



## Cascade Rescue Cable and Hang Glider

**ALL PERSONS USING THE CASCADE RESCUE COMPANY CABLE GLIDER OR HANG GLIDER MUST READ AND UNDERSTAND THE FOLLOWING.**



## Cascade Rescue Glider

The Cable Glider and Hang Glider are very sophisticated devices, precision manufactured for the intent of assisting with the rescue of persons from gondolas, trams, chair lifts and zip lines. As with any activity involving "work at height" or technical rescue, all safety and local protocols must be followed.

**Only trained and experienced personnel of high incline and rope rescue techniques are considered qualified and can properly use these devices. Failure to follow these rules may result in severe injury, including death to the user and/or rescue subjects. As such, a few simple procedures must be followed with regard to operations of the Glider.**

The Glider is designed to accommodate cables with diameters ranging from 20mm up to 58mm - KNOW your cable size! Each Glider may come with several Actuator Bars. Each bar is labeled with the size range corresponding to cable size. For example, if you have a 38mm cable, you should choose the Actuator Bar that includes 38mm within the range stamped on the side of the Actuator Bar.

1. The Glider should always be attached to the rescuer.
2. The Cable Glider has a full "Down Tube" assembly that includes a seat, handle/gear loop, belay point and telescoping foot rest. This allows the rescuer to attach the Glider to the cable and then, through the use of appropriate safety and fall arrest devices "step" onto the Glider. It is perfectly acceptable to step from the tower to the Handle Ring, Seat and then the Footrest. When using the Cable Glider, it is often easier to extend the foot rest before mounting the Glider on the cable. When extending the foot rest, it is essential to ensure that the foot rest is fully extended and in the locked position so that it does not turn or swivel under load.

The Hang Glider does not have a "Down Tube" assembly and is designed to allow a rescuer to "hang" below the Glider in a full body harness. As with the Cable Glider, appropriate fall protection and work at height equipment must be utilized.

3. To attach the Glider to the cable, release the Brake Safety Cord and push forward on the Glider Brake Release Lever. This will open the Glider brake mechanism and allow sufficient room between the brake and the trolley system to place it over the cable.

Ensure that the cable is seated onto the center of the trolley rollers as it rests on top of the cable and that the brake pad is centered below the cable.

4. After the Glider is seated on the cable, pull the Brake Release Lever back and lock into place using the Cam-Cleat and Brake Safety Cord. **This step is extremely important** and secures the Glider from rolling down or detaching from the cable until the Glider is fully loaded with the weight of the Rescuer. After the brake is locked, the rescuer should attempt to push the Glider down the cable. If the Glider moves at all, the brake should be tightened and the Brake Safety Cord re-tensioned.
5. After ensuring that the brake is locked, the Rescuer may then transfer their weight to the Glider. When they have transferred all their weight and they have ensured that the Glider is resting properly on the cable and that there are no obstructions to the movement of the Glider or any of its components, the Brake Safety Cord can be disengaged and the Glider will remain stationary on the cable.

**NEVER mount the Glider without first ensuring that the Brake is locked, that one lanyard (fall protection) is attached to the cable and one to the tower and the Glider is attached to you. A video is available at Cascade-rescue.com that demonstrates this practice.**

6. After the rescuer has fully mounted or transferred all their weight to the Glider, and observed all precautions described above, the rescuer may release the Brake Safety Cord from the cam-cleat. When releasing the Brake Safety Cord, always keep one hand on the Brake Release Lever. The Glider should remain stationary on the cable. A safety check is required at this stage. While still attached to the tower, the rescuer will gently and with even pressure move the Brake Release Lever forward. The rescuer should allow the glider to move 6-12 inches down the cable and then release pressure on the Brake Release Lever. The Glider should stop with no rescuer assistance. If it does not, the rescuer should return to the tower and ensure the Glider has the appropriate Brake Actuator Bar or that there are no other mechanical issues preventing the brake from engaging properly. Once this safety check has been successfully completed, the rescuer may remove the second lanyard from the tower and place it next to the first lanyard behind the Glider. The lanyards will then follow the Glider as it moves down the cable. **If at any time the rescuer “un-weights” the Glider in any way, all safety checks and inspections must be repeated.**

To move forward down the cable, gently ease the Brake Release Lever straight forward using the hand that is on the side of the Brake Release Lever (Push Forward to Move Forward). When the lever is released, the Glider will stop. You will find that you are able to “feather” your rate of descent based upon how much forward pressure you place on the handle. Farther forward equals less braking pressure and faster travel. At no time should enough force be applied such that the brake pad is not in contact with the cable.

