prusik or ropeman as a handle to pull harder. If these all fail then you could leave it (and come back in daylight...), lead back up on the spare end, or prusik back up it.

**Q. Can I abseil off a tree?**

**A.** Yes, if it's big and solidly rooted. But always use a sling - repeated abseiling without protecting the tree damages the bark and will eventually kill it.

**Q. Any tips for safer abseiling?**

**A.** Double check everything before you commit fully to the rope. Clear loose debris from the top of the abseil so it doesn't get knocked down on you. Beware sharp edges and avoid shock-loading anchors. Use a back up prusik or device wherever the consequences of letting go would be serious (i.e. usually!).



WRONG: Above the anchor, with a static sling.  
Photo: Adrian Jebb.



RIGHT: Tight on the anchors, a dynamic rope lanyard gives extra safety. Photo: Adrian Jebb.

small jammed nut in slightly shattered rock possibly only worth 3. Add together all the anchor points for a total score.

- Are any knots well tied, the anchors correctly equalised and the load shared equally? Ideally all the anchors will be connected to create a central abseil point. Using a maillon or other metal connector at this central point will greatly increase the lifespan of any tape or cord used, since pulling the ropes down after abseiling can generate friction damage.
- Consider the original strength of any cord or tape. Account for whether it's doubled or not.
- Check the physical condition of any tape or cord. Look for cuts, abrasion and melting.
- Look for signs of weathering, chemical attack and aging. Is the tape or cord bleached, discoloured or stained? Turn it over or pull it through to see how much it has faded.
- Carry some tat to replace any suspicious tape or cord. What you use will depend on your situation but 5mm cord may be considered the minimum. If removing existing tat, take great care when cutting anything...

### Attachment to the station

If you're setting up an abseil, or awaiting your turn on a multi-pitch descent, you'll need to safely attach yourself to the station without using the rope. It's normal to use a sling, but be beware that any sort of slip or

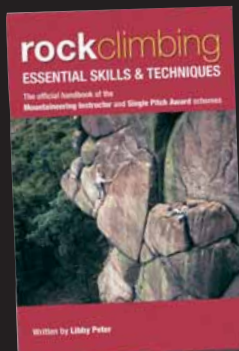
fall, even one that seems trivial, can have serious consequences. Tragic accidents have occurred when climbers have slipped onto their static sling. Even if the station is bombproof, it's possible to generate very high forces, breaking the attachment sling or causing serious injury. So stay low and tight on the belay, and clip into the strong central point of the station rather than just one of the anchors. Avoid standing above the belay at all costs - if short of room, hang off the belay. If it's good enough to abseil off, it's good enough to hang from.

### Dubious stations

Sometimes the station doesn't add up to the 10 point minimum and you'll be unhappy. Consider adding some of your rack to the station (money well spent if it means staying alive) or, if on a long descent, backing up the station with another temporary anchor left slightly slack. The idea is to test the station by sending the heaviest climber down first (with the packs). If the station passes the test the last person down then removes the loose backup and carefully abseils down. Although a popular trick amongst skinflint alpinists, this method is not without risk. Remember that your gear can be replaced, but you can't. ■

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