

Climbing Wall User's Guide for Mobile Models MW3, MW4, Anniversary Edition MW4 and MW5

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US PAT# 6,083,142, 6,390,952 and patents pending

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Printed in the United States of America

Revision 5, June 1st 2005

Extreme Engineering
9198-B Ridge Road
Newcastle, CA 95658

Voice: 916-663-1560
Fax: 916-663-9249
e-mail: info@extremeengineering.com
Website: www.extremeengineering.com

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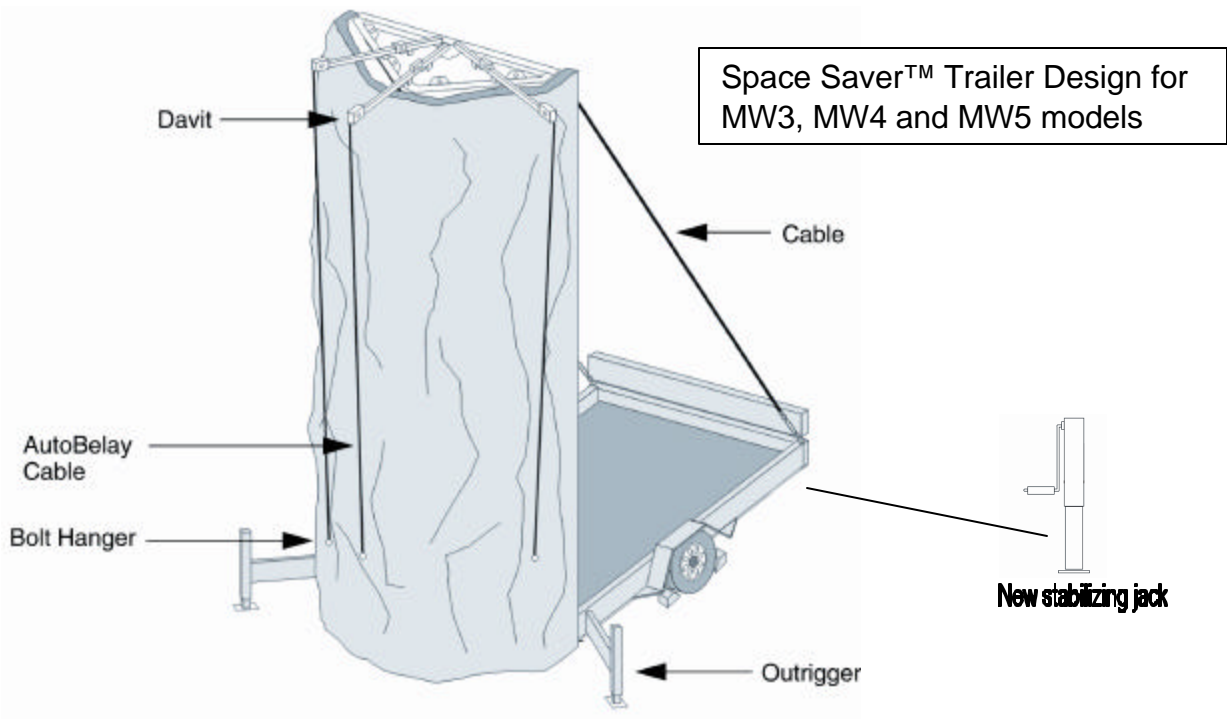


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Congratulations!

Congratulations on your purchase of an Extreme Engineering® mobile climbing wall. It is designed by the company that has invented and innovated numerous recreational equipment products, including mobile and stationary climbing walls, the Extreme AutoBelay™ safety climbing system, and the PowerBelay™ safety rappeling system.

Your mobile climbing wall is the first and best in the industry!



The Extreme Engineering® mobile climbing wall is durable, designed to give you years of service and provide tens of thousands of climbs for your customers.

Your mobile climbing wall is easy to tow, set up, operate and take down. If you follow these instructions carefully, you'll be assured of safe and reliable operation.

Be sure to read and follow the safety instructions in this manual.

Safety first!

Always make safety your first concern when setting up, operating, or taking down your Extreme mobile climbing wall.



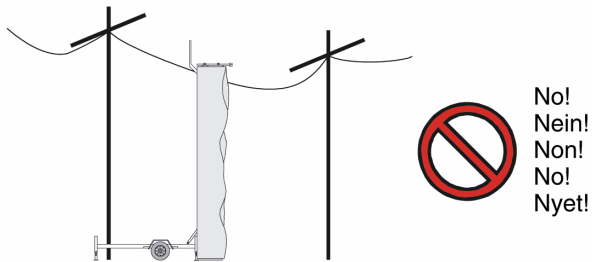
CAUTION. This is a safety alert symbol. It is used to alert you to potential personal safety hazards. Please read all safety messages that follow this symbol to avoid injury or death.



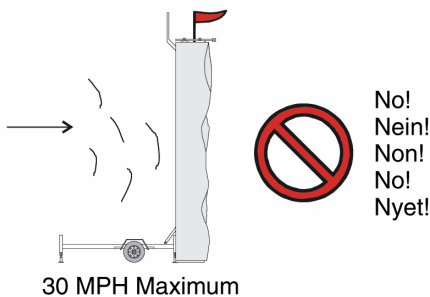
CAUTION. For your safety, read all instructions in this User's Guide before operating the Extreme mobile climbing wall.

Safety Rules for Mobile Climbing Wall Setup

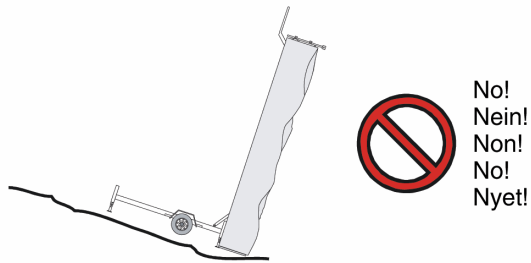
Follow these safety rules to set up your climbing wall correctly. We'll offer you some additional safety tips in the section on operating the climbing wall.



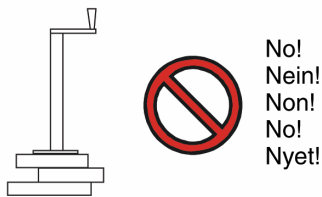
- Don't set up or operate the climbing wall near overhead electrical lines, roof eaves, trees, or other obstructions (like trees or wires) from the top of the wall.



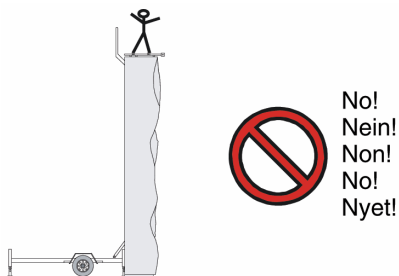
- Don't set up or operate the climbing wall in windy conditions (winds with gusts of 30 more).



- Set up the climbing wall only on a level surface (3% slope maximum). You can level the wall with shims, but it's important to start with the most level ground or floor possible.
- Set up the climbing wall only on a firm surface. Never set up the wall on soft ground or an unstable floor.



- Extend the jacks only on solid ground or a solid floor. Don't use blocks under the jacks.
- Although you can set up the wall by yourself, it's better to have a second person help. This person can warn you during setup of potential problems or hazards.
- Keep the area clear of people, cars, etc., during setup.
- Don't climb on the backside of the wall or its supports.



- Don't climb on or stand on top of wall.

Inspect the Mobile Climbing Wall Before Use

The Maintenance section of this User's Guide includes comprehensive details for making a complete inspection. Read that section carefully.