*If this is the first time the rescuer has ridden a Cable or Hang Glider, we strongly recommend that the Rescuer riding the Glider is tied to a belay point on the tower and the rope is managed by another Rescuer. The belay line must be managed so that the line is parallel to the cable, first attached to the back belay point of the Glider and then to the Rescuer. This allows the rider to gain experience with the use of the Glider and its braking and travel characteristics and maximizes safety and security and will build confidence in use of the Glider. Using this technique, the rider can make short descents in a controlled environment and be retrieved by their partner above. This process can be repeated as many times as necessary to ensure proper operation and rider comfort. Only when the rider is comfortable making a solo descent should the belay be removed. The user accepts any and all liability if this recommendation is ignored.*

7. **Do not “over-throw” or push the brake handle as far forward as it will go.** A slight amount of pressure will release the brake. There is significant leverage available on the Brake Release Lever. Pushing forward excessively can cause the front wheel to leave the cable and potentially derail the device. DO NOT allow the Glider to travel down the cable at excessive speeds.
8. As you move closer to the subject (gondola, tram, chairlift or rider), begin to slow your descent by gently **reducing** forward pressure on the Brake Release Lever. When the subject is reached, gently release all pressure on the Brake Release Lever to stop.
9. Before dismounting the Glider, ensure that the Brake is SECURELY LOCKED by securing the Brake Safety Cord into the Cam-Cleat and that one lanyard is on the cable and one lanyard is attached to the Gondola, Tram or Chairlift, (Subject) and the Glider is attached to you or otherwise anchored via tether to the Subject. Only then is it safe to dismount and begin rescue or repair operations.
10. To traverse around the point where the Grip (gondola/tram/chair) is attached to the cable, remove the lanyard attached to the cable behind the Glider and reattach it to the cable on the other side of where the Grip is attached to the cable. At this point, one lanyard is attached to the downhill side of the Grip, one lanyard is attached to the Grip and the Glider is attached to the rescuer. The Glider may then be moved around the Grip attachment point and locked into place on the downhill side. Once the Glider is reattached and fully locked, the rescuer may remount the Glider and follow the same procedures outlined above, beginning at Step 3.
11. Tower dismounts are accomplished in basically the same way. Stop at the tower, Lock the Glider Brake, attach one lanyard to the tower, dismount the Glider, unlock the Glider Brake and remove it from the cable and set it aside on the tower platform or Sheave Train. Only then is it safe to remove the last lanyard from the cable and attach it to the tower.

12. Virtually all lifts are different and every rescue situation may be different as well. A variety of rope rescue equipment may be needed for any given scenario. A minimum suggested list of equipment is listed below.

1. A fall rated full body harness that is comfortable to wear for extended periods of time, even in a hanging position. Suspension Trauma is always a real threat.
2. Climbing helmet.
3. Rope rescue gloves
4. Two lanyards with shock absorbing devices and large safety (ladder) hooks. The Petzl MGO is a good choice.
5. Webbing or other equipment such as a "cow tail" to attach the Rescuer to the Glider.
6. For the Hang Glider a system such as the Rock Exotica or Petzl Grillon is used to attach the Rescuer to the attachment point on the Glider. This will allow them to adjust their position relative to the Glider or subject.
7. At least one 5 step etrier or adjustable foot loop.
8. Appropriate rope, patient lowering device (Cascade Evacuation Seat or Triangular Harness), Belay Device such as a Grillion, ID's, or similar device for lowering the patient or self rescue.

