

Mecklenburg County Council

COPE & Climbing

Mock Lead Climbing SOP

Overview

The purpose of this document is to set a standard means for rigging and facilitating a mock lead climb with an initial focus on the MSR outdoor tower although the principles in this document apply with some minor differences to outdoor locations. The mock lead route on the MSR tower is a sport route including bolt hangers and a pair of anchor bolts with rings at the top of the route.

A mock lead climb is intended for advanced climbers. This is not an element or activity for new or inexperienced climbers. While there is no age limit, the instructor should use his/her judgement as to the experience level of the scouts. The target participant group should meet the following:

- Older Scouts BSA or Venture scouts,
- have climbed before,
- have demonstrated proficiency in climbing technique (i.e. able to climb other routes on the MSR tower or indoor wall; or similar natural rock routes),
- have demonstrated proficiency in climbing knots,
- have demonstrated proficiency in top rope belay technique,
- and are looking for the next challenge.

BSA NCAP standards require that all scouts are top rope belayed when climbing (PS-206-C-6). The towers at MSR and Belk are both designed with life safety systems above the climbing walls to facilitate a top rope anchor with a slingshot belay in which the belayer stands on the ground. All climbers must be on an independent top rope belay when participating in a mock lead climb.

As this activity is an extension of a top rope climb, much of these operating procedures are borrowed from the Top Rope Climbing SOP. All applicable Top Rope Climbing procedures must be followed during a mock lead climb.

Equipment

The following lists the equipment needed to rig the mock lead climb as detailed below in this document.

- MSR
 - 1 shear reduction device
 - 2 oval screw gate locking steel carabiners
 - 1 low stretch static rope (dedicated to the mock lead wall)
 - 1 dynamic rope (dedicated to the mock lead wall)
 - 2 Mammut SMART assisted braking belay devices
 - 2 screw gate locking aluminum carabiners (paired with the belay devices)
 - 1 set of 6 quickdraws
 - 1 set of 2 anchor draws
 - 2 personal anchor systems (PAS)
 - 2 screw gate locking carabiners (preferred red gate steel oval)
 - 2 screw gate locking carabiners (i.e. Black Diamond Positron)
 - 1 x 12' webbing
 - 2 pairs of belay gloves
 - 2 ground tarps
 - 1 set of lobster claws with locking carabiner (optional)
 - 1 Rescue Bag
- Natural Rock
 - Equipment to rig an independent top rope belay
 - Site and route specific top rope anchor
 - 1 low stretch static or dynamic rope
 - 1 Mammut SMART assisted braking belay device
 - 1 screw gate locking aluminum carabiner (paired with the belay device)
 - 1 pair of belay gloves
 - 1 ground tarp
 - 1 dynamic rope (dedicated as the lead rope)
 - 1 Mammut SMART assisted braking belay device
 - 1 screw gate locking aluminum carabiner (paired with the belay device)
 - 1 set of quickdraws (enough for the route to be climbed)
 - 1 set of 2 anchor draws
 - 1 personal anchor system (PAS)
 - 1 screw gate locking carabiner
 - 1 ground tarp
 - 1 pair of belay gloves

It is preferred although not required that the participants (climbers and belayers) for this element wear a harness with a vertical belay loop and two tie in points. Additionally harnesses with one or more gear loops are preferred.

Opening the Tower for the Mock Lead Climb

MSR

At MSR it is necessary to access the top of the climbing wall to rig the top rope belay for the mock lead climb (more below). The locked door/fence to the top of the tower must be unlocked. The mock lead wall is on the right side of the tower as you face the rappelling wall. It is not necessary to open the barn doors to the usual climbing routes on the tower.

After the tower has been fully inspected the A frame ladder and a milk crate of removeable climbing holds should be brought out of the tower (they are stored in the closet under the tower at MSR or on the first landing behind the gate). When someone is on the ladder for any reason proper spotting techniques should be used. The ladder is used to install the temporary, removeable climbing holds on the wall. The ladder should not be opened. Rather it should be “seated” in the gravel around the tower and leaned against the tower wall for maximum stability.