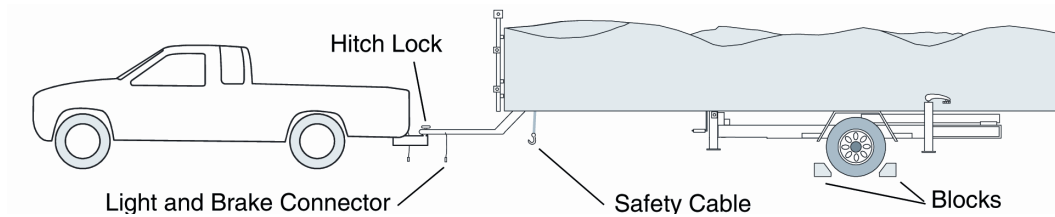
If you find any problems after an inspection, visit our technical site at www.extremeengineering.com

Setup (For Space Saver™ trailer design MW3, MW4 and MW5)

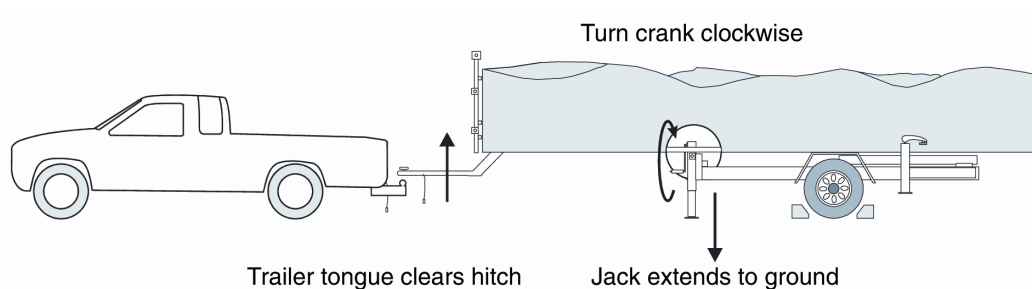


CAUTION. For your safety, read all instructions before setting up the climbing wall.

Position the Climbing Wall and Unhitch the Tow Vehicle



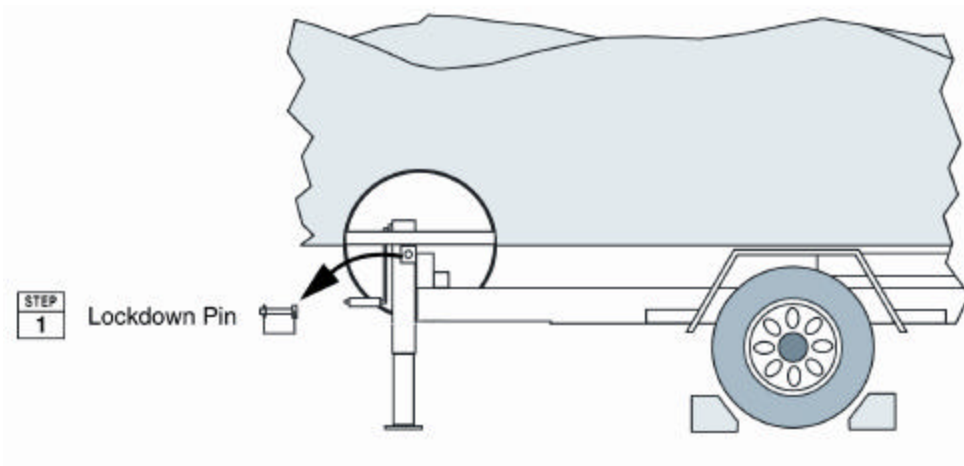
1. Use the tow vehicle to position the climbing wall to its final location.
2. Block the wheels of the trailer to keep it from rolling.
3. Unplug the trailer light and brake connector.
4. Loosen the hitch lock over the ball hitch.
5. Disconnect the safety cable.



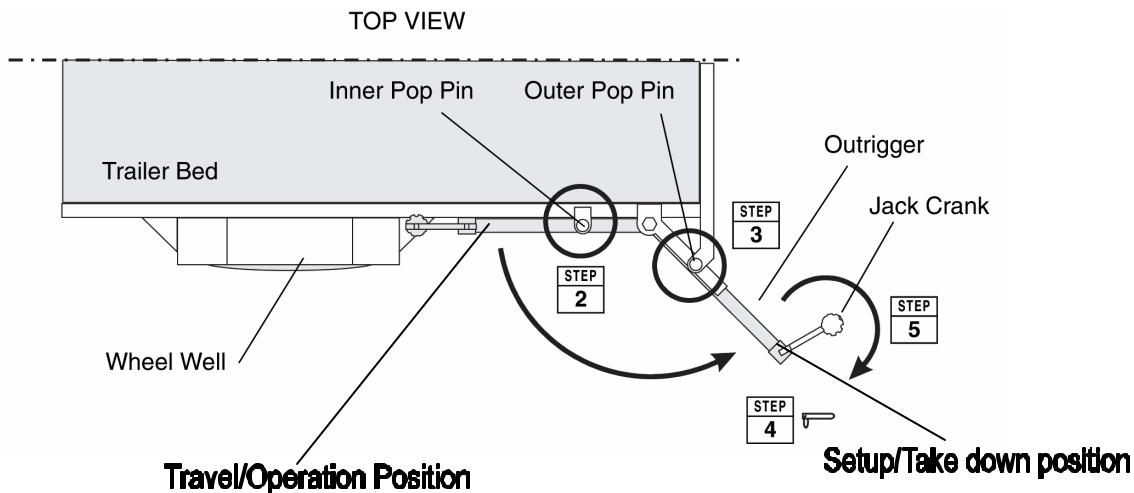
6. Crank the handle on the center jack clockwise to extend the jack. Extend the jack until the trailer's tongue is clear of the hitch ball on the towing vehicle.

7. Drive the tow vehicle away from the climbing wall.

Prepare the Wall

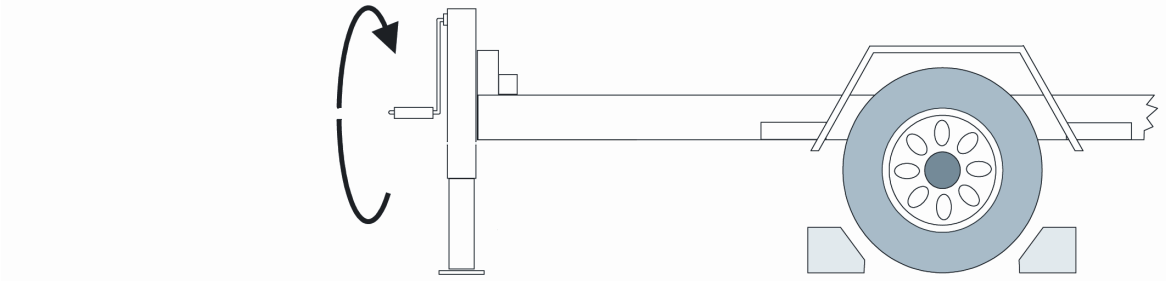


1. Remove the wall's lockdown pin at the front of the trailer.



2. Pull the inner pop pin holding the outrigger stowed against the side of the trailer to release it, and swing the outrigger into position.
3. Pull the outer pop pin and snap it into place in the outrigger. This locks the outrigger into its deployed position.
4. Pull out the keeper pin on the extension leg of the outrigger jack. Let the extension leg drop until the jack foot pad is on or near the ground. Reinsert the keeper pin.
5. Flip the built-in jack crank over. Crank the jack clockwise to extend the jack until it rests firmly on the ground.
6. Do the same procedure with the other outrigger.

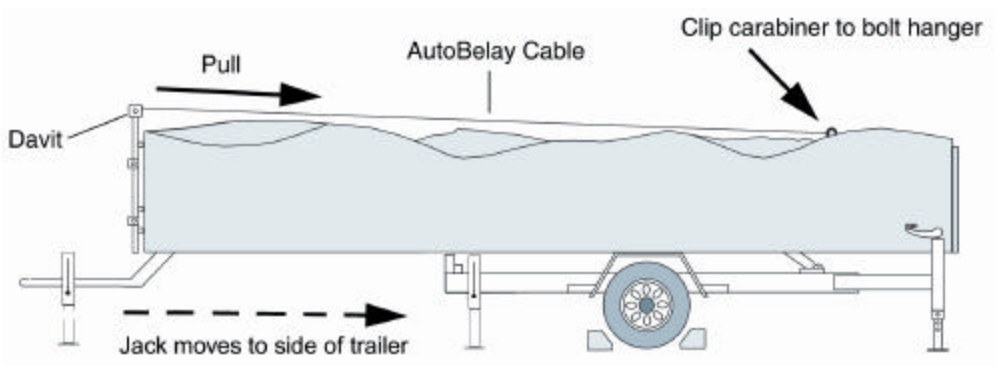
7. Extend the two outrigger jacks until the trailer wheels are about 2" off of the ground. Adjust them to be sure the trailer is level.