13. The above listed gear is not all-inclusive. Rescue scenarios are highly dynamic. Additional rope, prussik's, pulleys, carabiners, webbing, etc. may be needed and should be easily available to the rescuer so that they may improvise as necessary.

14. Regardless of your experience level and comfort with working at height, your first experience using the Glider may seem awkward. As with the use of any new piece of rescue equipment, this feeling will rapidly diminish with training and practice. Rope rescue often requires the maintenance or "tending" of many different components in the rescue system. Always know where all of your gear is in the system and what its function is at all times.

15. Never attempt any maneuver while working at height if you are uncomfortable with the situation. Mounting, dismounting and traversing gondolas, trams, chairlift and towers can be challenging for the uninitiated. Don't exceed your capabilities or level of training.

I have read and understand the contents of this document, the proper operations of the Cable and Hang Glider evacuation devices and am a competent rope rescue technician.

Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

## **WARNINGS, INSPECTION AND MAINTENANCE**

Read and keep these instructions. Adhere strictly to the following requirements and recommendations:

1. This equipment should be used only by trained and competent persons or the user should be under the direct supervision of a trained and competent person.
  2. The activity for which this product may be used is inherently dangerous. The consequences of incorrect selection, improper use or maintenance of equipment could result in damage, serious injury or death.
  3. It is the user's responsibility to ensure that he/she understand the correct and safe use of any equipment supplied by or through Cascade Rescue Company, uses it only for the purposes for which it is designed and practices all proper safety procedures.
  4. The manufacturer or supplier will not accept any responsibility for damage, injury or death resulting from misuse, neglect or improperly or inadequately trained persons.
  5. Your life depends on your equipment and on its history (use, storage, inspection, etc). Record and keep with these instructions: serial number, place and date of purchase, date when first used and checks, dates and duration of use, user's name and comments.
  7. The user must be medically capable to control his own security and any possible emergency situations.
  8. Before using the equipment, take all necessary steps to familiarize yourself and others with rescue and self-rescue techniques should an emergency occur.
- **Use:**  
The product should only be used as instructed and no alterations to it should be made. It may be used in conjunction with any appropriate equipment of suitable specification with due consideration to the limitations of each individual piece. Where possible this product should be treated as personal protective equipment.
  - **Falls:**  
Be aware that any product in the safety system can be damaged in a fall and consequently should always be examined for defects before re-use. The examination must be carried out by a competent person, with written confirmation that it is

acceptable for re-use. If the product or any of the component parts in the system exhibits sign of wear or defect, or if there is any doubt, replace it.

- **Inspections:**

Immediately before use, the user should make a visual inspection of the equipment to ensure that it is in a serviceable condition. If any part of the equipment appears to be suffering from any defects, wear corrosion or contamination by chemicals, it should be withdrawn from service. If the brake pad has worn 75 to 80% of its total thickness it should be replaced. This can be completed by returning it to the manufacturer or can be replaced by the user with a replacement part provided by the manufacturer.

- **Chemicals:**

Avoid all contact with chemical reagents which could impact the performance of the product.

- **Cleaning:**

Wash in warm water of domestic supply quality maximum temperature 100° F. Rinse and dry naturally in a warm room away from direct heat.

- **Lubrication:**

Lubricate the cam mechanisms with a silicone or lithium based lubricant. This should be carried out after cleaning.

- **Maintenance/Servicing :**

In addition to the normal inspection required before use, this item of equipment should be periodically thoroughly examined by a competent person. Any item showing any defect should be withdrawn from service immediately. During the examination, pay particular attention to: metal parts: general wear, corrosion, gate malfunction, mechanical deformation / distortion.

- **Storage:**

Store unpacked in a cool, dry, dark place away from excessive heat or heat sources, high humidity, sharp edges, corrosives or other possible causes of damage. Do not store wet.

- **Service and Recertification:**

It is difficult to provide an obsolescence date, however the unit must be regularly inspected and if any signs of abnormal wear or damage are present the manufacturer should be contacted to determine appropriate action.