The holds should be installed from the bottom up so that they provide additional grips for the instructor as he/she installs the higher holds. The holds fit on the plastic cleats on the tower in only one orientation due to the groove on the back side of the holds. The holds must be placed from the top down then pushed into the wall. It is sometimes necessary to *lightly* tap a hold with a rubber mallet to secure it in place. Due to wear and tear on the holds and plastic cleats some holds fit certain cleats better than others. You may need to try several holds to find a good match. It is worth the time to find a good match so that the holds do not pop off while a climber is on the wall. This can make it difficult for the climber to continue his/her ascent, but it also poses a danger of a falling hold. Sometimes the plastic cleats will break or chip. It is then necessary to find a new plastic cleat in a bucket inside the tower or COPE storage closet and replace it with the socket wrench kept in the tool bag in the storage closet.

Rigging for the Mock Lead Climb

MSR

Rig the Top Rope

At MSR you must rig the climbing rope from the top of the tower. Unlock the tower stair gate and ascend to the platform above the mock lead wall on the tower. You will need to bring with you the low stretch static rope, a steel oval carabiner and the shear reduction device (SRD). You may also want to stage the lobster claws on the life safety cable for later use.

Once at the top of the tower thread one end of the climbing rope through the SRD. Clip the SRD to the steel oval carabiner and clip the carabiner to the overhead life safety cable above the mock lead climbing route. Pull enough rope through the SRD so that both ends of the rope will reach the ground. Yell “ROPE!” and toss the climbing rope over the railing to the ground. You may want to hold the ends of the rope near the SRD so that they do not pull through and the entire rope winds up on the ground. Either look over the rail to ensure both ends have reached the ground or ask someone on the ground if both ends are on the ground. Walk down the stairs of the tower.

Note that the climber’s end of the rope should be exiting the SRD closer to the tower wall and the belay end of the rope should exit the SRD away from the tower. The climber and belay lines should not cross when exiting the SRD.



Rig the Top Rope Belay

BSA standards require that a ground anchor be used for the belayer whenever possible. The ground anchor at MSR for the mock lead climb is embedded in the ground a short distance from the mock lead wall and is protected by a green irrigation cover. Remove the cover by twisting or rotating it until it can be pulled off the base. Set the cover aside, behind the anchor so that it is not a tripping hazard for the belayer.

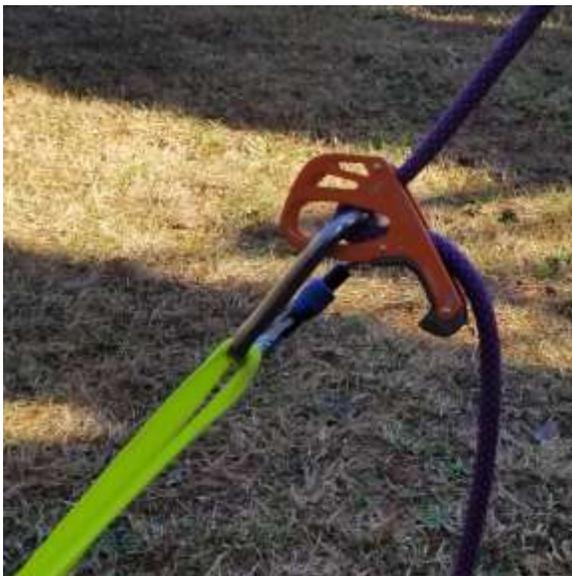
Tie the webbing in a loop using a water knot with appropriate back up knots. Clip the webbing to the anchor with a steel locking carabiner. This loop of webbing should not be girth hitched around the anchor.



Spread a tarp down on the ground near where the belayer will stand. The tarp is important to keep the ropes out of the dirt and damp grass thus preserving the useful life span of the rope. The tarp can be positioned against the anchor to also protect the webbing from the dirt on the ground around the irrigation cover.

Pull the belayer's end of the top rope back to the tarp placing extra coils of rope on the tarp. Thread a bite of rope through the belay device, clip in with the locking carabiner and clip in to the loop of webbing. Pull enough tension on the rope to keep the hardware off the ground.

A stopper knot (barrel knot) must be tied in the end of the climbing rope. This is the same knot used as a backup for a figure 8 knot.



When the climbs have been rigged, the ladder and the bucket of climbing holds should be returned to the inside of the tower. Do not leave anything out around the top rope belay anchor or the base of the mock lead route that could pose a fall or tripping hazard.

Rig the Climber's End of the Top Rope

There is no rigging required for the top rope. For this element, the climber will tie in to the top rope using a figure 8 follow through knot. Leave the climbing end of the top rope loose with no knot tied.