8. Lower the two stabilizing jacks at the front of trailer to the ground. Make sure the jacks contact the ground firmly.

Prepare the AutoBelay™ System

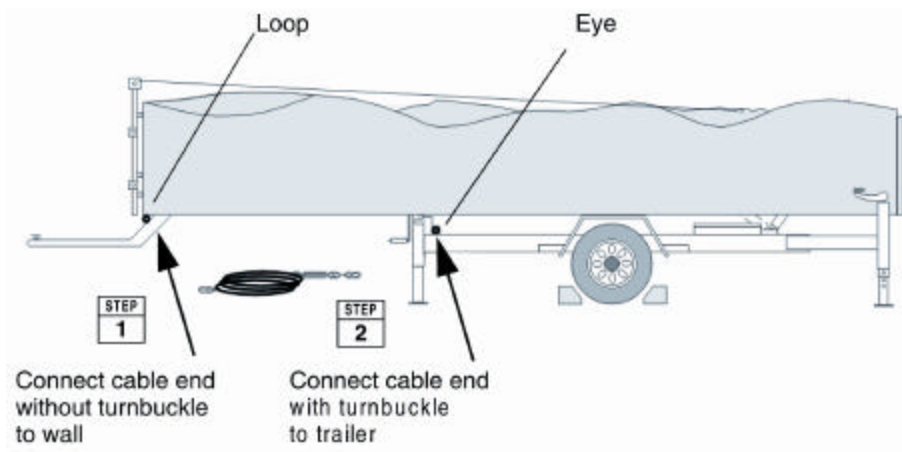
During travel, the AutoBelay™ cable is fully retracted, with the cable swivel and carabiner at the top of the wall. To get it ready for climbing:



1. Pull the AutoBelay™ cable from its davit at the wall top out to its full extension.
2. Clip the AutoBelay™ cable's carabiner to a bolt hanger near the bottom of the wall. Repeat this procedure for each of the climbing wall's Auto-Belay cables.

Be sure to do this *before* raising the wall. If you forget to prepare an AutoBelay™ cable, you'll have to climb the wall later (using another AutoBelay™ cable) in order to reach the retracted cable! If you forget to extend any AutoBelay™ cables, you'll have to lower the wall to repeat this step.

Connect the Stabilizing Cables (optional)



There are two stabilizing cables. Each cable runs from a loop on the top of the wall to an eye on the trailer. The cables stabilize the wall once it is raised.

1. Connect the end without a turnbuckle to the loop on the upper corner of the wall.
2. Connect the end with a turnbuckle to the eye on trailer.
3. Repeat the procedure for the other stabilizing cable.

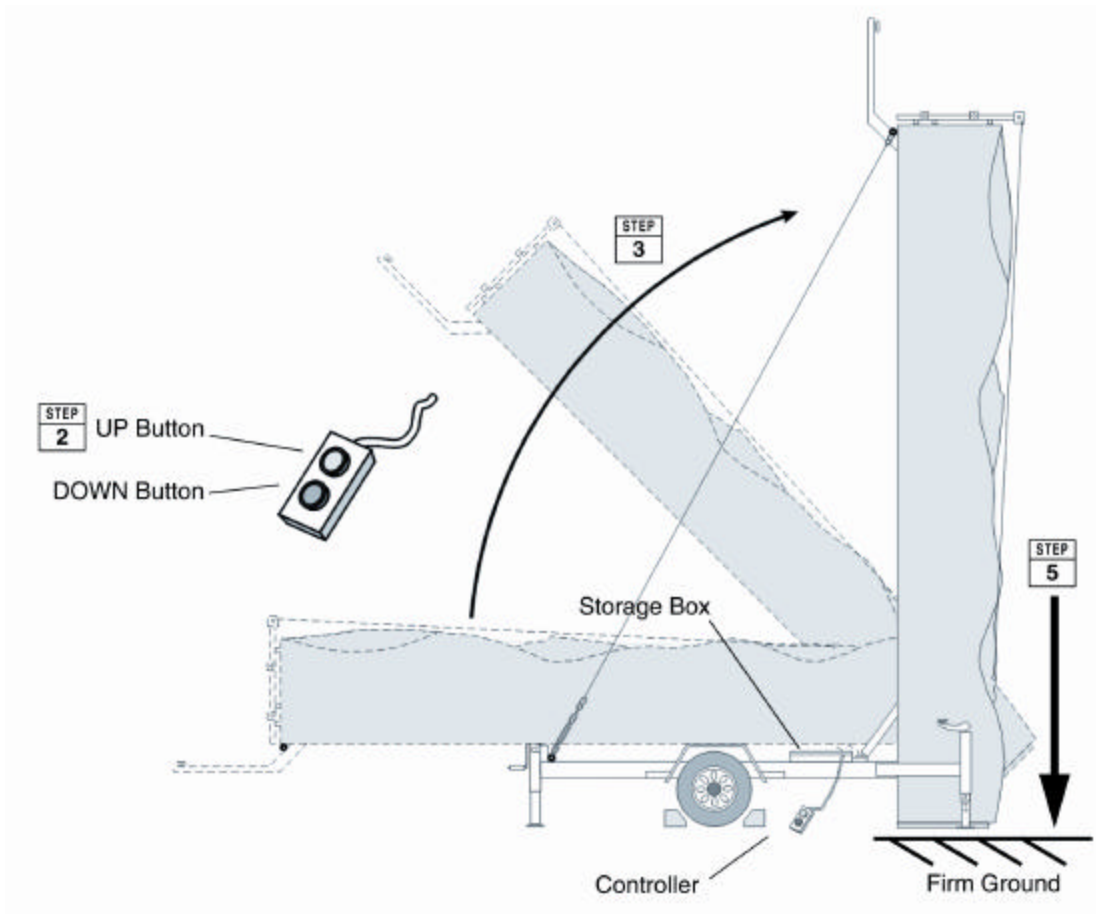


CAUTION. When raising stabilizing cables, make sure they do not get caught around the trailer.



NOTE: When “Extreme Air™” option is installed, stabilizer will interfere with operation.

Raise the Wall



1. Remove the controller from its storage box on the trailer.
2. Press and hold the UP button on the controller.
3. Raise the wall to the vertical position in one *continuous* motion. Try to avoid pressing the UP button multiple times.
4. Put the controller back into the storage box on the trailer or store the controller away.
5. Retract outriggers to travel/operation position.
6. Lower the outrigger jacks until the tower sits firmly on the ground.
7. Place the outrigger jacks back into the travel position and allow the legs of the jacks to rest firmly on the ground.

The base of the wall must sit firmly on the ground. The ground surface must have at least 2,000 lb./sq. ft. load bearing strength.



NOTE: You can use shims to level the base of the wall, as long as they are of a sturdy, non-compressible material. Use a minimal number of shims, and do not stack them. Make a final double-check

of the shims when all other setup steps are completed, to make sure they are secure.

