METOLIUS

Belay/Rappel Device

BRD™

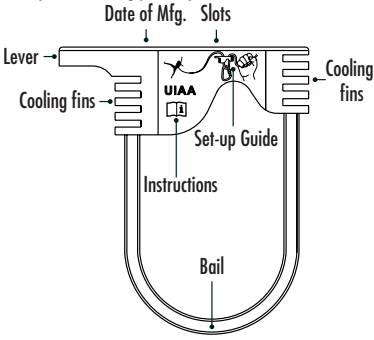
#91008 Rev. 12/22

The Importance of the Belay

The importance of the belayer's job cannot be over-emphasized. As a belayer, you literally have your partner's life in your hands. Belay devices have improved dramatically, but even the best belay device cannot compensate for a lack of training or experience. Moreover, a minor lapse in the diligence of even the most experienced and well-trained belayer can have catastrophic results. Far too many accidents are the result of poorly trained or inattentive belayers. Don't let yourself become one of the statistics. Learn the proper technique and give belaying your full attention. Don't eat, take photos, or socialize while you're belaying. Take the belay seriously. Someone's life is at stake! This guide can help you to learn proper belay technique, but it does not replace professional instruction.

The BRD

The Metolius BRD is a plate-style belay/rappel device. Plate-style devices have several advantages. They are the lightest in weight of all the common belay devices and are exceptionally easy to operate. They don't introduce a twist into the rope (like a figure eight or Munter Hitch) which makes the rope handle better and last longer. BRD Can be used with any diameter dynamic climbing rope based on instructions of use of either single or double ropes for belay or rappel. Their one-piece construction makes them absolutely reliable - no moving parts to collect dirt, jam, malfunction, etc. However, most plate-style devices have two drawbacks: they don't provide much friction, and they don't dissipate heat well. The BRD features engineered rope slots to give the belayer added control by increasing friction on the rope. The increased thermal mass of the BRD, coupled with cooling fins, dissipate heat more efficiently than existing plate-style devices.



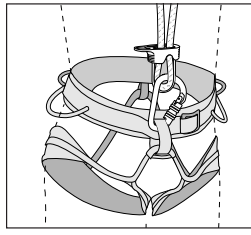
The Belay System

The belay is a system for arresting a falling climber. In simple terms, the rope passes from the climber, through one or more running anchors, and to the belayer. The belayer feeds out or takes in rope as the climber moves, keeping slack out of the system. If the climber falls, the belayer locks off the rope, stopping the fall. Enormous forces can be generated even in a short fall. Therefore, the rope is attached to the belayer via a belay device, which is used to increase the amount of friction that the belayer can exert on the rope in order to stop the falling climber. It is beyond the scope of this text to discuss the complex system of anchors that the belay system depends

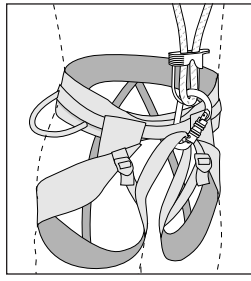
upon. Suffice it to say that if an anchor fails, the system will fail. Learn to place and manage anchor systems from a qualified instructor.

The BRD must always be attached to the belayer's harness with a locking belay carabiner. Check your harness manufacturer's instructions to make sure that you attach the belay device to the correct point on your harness.

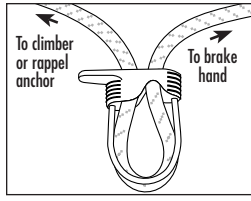
Most harnesses have a belay/ rappel loop connecting the leg loops and waist belt, which is where the device should be attached.



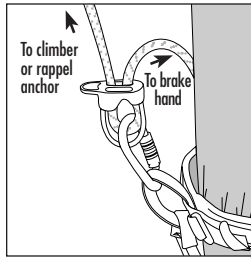
If your harness does not have a belay loop, you must clip the belay carabiner through the tie-in points of both the waist belt and leg loops of your harness.



Once the carabiner is correctly attached to your harness, pass a bight of rope through either slot of the BRD from the top (non-bail) side.