Rig the Lead Climbing Rope

There is no rigging required for the lead climbing rope. Instead, the rope is staged at the base of the tower. A stopper knot should be tied in the belay end of the lead rope (at the bottom of the stack). The rope must be flaked out or stacked on a tarp set on the ground near the base of the tower. Do not place the tarp right at the base of the route, rather set it off to the side, where the climber will not step on the rope. (To the left or the right of the route is fine, whichever is more comfortable for the climber and lead belayer.)

Offsite Natural Rock

Follow training and rigging techniques for a top rope anchor and rope according to the demands of the specific venue and route to be climbed. It is often the case that the best mock lead routes are routes that the scouts have already climbed on top rope during an event. In this case the top rope anchor and belay line are already set. Furthermore, the scouts have some familiarity with the route allowing them to focus on the lead climbing skills.

There is no difference in setting up the lead climbing rope for a natural site. The steps are the same as if we were rigging at camp.

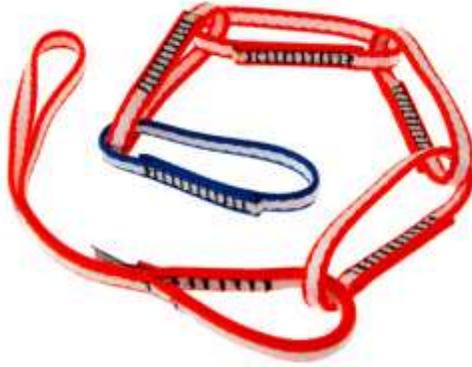
Staging for the Mock Lead Climb

All spectators and scouts waiting to climb must be instructed to remain away from the base of the mock lead route and the top rope belay anchor.

While climbing, only the climber and the lead belayer should be near the base of the lead route. An instructor may need to approach the route to assist the climber or lead belayer, but otherwise should stand back a safe distance to supervise the activity.

Lead Climber

The lead climber should attach the Personal Anchor System (PAS) to his/her harness. The long flexible end of the PAS should be girth hitched through both tie in points of the climber's harness. (On the current PAS provided by the camp, this end is orange and is opposite the blue loop of the PAS. Do not girth hitch the blue loop to the harness's tie in points.) Make sure to follow the manufacturer's recommendation on the proper use of a PAS.



The red gate steel oval locking carabiner should be clipped to the blue loop of the PAS and this should then be clipped to a gear loop of the harness. The PAS should not dangle or droop from the harness in such a manner that might interfere with the climber's legs while climbing.

The lead climber should then attach the quickdraws to a gear loop of the harness as well as the two anchor draws. There are several techniques for clipping the quickdraws to a gear loop such as gate in or gate out. Either is acceptable although best practice has the bolt end carabiner of the quickdraw clipped to the gear loop (more on this in the climbing section below).

Lead Belayer

The lead belayer will stand off to one side of the climber near the base of the route and the tarp on which the lead climb rope has been stacked. The lead belayer may stand to the left or right of the climber depending on belayer and climber preference. The lead belayer should be within a few feet of the route, not more than 6 feet or so. The rope tarp should be positioned next to the lead belayer, on the side of his/her dominant brake hand.

Facilitating a Mock Lead Climb

There are many styles and techniques to facilitate a mock lead climb. However, there are certain steps that must always be followed. These are detailed below.

- CHECK
- Tie in to the Climbing Ropes
- Climbing Commands
- Untie from the Climbing Ropes

CHECK

Before beginning any climbing session, the trained instructor must go through CHECK.

The first step is to CHECK the overall rigging and himself/herself.

Once facilitating a climbing session each participant must be CHECK'ed. A trained climbing staff member must check the harness and helmet of the climber every time the climber approaches the route. The

harness and helmet of the belayers should be checked as well. Participants will often take off their harness or loosen it between climbs. Never assume that a harness or helmet is OK. Check every time.

It is very useful to ask the climber and belayers their names. Use them and repeat them often. It reinforces the connection between the climber, the belayers and the instructor. It also helps to get the climber's or belayers' attention when there is a lot of noise and commotion around the tower.

Tie in to the Climbing Ropes

The climber must tie in using a figure 8 follow through with appropriate back up knot. The knots must be checked by the trained instructor. The climber must tie into the lead climbing rope. The top rope may be tied in or clipped in following existing policies and standards. If tied in, the rope must be tied to both tie in points on the harness. Care should be taken that the two knots do not interfere with each other or overlap. One useful technique is to have the climber tie one knot on each side of the vertical belay loop. This helps to keep the two knots separate.