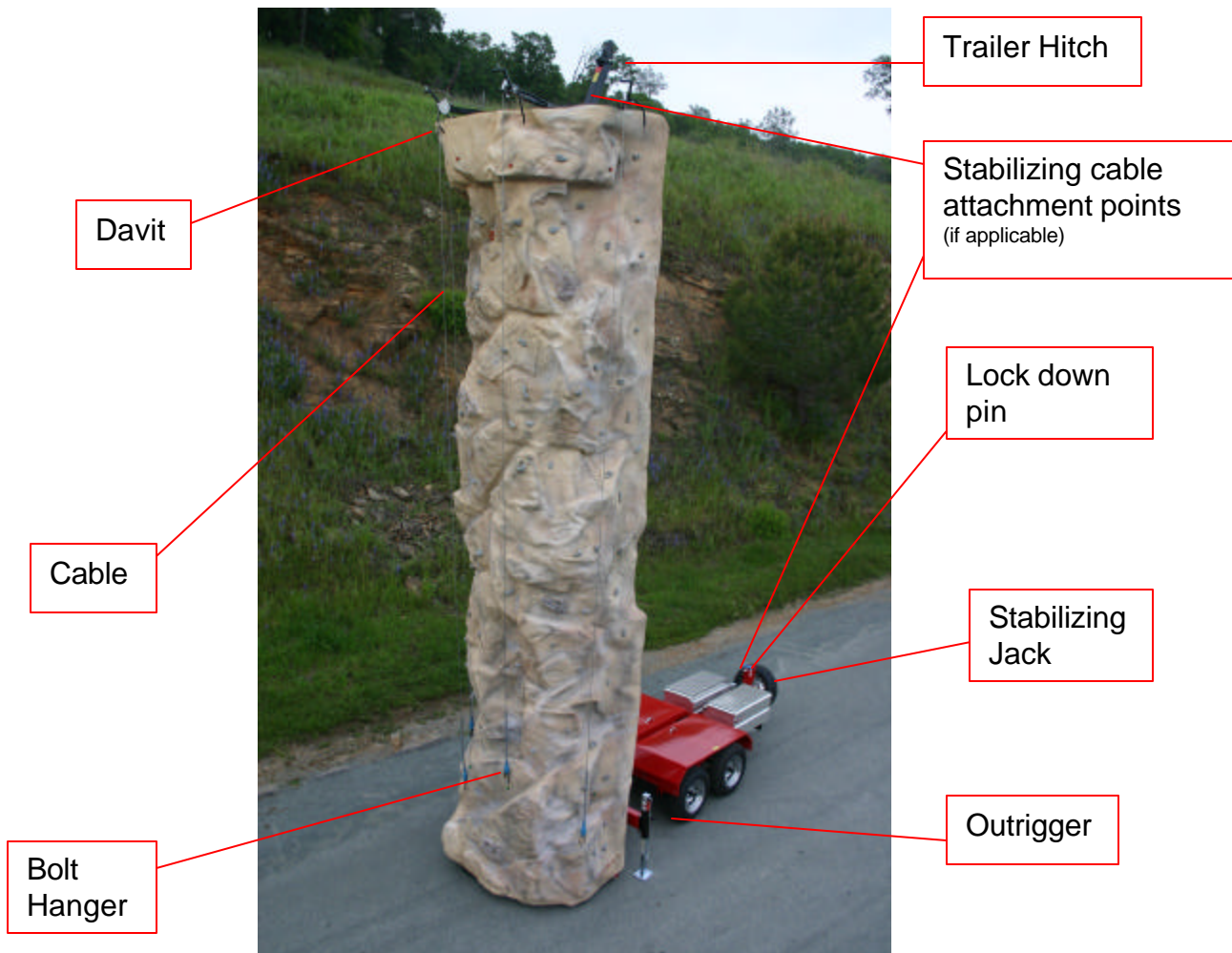
The wall should ideally be at exactly 90 degrees vertical, measured at the wall's rear and on one side.

Setup

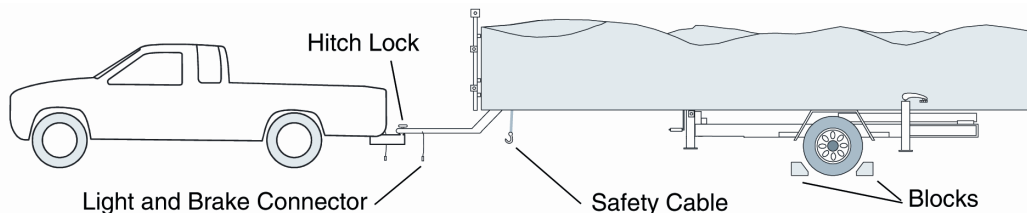
(For C.A.T.T.™ trailer design Anniversary Edition 4 Climber)



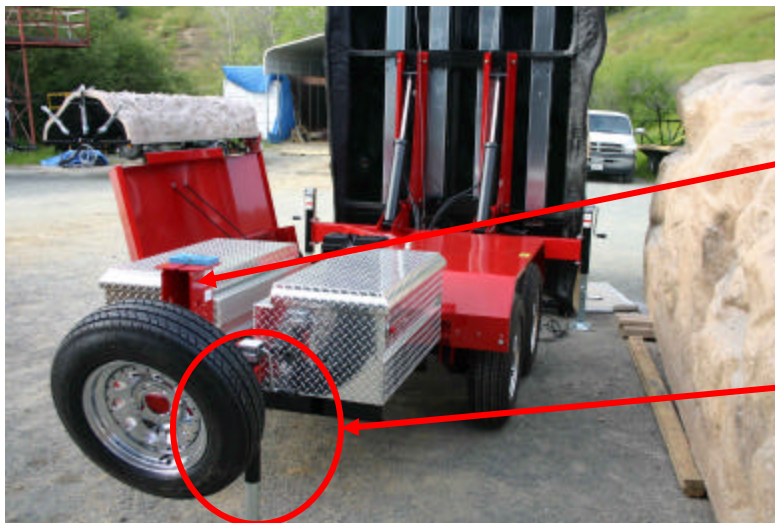
CAUTION. For your safety, read all instructions before setting up the climbing wall.



Position the Climbing Wall and Unhitch the Tow Vehicle



1. Use the tow vehicle to position the climbing wall to its final location.
2. Block the wheels of the trailer to keep it from rolling.
3. Unplug the trailer light and brake connector.
4. Loosen the hitch lock over the ball hitch.
5. Disconnect the safety cable.
6. Release tongue from tow vehicle by cranking clockwise on the tongue's jack. (You may remove this jack once the tongue is off the towing vehicle by pulling out the safety pin).



Lock Down Pin

Center stabilizing jack.

7. Crank clockwise on the center stabilizing jack until it rests firmly on the ground.
8. Drive the tow vehicle away from the climbing wall.
9. Remove the trailer's lock down pin. The lock down pin is what holds the climbing wall substructure to the trailer. Lock down pin is located on the front center of the base of the trailer.

Prepare the Wall



10. Pull the safety pin on the drop legs of each outrigger and allow them to rest firmly on the ground.
11. Place the safety pins back into the outriggers and crank clockwise on the outriggers to raise the trailer.
12. Extend the two outrigger jacks until the trailer wheels are about 2" off of the ground. Adjust them to be sure the trailer is level.

Prepare the AutoBelay™ System

During travel, the AutoBelay™ cable is fully retracted, with the cable swivel and carabineer at the top of the wall. To get it ready for climbing:



12. Pull the AutoBelay™ cable from its davit at the wall top out to its full extension.

13. Clip the AutoBelay™ cable's carabineer to a bolt hanger near the bottom of the wall. Repeat this procedure for each of the climbing wall's Auto-Belay cables.

Be sure to do this *before* raising the wall. If you forget to prepare an AutoBelay™ cable, you'll have to climb the wall later (using another AutoBelay™ cable) in order to reach the retracted cable! If you forget to extend any AutoBelay™ cables, you'll have to lower the wall to repeat this step.



CAUTION. When raising stabilizing cables, make sure they do not get caught around the trailer.



NOTE: When "Extreme Air™" option is installed, stabilizer will interfere with operation.

Connect the Stabilizing Cables (optional)

Stabilizing cable attachment points (if applicable)



There is one stabilizing cable that turns into a "y" to allow you to connect the cable on top of the wall to two attachment points on top of the trailer. The cable will stabilize once the wall is raised.

1. Connect the end without a turnbuckle to the loop on the two upper corners of the wall.

13. Connect the end with a turnbuckle to the attachment point on the trailer.



CAUTION. When raising stabilizing cable, make sure it does not get caught around the trailer.