Clip both the bight of rope and the bail of the BRD into the belay carabiner.

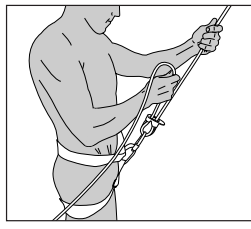


If you are using double ropes, put one rope into each slot, making sure they are both oriented in the same direction and running to the climber or rappel anchor free of twists.

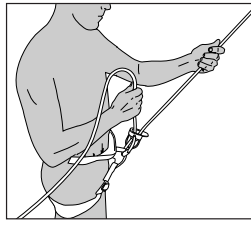
The end of the rope running from the climber or rappel anchor should be on the lever side of the BRD. If in doubt, refer to the graphic on the side of the BRD for proper rope orientation. Lock the belay carabiner and frequently re-check that it is properly locked and oriented while you're belaying.

One of your hands will act as the guide hand, used to feed rope into and out of the BRD, and the other hand will be the brake hand, used to stop the rope in a fall. Once the belay has begun, the brake hand must absolutely never leave the rope.

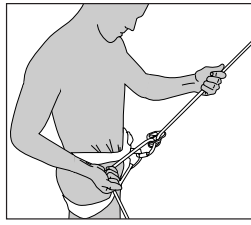
In order to feed out or take in slack smoothly, both strands of rope must be kept parallel to each other. This allows the BRD to ride away from the belay carabiner and the rope to run easily.



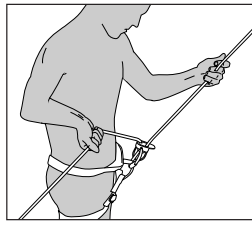
As soon as the rope strands begin to move out of a parallel position, the BRD will ride down onto the carabiner and begin to lock up.



To lock off the rope, simply move your brake hand down to your side, below the level of the BRD. To lower the climber or to rappel, let the rope slide through your brake hand in a slow and controlled manner.

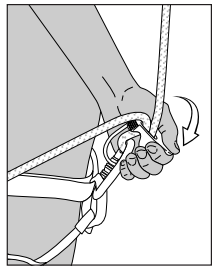


If there is too much friction to lower the climber or to begin rappelling just by loosening your grip pressure on the rope, gradually raise your brake hand until it is even with or even above the level of the BRD.



Since the BRD is designed to lock off more tightly than other plate-style devices, it is equipped with a lever to further control the amount of friction generated. If you have employed the above methods and there is still too much friction to lower or descend smoothly, cup the device

with your guide hand and rotate it downward toward the lever side by pushing down on the lever with your thumb. Judging the speed that the rope passes through the belay device and adjusting the amount of friction are matters of experience and practice. Until you are thoroughly familiar with the BRD, make any corrections or adjustments slowly and carefully to avoid losing control.



Rappelling

For rappelling, the BRD is set up exactly the same as for belaying. The end of the rope going to the anchor will pass through the lever side of the BRD slot and the tail end of the rope (brake hand side) will be on the non-lever side of the BRD. Lower yourself slowly using the lever to reduce friction as necessary (as described above). At the top of long rappels, the weight of the rope below you can make it difficult to lower yourself smoothly. Sometimes the rope weight will even be sufficient to lock up the BRD. In this case, it may be necessary to push the rope through the BRD with your brake hand and/or lift the BRD away from the carabiner with your guide hand. It will become progressively easier to feed the rope as you descend. If you are rappelling on two ropes of different diameters, be aware that the smaller diameter rope will feed more quickly, which will cause the rope to creep through the anchor. For this reason, always feed the larger diameter rope through the anchor so the knot connecting the ropes will stop when it contacts the anchor. If you feed the small rope, the ropes can continue to creep through the anchor until one side is substantially shorter than the other, making it very easy to rappel off the end of your ropes. You should always take the precaution of tying knots in the ends of your rappel ropes.