In this picture the blue and red rope on the left is the top rope belay line while the yellow and blue rope on the right is the lead belay rope. It is not important which side of the belay loop the knots are tied, but they should be neat, properly dressed, and easy to identify.

If a harness other than a program harness is in use, the manufacturer's recommendation must be followed for the tie in point(s) on the harness.

Climbing Commands

The climber must exchange the climbing commands with both belayers before the climber may ascend the route.

Ask the climber to face the belayer. This aids in hearing the climber issue commands but also allows the belayer an additional check of the climber. A good technique is to have the climber put his/her back against the start of the route.

On Belay

The climber asks the top rope belayer “On Belay?” The belayer must:

- Check that he/she is properly clipped in to the belay device and the webbing.
- The top rope backup belayer must be in position
- Visually check the climbing area. No one out of place, belay stance is clear, etc.
- Pull excessive slack out of the rope.

The belayer now responds “Belay On.” The belayer may make a sentence out of each command response. For example, “Timmy, the belay is on.”

During the climb, the climber will need slack in the top rope to maneuver around the route, clip, rig and clean the route. The top rope belayer must avoid excessive slack in the top rope but should not keep the top rope taught.

The climber then asks the lead belayer “On Belay?” The lead belayer must:

- Check that he/she is clipped in to the belay device properly.
- Visually check the base of the route. No one out of place, belay stance is clear, etc.
- Visually check the lead rope. The rope must be flaked or stacked and clear of any obstructions. There should be a little bit of slack between the climber and the lead belayer.

Climbing

The climber issues the command “Climbing.” The belayers both respond “Climb On.” The climber may now turn, face the route, and begin to climb.

As the climber begins his/her ascent, the lead belayer should spot the climber until the first quickdraw has been clipped. This is a best practice for lead climbing.

While the climber is ascending, the top rope belayer should be looking out for safety concerns. These might include but are not limited to the following:

- Climber must keep his head above his waist
- The top rope should remain between the climber’s arms
- Climber should face the route

At no point should the climber ascend beyond the lead anchor at the top of the route.

The climber must not grab a bolt hanger or an anchor bolt with the ring. His or her hand or fingers could be pinched, caught, or trapped and serious injury could result.

Clipping a Quickdraw

As the climber moves up the route, he/she will encounter the bolt hangers. Once a bolt hanger is reached, the climber should remove or unclip a quickdraw from his/her harness and clip the draw to the bolt hanger. For the current set of quickdraws provided by the council, the black carabiner should always be clipped to the bolt hanger. The climber should issue the command "Clipping" then grab the lead rope right at the tie-in knot pulling the rope up to the quickdraw. The lead belayer must feed slack to the lead rope so that the climber has enough rope to complete the clip. The lead rope should be clipped to the bottom carabiner on the quickdraw (for the current set this is the orange carabiner).

The best practice is to clip the quickdraw so that the gate faces away from the direction of the next few climbing moves. For example, if the climber is moving up and the right, the gate should face to the left.



In this picture the climber has moved up and to the right. The quickdraw is oriented with the gate away and the lead rope is properly clipped to the bottom carabiner.

Back-clipping and z-clipping are two common mistakes that must be avoided.

Back-clipping happens when the rope is clipped so it's running through the carabiner incorrectly. The correct way is to have the rope coming up from behind (between carabiner and climbing surface), through the carabiner and out, away from the climbing surface and then to the climber's harness. A back-clipped quickdraw has the rope running up through the carabiner from the front, toward the climbing surface, and then to the climber's harness.



Again, the climber has moved up and to the right. However, there are two issues with the quickdraw and lead rope.

1 – The lead rope is back-clipped through the bottom carabiner. This must be corrected before the climber advances.

2 – The quickdraw is not in the ideal orientation. It should have the gate facing away from the climber's direction, i.e. to the left. Best practice, or safest, would be to turn the quickdraw to the left. However, in some circumstances this may not be possible.

Z-clipping will create rope drag that makes it nearly impossible to move up, as well as making the highest clipped bolt useless. This scenario happens when the climber grabs the rope from below the last clipped bolt and then clips it through a higher bolt, creating a Z-shape. To avoid this the climber should always reach for the lead rope right at his/her tie-in knot.