NOTE: When “Extreme Air™” option is installed, stabilizer will interfere with operation.

Raise the Wall



14. Press and hold the UP button on the controller.

15. Raise the wall to the vertical position in one *continuous* motion. Try to avoid pressing the UP button multiple times.

16. Put the controller back into the storage box on the trailer or store the controller away.

17. Retract outriggers to travel/operation position.

18. Lower the outrigger jacks until the tower sits firmly on the ground.

The base of the wall must sit firmly on the ground. The ground surface must have at least 2,000 lb./sq. ft. load bearing strength.

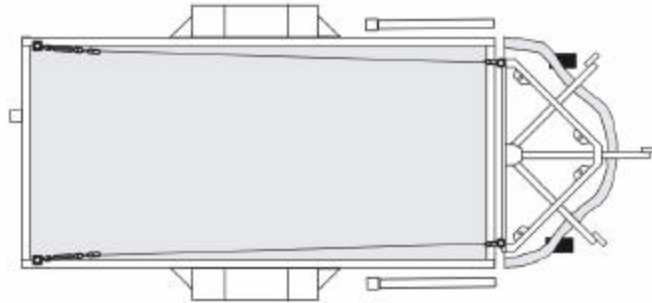


NOTE: You can use shims to level the base of the wall, as long as they are of a sturdy, non-compressible material. Use a minimal number of shims, and do not stack them. Make a final double-check

of the shims when all other setup steps are completed, to make sure they are secure.

Prepare for Operations

These final steps will make the climbing wall ready for climbers.



1. It's a good idea to have a crowd control around the climbing wall. You might use stanchions to keep those waiting to climb out of the climbing area or provide a place for climbers to line up.
2. Set up a cashbox and table near the crowd control ropes at one side of the climbing wall.

The cashbox and table should be adjacent to a "harness area," so one operator can both collect money and harness climbers. If you use tokens or tickets, the operator will still need to collect these. (See the Operating Techniques section below.)

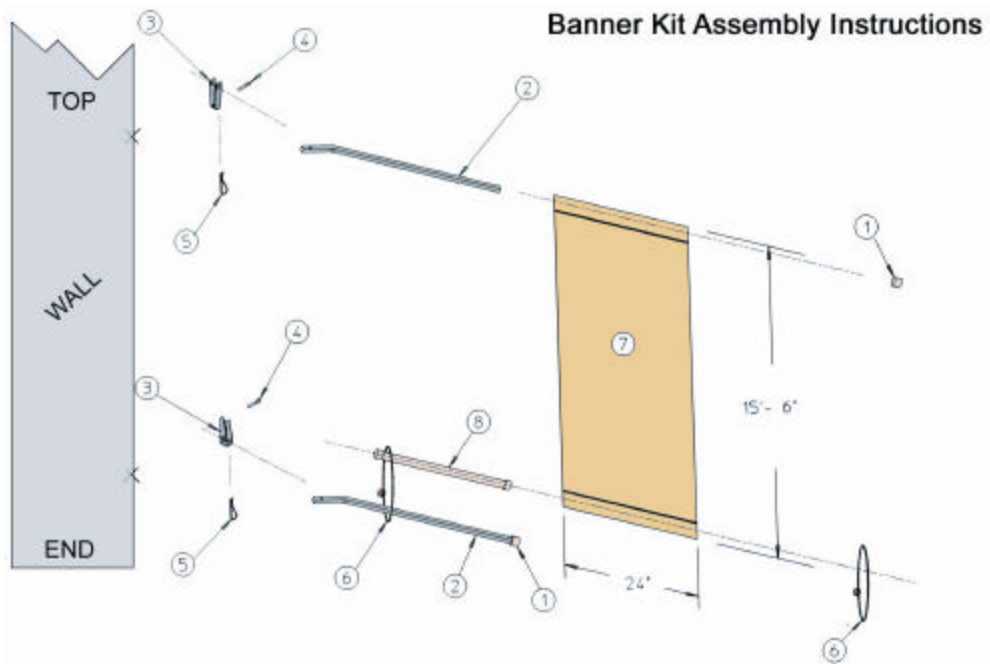
3. Establish your method of entrance control. This includes how tickets are used, supervising the entrance point to the line, etc.
4. Make sure your operators are clear on your procedures.
5. Make sure you are in compliance with any applicable rules and regulations at the site or event.
8. You should have a plan established for handling contingencies like medical or other emergencies, even though these are unlikely to occur. Make sure every member of your crew knows this information.

Operating the Climber Timer™ (if applicable)

Mounting the Climber Timer

Refer to separate manual included with timer.

Mounting the Banner Bracket Kit (if applicable)



Tools needed for assembly:
1) Tightening device for 1/4" bolt

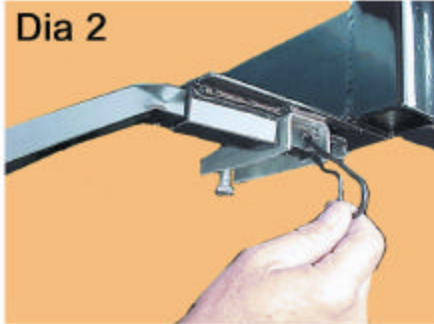
KIT INCLUDES

- 1. Safety Tip
- 2. Rod
- 3. Adjustment Bracket
- 4. Bolt
- 5. Clip
- 6. Ball Bungee
- 7. Banner (not included)
- 8. Banner Bar

QTY

- 4
- 4
- 4
- 4
- 4
- 4
- 2
- 2

1. Assemble *adjustment bracket* to the top (2) rods (Diagram 1).



2. Assemble *clip* to top (2) rods (Diagram 2). Tighten *bolts* on top (2) *adjusting brackets* until snug.



3. Assemble the top of the banner with the logo facing the correct direction to the top (2) rods and attach the *safety tips* (Diagram 3).
4. Use the integrated trailer lift system to raise the climbing wall high enough to access the banner mounting tubs located above the wheel fenders on the climbing wall support frame.



CAUTION. Do not pinch yourself when raising or lowering the climbing wall.

5. Repeat steps 1 – 4 to install the lower (2) *rods*.
6. Attach the *safety tips* (Diagram 3).



7. Insert *banner bar* through the bottom of the *banner* and attach *end caps* (Diagram 4).
8. Attach *ball bungees* between *banner bar* and *rod* on both sides of the *banner* and adjust the tension (Diagram 4).
9. The climbing wall is ready to be raised.
10. Remove the banners and all parts before transporting the climbing wall.

Operations



CAUTION: Read all instructions before operating the climbing wall.



CAUTION: Climbing is a physical activity and all possible care should be taken to ensure the safety of the climbers, spectators, and operators. Always operate the climbing wall according to the procedures described here.

Operating Techniques

1. Make sure to keep the landing area clear of spectators.
2. Use a minimum crew of two.

Crew member #1

- Takes money (or tickets, or tokens, if money is taken elsewhere)
- Helps the climbers complete release forms (may be necessary)
- Harnesses the climbers
- Sends climbers to crew member #2

Crew member #2

- Hooks up the climbers
- Collects tickets or tokens (if used)

- Supervises climbers on the wall
 - Unhooks the climbers
 - Sends climbers back to harness area
 - Advises climbers (acts as the coach)
 - Solves problems with climbing
3. When not in use, you must keep the AutoBelay™ cables attached to their corresponding bolt hangers near the bottom of the wall. If you accidentally release a cable, it will automatically retract to its davit at the top of the wall, and you will have to retrieve it manually.
 4. The coach (crew member #2) should be the only non-climber in the landing area.
 5. After the climber's time is complete, unhook the climber and have him or her go to the harness area for removal of the harness.
 6. **TO ENSURE MAXIMUM SAFETY AND EASY SETUP, USE EXTREME 'S SPEED HARNESES™ DURING YOUR FUTURE EVENTS. THEY INCREASE YOUR CYCLE TIME, ARE FASTER AND SAFER TO PUT ON, AND LAST LONGER THAN ANY STANDARD HARNESS ON THE MARKET.**

Safety Rules for You, the Operator

- Don't climb on the back side of the wall or its supports
- Don't stand on top of the wall
- Don't stand underneath a climber while climbing is in progress
- Don't leave the climbing wall unattended while climbs are in progress
- If you must leave the wall unattended (while not in use), make sure that the AutoBelay™ cable is not accessible. This may be difficult, so the best solution is to keep one crewmember at the wall at all times.