Variables

Like any belay device, the BRD is susceptible to changes in other parts of the belay system. The BRD will work with ropes of 8.0 to 11.0mm in diameter and any UIAA or CE approved locking carabiner. Because we cannot guarantee the performance of other brands of carabiners, we recommend using a Metolius Element Belay Carabiner to insure the smooth performance of your belay system. The diameter of your rope, the age of your rope, how soft or stiff it is, how fuzzy the sheath is, and the size and shape of the carabiner you are using will affect the performance of the BRD. Wet or icy ropes will drastically alter the characteristics of the BRD as well. Be alert to any changes you make to your belay system, and give yourself time to adapt to changes in the behavior of the belay device.

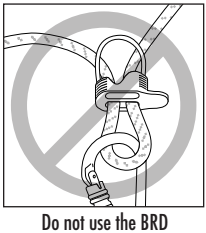
Belay/rappel devices can generate tremendous amounts of heat, especially on long rappels. The BRD is designed with increased thermal mass and cooling fins to dissipate heat better than other belay devices. However, you should be aware that any belay device can generate enough heat to glaze the sheath of your rope or burn you, especially on hot days. Slow down your rappels and lower your partner more slowly in hot

weather. Remove hot devices from the ropes as quickly as possible after a long rappel or lower-off, and try not to let hot devices contact bare skin.

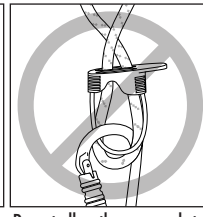
It is always a good idea to use gloves for belaying or rappelling. They make handling the rope more comfortable and increase your margin of safety.

What to Avoid

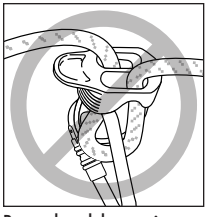
The unique shape of the BRD requires the rope to run in a specific direction. The end of the rope going to the climber or rappel anchor should come out the lever side of the BRD, as shown in the graphic on the side of the device. If you should accidentally feed the rope incorrectly and don't realize it until you are in the midst of belaying or rappelling, don't panic. The BRD will function when threaded backwards. It just won't generate as much friction as normal (it will function much like other plate style devices), so you will have to use more braking force. Do not try to change the orientation of the device while belaying or rappelling.



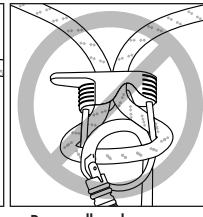
Do not use the BRD upside down.



Do not allow the rope ends to cross each other.



Do not thread the rope into one slot and out the other.



Do not allow the rope to cross the bail.

- Do not load the bail in any way, it is not structural.
- Do not use the BRD as a nut, any other type of protection, or for any purpose other than belaying or rappelling as outlined in this manual.
- Do not file, grind, cut or otherwise modify your BRD in any way.
- Like any piece of gear that contacts your rope, harness, or webbing, keep the BRD away from chemical reagents (battery acid, gasoline, etc.).

Wear

The BRD and the belay carabiner will wear with use. How rapidly they wear will depend primarily on how much they are used and how dirty or gritty your ropes are. The cleaner your rope is, the longer your equipment will last. Using a rope bag is highly recommended. It will extend the life span not only of your rope, but also of your BRD and belay carabiner. Inspect your BRD and belay carabiner before every use. You should retire your BRD and/or belay carabiner when:

- There is significant rope wear or grooving.
- You notice any sharp edges, burrs, thin spots, or cracks.
- The wear interferes with the smooth operation of the device.

If you have any doubt about the safety of your BRD or any other Metolius gear, heed your instincts and retire it, or send it to us for inspection. Destroy retired gear to prevent any possibility of further use.

If you do not completely understand any of the above or if you have questions, contact Metolius at (541) 382-7585 or info@metoliusclimbing.com.

Markings

The following markings may be found on the Metolius BRD:

: Indicates that user must read instructions before use.

UIAA: Indicates that the device is certified by the UIAA.

Metolius: Name of the manufacturer

METOLIUS **:** Metolius logo

BRD: Name of the product

Date Code: Indicates the date of manufacture