In this picture the lead rope has been z-clipped.

The climber reached below the bottom quickdraw to grab the rope, then clipped it to the top quickdraw.

The climber then moved up and to the right on the route.

Note that slack has been reintroduced into the setup to make the z-clip more apparent. In most situations, the two quickdraws will be pulled close together.

As the climber moves up the route care must be taken to avoid these two situations. When starting out take the time to look closely at the quickdraw orientation, the direction of the lead rope and the direction of the climb. The lead belayer and instructor should be watching the climber closely for these mistakes as well. Any mistake should be corrected before the climber moves on.

Additional Climbing Commands

Much as when top rope climbing the climber can issue additional commands to the lead belayer.

- **Slack** – “Give me more slack on the lead rope.”
- **Take or Tension** – “Take out the slack on the lead rope. Pull it tight.”

Clipping the PAS to an Anchor Bolt

Once the climber has reached the set of anchor bolts at the top of the route, he/she should unclip the PAS from his/her harness and clip it to one of the anchor bolts. It does not matter which bolt is used. Best practice is to clip the carabiner of the PAS to the bolt hanger, not the ring, and should be clipped outside of the ring. The carabiner should be clipped from the bottom up so that the spine of the carabiner is against the climbing surface. If there is enough play, or space, between the carabiner, the bolt hanger and the climbing surface, the carabiner can be clipped from the top down and flipped over so that the gate is not against the climbing surface.

Any loop of the PAS can be used. The multiple loops allow the climber to clip in closer to the anchor bolts if needed. Once clipped, the carabiner should be locked.

Once the PAS is clipped to an anchor bolt, the climber should let the lead belayer know he/she is “In Direct”. Although the climber is now attached directly to an anchor bolt, the lead belayer should NOT take the climber off belay.

If the carabiner on the PAS will not fit through the hanger with the ring, the ring can be clipped. This is not best practice and should not be the default option, but it is an acceptable alternative.



The PAS is clipped outside of the ring and the anchor draw.



The PAS is clipped directly to the ring.

Building a Sport Anchor

Natural rock anchors are outside of the scope of this SOP. However, one specific type of anchor will be covered: the sport anchor. This anchor requires two quickdraws. Rather than use two standard quickdraws with non-locking carabiners on each end, a safer practice is to use an anchor draw, one that has a locking carabiner on the rope end. The quickdraws provided have a green carabiner for the anchor side and an orange locking carabiner for the bottom rope end.

Best practice is to start with the anchor bolt free of the climber’s PAS. The anchor draw should be clipped from the bottom up so that the resulting orientation has the gate facing out, away from the climbing surface, and outside of the ring. Once the anchor draw has been clipped to the bolt, the lead rope can be brought up and clipped to the bottom carabiner just as if clipping a quickdraw elsewhere on the route. This bottom carabiner must be locked after the rope has been clipped.

Repeat with the other anchor bolt and anchor draw.



The best orientation for the two anchor draws has the locked carabiners with gates opposite and facing outward.

The two bottom carabiners form a basket to hold the rope from which the rope cannot escape.

Note the dog bones (sewn slings) of the anchor draws are neat and flat. If they are twisted, this indicates that something is not right.

The climber's PAS is also still clipped to one anchor bolt. The climber is still "in direct".

In this picture the gates of the bottom two carabiners are facing in toward one another.

Although the carabiners are locked, this not as safe since the two gates could rub against each other and unlock.





In this anchor the draws have been clipped directly to the rings. While safe, this is frowned upon and should not be the rigging method used except in rare circumstances.

Once the anchor has been built and the rope is clipped to the draws with both draws locked, the climber needs to weight test the anchor. The climber should ask the lead belayer to “take” or “tension”. The climber must have all of their body weight held by the lead rope passing through the anchor with none of their body weight on the PAS or the top rope. Once the climber has confirmed that the anchor will hold their weight, then the climber may remove the PAS from the anchor bolt. Once the PAS has been removed, the climber should let the lead belayer know that he/she is “off direct”. The climber is ready to be lowered and clean the route.



In this picture the lead ropes passes up through all of the quickdraws to the anchor at the top of the route. The lead rope passes cleanly and straight through with no twists, bends or kinks.

The climber has been lowered to the ground without cleaning the route and the climber's end of the lead rope is off the picture to the right.