Using the optional safety cover is highly recommended, to prevent unauthorized climbing.

- Don't let a climber put on or take off a harness. You must always do this.

- Don't touch any pulley or cable within the wall structure while the AutoBelay™ is operating. If you must handle an AutoBelay™ cable while a climb is in progress, it should only be a cable on the climbing side of the wall, and as described in the special situations section below.



CAUTION: Don't wear any loose clothing, such as scarves, neckties, etc., while operating or inspecting the ride, to prevent the possibility of your becoming entangled in the ride's moving parts.

Safety Rules for Your Climbers

It's a good idea to make climbers aware of some simple rules. We suggest you reproduce these rules as a poster or handout for the climber (and his or her parents) to read. The following page is ready to photocopy, if you wish. Contact Extreme Engineering via email for an electronic format of the safety rules.

Safety Rules

Climbing Wall

CLIMBER RECOMMENDATIONS

- Must weigh 45 minimum, 250 maximum to wear climbing harness.

BEFORE YOUR CLIMB STARTS

- After you are hooked into your harness, stay in the harness area. Wait until we tell you to go to the climbing area.
- Don't step on the AutoBelay™ cable while you wait to start.

DURING YOUR CLIMB

- Stay on the climbing route for your station.
- Don't cross over to put yourself directly beneath or above other climbers.
- Don't climb without shoes or a top.
- Don't climb beyond the wall top. Don't go beyond chest-height to the wall top.

DURING YOUR DESCENT

- Don't kick off more than 6 or 8 feet from the wall.
- Rappel straight down, and don't swing too close to other climbers.
- Be alert for other climbers beneath you, who may have strayed from their routes.

AT THE END OF YOUR CLIMB

- When you are lowered to the ground at the end of the climb, land on your feet.
- After your climb is complete, wait for us to unhook you.
- Once you have been unhooked, go to the harness area where we will remove your harness. Please do not try to remove the harness yourself.

This Page May Be Duplicated

Special Situations

The vast majority of climbs take place without any difficulty or interruption, but sometimes a problem can occur. Here's what to do.

Climber frozen at top

1. Ask the climber to stay calm. Say that you are going to come up and help him or her down.
2. Put on a harness.
3. As the climber next to the frozen climber finishes his or her climb, clip onto the AutoBelay™ cable and climb the wall.
4. When you reach the frozen climber, show him or her the footholds to climb down.



NOTE: Encouraging the climber to rappel down generally will not work.

Climber reports discomfort

1. Ask the climber to stay calm. Ask the climber if he or she is comfortable rappeling down. If so, then ask him or her to do so (if not, follow the procedure for “Climber frozen at top” above).
2. If the problem is with his or her harness comfort, then adjust the harness, and let the climber begin his or her climb again.
3. If a climber is unable to resume for whatever reason, unhook and send him or her back to the harness area.

Climber is intentionally reckless

1. Ask the climber to take it easy. Choose one of the following options if he or she persists:
 - a. If you do not believe adjacent climbers would be endangered, tell the reckless climber to rappel down or climb down now; or
 - b. If you believe other climbers might be endangered, tell the reckless climber to freeze at their position, and ask the other adjacent climbers to rappel down first (you can let them restart once the reckless climber is removed from the wall). Then, tell the reckless climber to either rappel down or climb down.
2. Unhook the climber and send him or her to the harness area.

Climber too light to rappel down

1. Ask the climber to stay calm.
2. Put on a harness
3. As the climber next to the frozen climber finishes his or her climb, clip onto the AutoBelay™ cable and climb the wall.
4. When you reach the climber, grab his or her AutoBelay™ cable. Then your weight and the climber's weight will cause both of you to rappel down.

AutoBelay cable retracts to top of wall

1. Put on a harness
2. Clip onto another available AutoBelay™ cable and climb wall.
3. Grab the loose AutoBelay™ cable and bring it down. When you get to the bottom, attach it to a bolt hanger at the hanger at the bottom of the wall.

Takedown



CAUTION: For your safety, read all instructions before taking down climbing wall.



CAUTION: Keep the area clear of people, cars, etc., during all steps of the takedown.

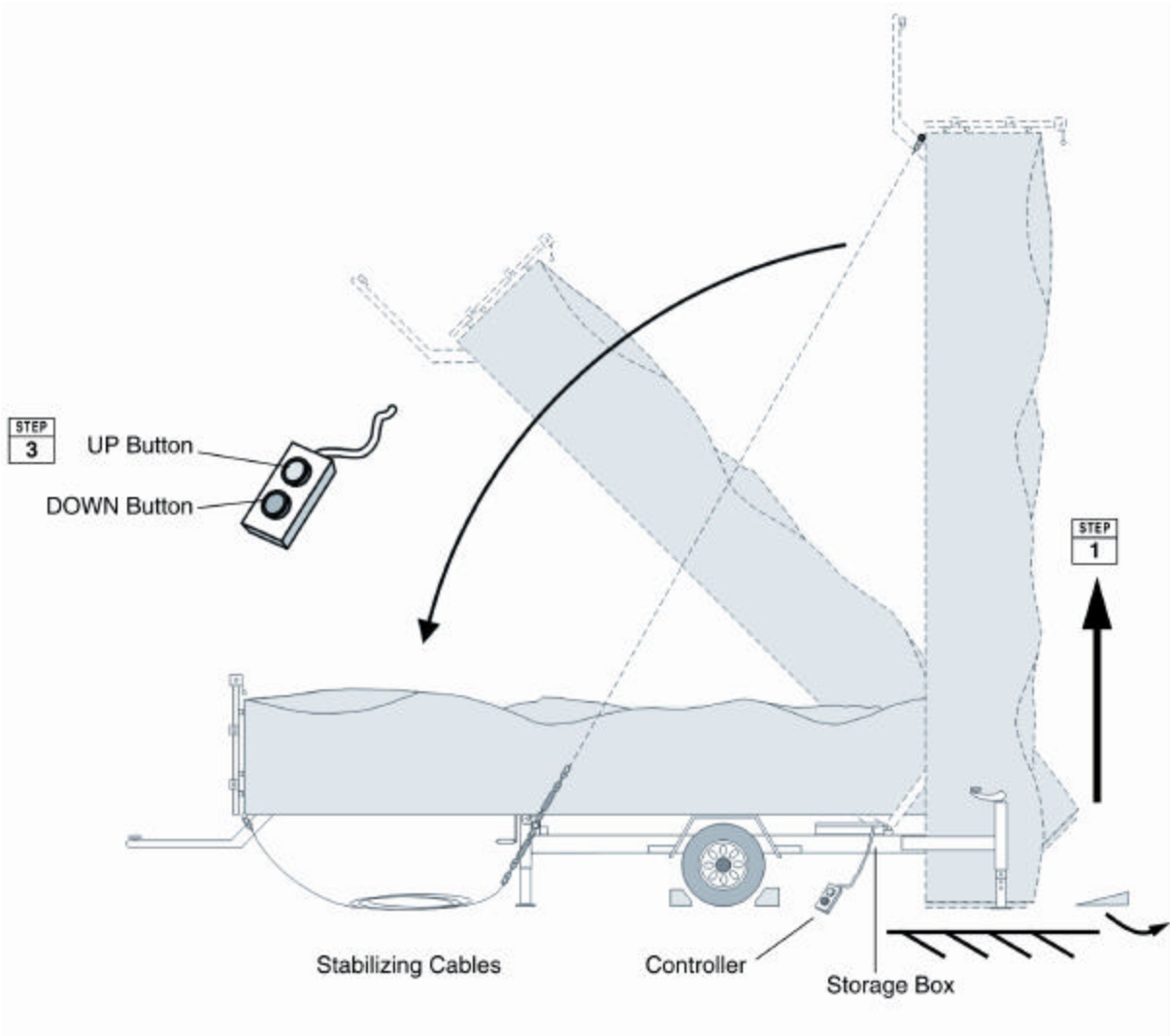
1. Clear the area of items used in operating the climbing wall, including stanchions, crowd control ropes, etc.
2. Clear the area of people and cars.