Note that the independent top rope has been removed for clarity.

Lowering and Cleaning

Once ready to come down, the climber issues the command "lower" to the belayers. Both belayers, the top rope belayer and the lead belayer must work in cooperation to bring the climber down. If either belayer locks off the belay device, it will stop the climber from lowering further.

Before lowering, the climber can clean the anchor as described below, or the anchor can be left in place for the next climber. Note that in this case, the two locking carabiners will remain locked as the lead rope is pulled between climbers. The next climber will need to unlock the carabiners before clipping the lead rope, then will need to relock the two carabiners.

As the climber is lowered within reach of a quickdraw on the route, he/she should issue the command "stop" to the belayers. The belayers should stop lowering and hold the climber at that point of the route. The climber needs to clean or remove the quickdraw from the bolt hanger. The quickdraw should

be removed from the bolt hanger first, clipped to the climber's harness (a gear loop) then the quickdraw can be unclipped from the rope. In this manner it is impossible for the climber to drop a quickdraw. Once the quickdraw has been cleaned, the climber issues the command "lower". This process is repeated at each quickdraw on the route.

An alternative method of cleaning is to unclip the rope from the quickdraws but leave the quickdraws in place for the next climber. This allows a less experienced climber the option to focus on the climb and only clipping the rope to the draws but not placing the draws themselves. This is easier for many new lead climbers, climbers with less stamina or simply as one step of a learning progression.

Off Belay

Once the climber is safely on the ground the belayers may release the belay. Often the climber is not aware or forgets to issue the "Off Belay" command. Once off belay the belayers may relax the hold on the rope, unclip from the belay device and ready himself/herself for the next climber.

The backup belayer may release the rope and attend to the current climber or help prepare the next climber.

Once safely on the ground and off belay the climber should untie from both climbing ropes. The top rope should be left hanging with no knot tied in the end of the rope. The lead rope should be pulled down and restacked or flaked on the tarp next to the route. No knots should be left tied in the climber's end of the lead rope.

Between Climbers/Sessions

In between climbers or climbing sessions, the top rope belay device should remain rigged on the top rope and webbing. Do not pull tension on the rope – the climber's end of the rope could be pulled up out of reach. The top rope belay hardware can be rested on the ground tarp.

The lead rope should be restacked or flaked if needed. The lead belay device & carabiner can be set on a table or simply clipped to one of the bolt hangers on the lower section of the route. The same can be done with the quickdraws and PAS used by the climber. Be mindful that the lead belayer or climber does not walk away with the mock lead equipment.

Additional Mock Lead Learning Options

Ground School

At MSR there are pairs of anchor bolts and bolt hangers on the lower portion of the mock lead wall. In some venues (such as Rocky Face) there are pairs of anchor bolts at ground level. These are to be used for teaching and training purposes. The skills covered in this document should be taught and practiced while everyone's feet are firmly on the ground and no one is on belay. Only once a climber has demonstrated proficiency in the skills required should the instructor allow them to begin a mock lead climb.

If though, at any time, a lead climber is having difficulty, the mock lead can be abandoned, and the climber lowered safely to the ground on the top rope.

No Lead Rope

As a participant is learning this new climbing technique, the climber can be allowed to top rope climb the route and place quickdraws with no lead rope. The quickdraws will simply hang on the bolt hangers. This might be an option for a climber who is particularly nervous and unsure if he/she wants to give this new activity a try.

Dummy Lead Rope

There are options for climbing that utilize a dummy lead rope.

This dummy rope might be a small, short section of rope tied to the climber's harness but is not long enough to reach the ground (i.e. any of the practice ropes usually used for knot tying). This is good option for new climbers as it drastically reduces the weight of the rope that they must pull up the route with them as they climb. The weight of the rope is also reduced when clipping the quickdraws and the climber does not need to worry about a lead belayer pulling the climber off the route.

Another dummy rope option is to use the lead climbing rope but do not use a lead belayer. This allows the climber to feel the full weight of the rope but takes any concern over the lead belayer out of the system. Also, useful if a lead belayer is not available but the participant still wants to practice the lead climbing skills.

Make sure that there is no knot in the dummy rope except for the end tied to the climber's harness. It must be able to pass cleanly through the quickdraws.