Lower the Wall

(For Space Saver™ trailer design MW3, MW4 and MW5)



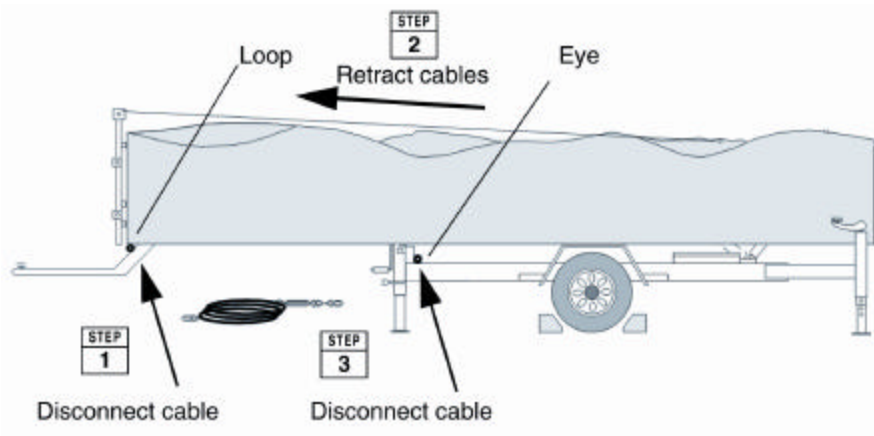
CAUTION: Keep the area clear of people while lowering the wall. Also make sure there is nothing resting on the trailer frame, that might prevent the wall from coming to rest fully on the trailer.



1. Extend the two outrigger jacks to raise the rear of the trailer wheels should be about 2" off the ground.
2. Plug in controller.
3. Press hold and controller's DOWN button to lower the wall down to its horizontal position on the trailer.
4. Make sure the stabilizing cables lower gently to the ground, clear of the trailer frame.
5. Unplug controller and store.

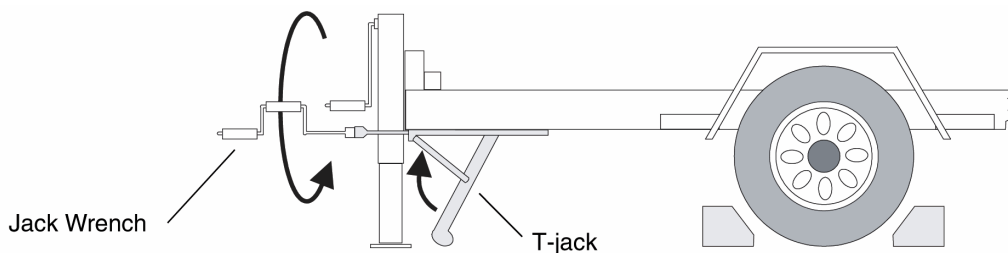
6. Pack up any shims which were under the wall base, and stow the in the optional trailer toolbox or in the tow vehicle.

Disconnect the Stabilizing Cables and Retract the AutoBelay™ Cables

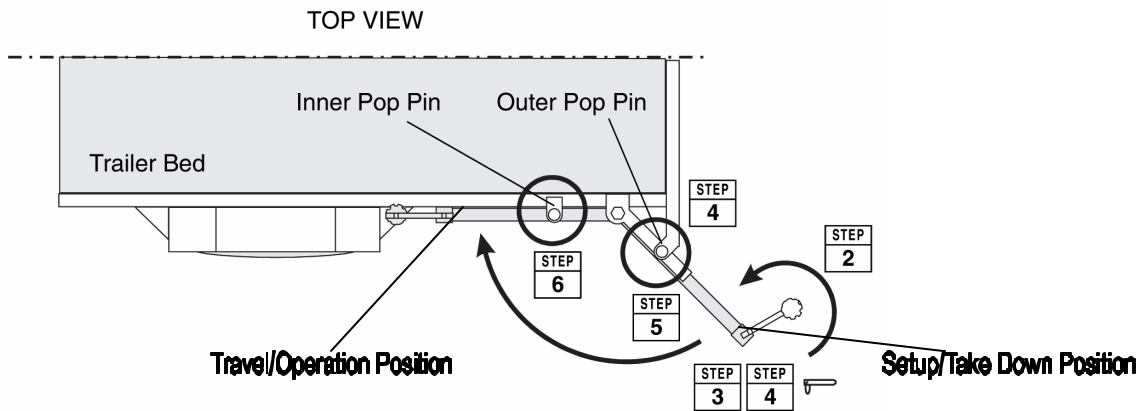


1. Disconnect the stabilizing cable from the loop on the upper corner of the wall.
2. If you have not already done so, retract the AutoBelay™ cables. Disconnect them from the bolt hangers near the base of the wall and let the cables retract up to the davits at the top of the wall.
3. Disconnect the stabilizing cable from the eye on trailer.
4. Repeat the procedure for the other stabilizing cable.
5. Stow the cables in the optional trailer toolbox or in the tow vehicle.

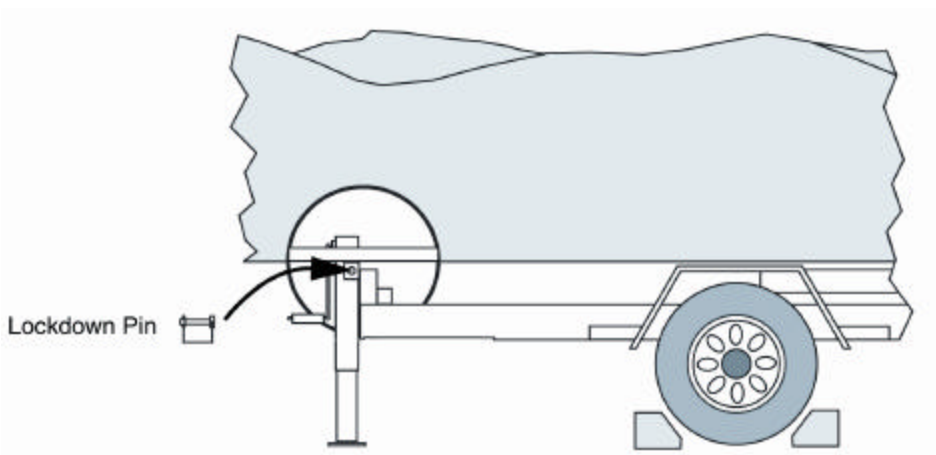
Secure the Wall for Transport



1. Use the stabilizing jacks to raise the outriggers at the front of the trailer. Be sure to raise them until they are very snug against the trailer frame.

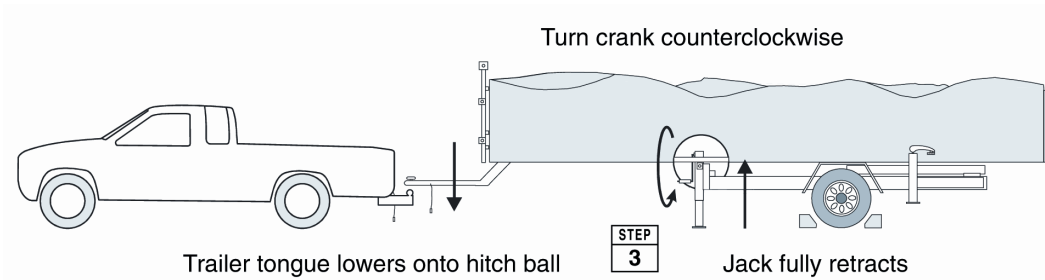


2. Crank the built-in jack crank on the outrigger jack counterclockwise to fully retract it. Repeat this step with the other outrigger jack. This will lower the trailer wheels to the ground.
3. Flip the jack handle over.
4. Pull out the keeper pin on the extension leg of the outrigger jack. Push the extension leg into its fully retracted position, and reinsert the keeper pin to hold the extension leg in that position.
5. Pull the outer pop pin (holding the outrigger at its in-use position) to release it, and swing the outrigger back to the side of the trailer.
6. Be sure the inner (transport) pop pin snaps back in, so the outrigger is locked into its secure transport position.
7. Repeat Steps 4-6 for the other outrigger.