Do Not Set the Lead Anchor

Since the climber is always on an independent top rope belay, the climber may choose to skip building the lead anchor. When the climber reaches the set of anchor bolts, simply treat it as any other top rope climb and lower the climber to the ground. Cleaning the quickdraws on the way down is an option as covered above.

Instructor at the Top

An instructor can be positioned at the top of the mock lead route in such a manner as to supervise a climber at the top of the route. At MSR, the instructor can use a set of lobster claws to clip into the overhead life safety line then climb over the railing above the mock lead route and stand or sit on the boards above the route. From this vantage point the instructor would be able to closely monitor and guide the climber while he/she is setting the anchor.

Cleaning a Sport Anchor (Lower through the Rings)

In addition to cleaning the quickdraws on the route, the climbers may be taught how to clean a sport anchor while on belay. This is a more advanced skill and should be reserved for climbers who have demonstrated a proficiency in:

- Climbing knots,
- Lead climbing,
- Clear communication of the climbing commands,
- Clipping and cleaning quickdraws,

- Building a sport anchor.

There are many methods that can be used to clean a sport anchor and lower through the rings of the two anchor bolts. The method described here requires that the climber always remain on lead belay (in addition to the independent top rope belay) and that the climber is always tied in or clipped to the lead rope with a life safety knot on the belay loop of the climber's harness.

The steps for cleaning the anchor and lowering from the rings begin with the climber at the anchor, in direct with the PAS, with the lead rope passing through the quickdraws on the route and the pair of anchor draws.

The climber first asks for "slack" and transfers his/her weight onto the PAS as the lead rope goes slack. The climber must pull about 6-8 feet of the lead rope through the anchor. This slack should be between the anchor and the climber's tie in knot. Double the slack of the lead rope over forming a bight of rope.



This bight of rope should be taken behind the anchor draws (between the draws and the climbing surface) and pushed through the two rings. Do not let the bight of rope pass through any other carabiners or pinch/trap any hardware or soft good to the climbing surface or the anchor bolts. It does not matter which way the bight passes, from left to right or right to left, but should be neat and avoid unnecessary twists or tangles.



Once through the two rings, tie a figure 8 on a bight. Using a locking carabiner, clip this knot to the belay loop of the climber's harness and lock the carabiner.



Tell the lead belayer to “take” or “tension”. The lead rope should be pulled tight by the lead belayer and the climber should transfer his/her weight back on to the lead rope via the locking carabiner and the figure 8 on a bight. Verify that the lead rope and the rings are holding the climber's full weight. The PAS and the anchor should be slack, with no tension or support of the climber's weight.

Untie the climber's original figure 8 follow through knot of the lead rope, not the top rope. Pull this slack end of the lead rope through the rings and allow it to hang off to one side.



Remove the anchor draws from the anchor bolts and clip to the climber's harness (gear loop).



Unclip the PAS from the anchor bolt. Once the PAS has been removed, the climber should let the lead belayer know that he/she is “off direct”. The climber is ready to be lowered and clean the route as detailed above. The climber must also keep an eye on the tail end of the lead rope to ensure that it does not become tangled or caught on the way down the route.

Once on the ground, pull the lead rope through the rings and reset for the next climber or clean up the gear for the day.

Although a climber can be lowered through the rings of the anchor bolts, the rings should never be used for top roping.

Derig (Take Down) a Mock Lead Rope and Hardware

Do not leave any of the mock lead equipment on the tower overnight or during inclement weather. The quickdraws, anchor draws, and PAS are not meant to be left out in the sun or the rain.

The mock lead rope itself can be pulled down through the draws on the route. The rope must be inspected, coiled, and stored as with all ropes used in the program.

If the mock lead route has not been cleaned as covered above the most straightforward means of cleaning the route is to climb on top rope and clean all of the quickdraws and anchor draws.

An alternative method that does not involve climbing the route is to clean on lower from the top of the tower. Tie a knot in the bottom of the top rope and pull it up to the SRD. An instructor should walk up the steps to the top of the tower, tie in to the top rope and have a belayer put him/her on belay. Once on belay, the instructor may climb over the railing and have the belayer lower the instructor down the route, cleaning the hardware as you go.

If only the anchor draws are left in place, an instructor can use the lobster claws to climb over the railing at the top of the tower to reach the top of the mock lead route and remove the two anchor draws.

Closing the Tower

The tower should be closed following the usual standard procedures for each camp. At Belk and MSR the removable holds should be stored under the tower in a bin or milk crate.