8. Insert the wall lockdown pin (located near the center jack).

Reconnect the Tow Vehicle

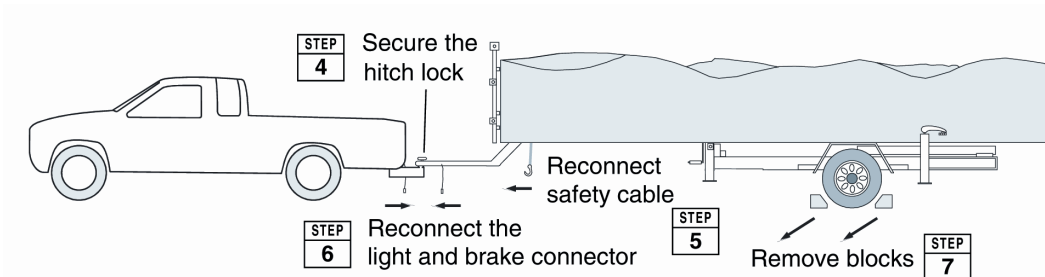


1. Back the tow vehicle into position so that its towing ball is positioned under the climbing wall's trailer tongue. If you have a second operator, have him or her stand by the trailer to guide you into position.
2. Position the tow vehicle's hitch as close as possible to the tongue of the trailer to minimize your having to manually move the trailer into place.



CAUTION: Try to avoid the need to manually position the trailer! If you must, do so only for the last few inches. Do not attempt to pull the trailer by hand, as this could result in serious injury.

3. Retract the center jack by cranking counterclockwise until the trailer tongue lowers onto the hitch ball.



4. Secure the hitch lock over the ball. *Look under hitch to make sure the ball is secure.
5. Reconnect the safety cable(s).



CAUTION: Be sure the safety cables are securely connected! Should the hitch fail during transport, the safety cable can help avoid a towing catastrophe.

6. Reconnect the trailer/brake connector, thus electrically connecting the trailer and the tow vehicle.
7. Make sure to connect the emergency break-away cable.

8. Unblock the trailer wheels, and stow the blocks.
9. If you have a second operator, have him or her stand behind the trailer while you test the turn signals and brake lights to make sure they are operating properly.
10. Take a walk completely around the wall and trailer to inspect it carefully. Make sure that everything is secure and stowed properly before leaving the site.
11. Drive the tow vehicle and the climbing wall away.

Lower the Wall

(For C.A.T.T.™ trailer design Anniversary Edition 4 Climber)



1. Raise the two stabilizing jacks at the rear of the trailer. The wheels should be about 2" off the ground.
2. Plug in controller.
3. Press hold and controller's DOWN button to lower the wall down to its horizontal position on the trailer.
4. Make sure the stabilizing cable lowers gently to the ground, clear of the trailer frame.
5. Unplug controller and store.
6. Remove the stabilizing cables and store.
7. Remove any climbing gear and store.

8. Retract the auto-belay systems by allowing the cables to raise to the top of the climbing wall.
9. Pack up any shims which were under the wall base, and stow the in the optional trailer toolbox or in the tow vehicle.

Troubleshooting

If you have a problem with your climbing wall, check the following table for a solution.

Problem and Solution
<p>Jacks don't extend or retract</p> <ul style="list-style-type: none"> • Keeper pins may still be in Place. Remove the keeper pins. • Dirty jack inner ram tube. Remove obvious dirt, then spray a little silicon lubricant to loosen the jack and extend it. When fully extended, clean the inner ram tube carefully and apply a light coating of silicon.
<p>Wall won't raise or lower</p> <ul style="list-style-type: none"> • Wall's lockdown pin is still in place. Remove and lockdown pin. • Controller malfunction. Make sure controller cable is not damaged. • Loose connector on hydraulic pump. Check and tighten connector. • Battery is low. Check the battery and recharge if necessary.
<p>Wall seems unstable</p> <ul style="list-style-type: none"> • Surface not level. Make sure the setup surface is level. Add shims as necessary. • Shims poor. If you have used shims to level the wall, make sure they are solid and stable, and they are not stacked. • Poor wall location. Move the wall to a more solid, level location. • Windy. If wind conditions are too strong, lower the wall and don't use it until conditions improve.

- Outriggers are not properly or fully deployed. Deploy, secure, and level.
- Stabilizing cables are not deployed. Lower the wall and attach them.
- Stabilizing cables are not adjusted properly. Adjust the turnbuckles to be sure the cables are moderately tight.
- Wall is not vertical. Check levels and adjust jacks as needed.

Belay in the Box™ AutoBelay™ cables won't extend

- Pulley problems. Make sure the pulleys are turning smoothly and that the cables are not jammed.
- Cables binding. Replace any worn parts causing binding.

Belay in the Box™ AutoBelay™ cables won't retract

- Low pressure in the air tank. Add air to the tank to bring the pressure up to 60-65 PSI, or as otherwise on the tank.

Brake lights/tail lights/turn signals don't work

- Connector loose or not connected. Make sure the trailer light/brake connector cable is firmly connected to the tow vehicle.
- Blown fuse in the tow vehicle. Inspect the fuse and replace it if necessary.
- Broken wire. Make sure the connector cable is not damaged.
- Broken or burnt-out light bulbs. Replace the broken or dead bulbs.

Maintenance

Your climbing wall will give you years of trouble-free service if you take care of it. For safety, trouble-free operation, and good appearance, follow the maintenance schedules provided here.

Log Book

A maintenance log book is essential for tracking the use of the Extreme climbing wall. If you record the date, number of daily cycles, and number of cumulative cycles, this record will allow you to anticipate when some maintenance tasks (such as replacing an AutoBelay™ cable) should occur. We have a maintenance log sheet included on page 37 of this manual.

Maintenance procedures and inspection logs

Read the inspection procedures on the following pages. Be sure to use copies of the inspection checklists provided in this manual to keep a record of your inspections.

Detailed description of inspection items

Inspect the climbing wall thoroughly before you take it out to use it. Your safety on the road, during setup and your climbers' safety depend on it!

- **AutoBelay™ cable**

Check the cable for fraying, broken strands, kinks, wear or damage. Run your hands along the entire length of the cable, checking for a wavy or uneven feel to the cable. We recommend wearing leather gloves when checking the cable. If you hit a broken strand or frayed section of cable, it can hurt your fingers! **ALWAYS REPLACE YOUR CABLES EVERY YEAR, NO QUESTIONS ASKED. YOU, YOUR STAFF, AND YOUR CLIENTS DEPEND ON IT!!**



CAUTION: Always replace any suspect cable. This is absolutely critical for safe operation! If you suspect a cable is damaged, or are not sure, visit our tech page at www.extremeengineering.com or call Customer Service for assistance before operating the system!

Only order Extreme Engineering certified cables. We use the highest grade American cable available.

AutoBelay™ cables should be replaced before 10,000 or every year, whichever comes first, even if there are no signs of wear.

Replacing your AutoBelay™ cables

Step 1



First release all the pressure out of the tank.

Step 2



Loosen all the bolts on the lids of the box.

Step 3



Using a ratchet, drill, or a wrench, loosen and remove all bolts. Please make sure you save all the bolts!

Step 4



After the bolts are removed, place them in a safe place and remove the two lids.

Step 5



Pull up on the rams so that they are standing out of the box.

Step 6



Brace the rams in place with some sort of solid bar such as a hammer, crowbar, a piece of wood, etc.

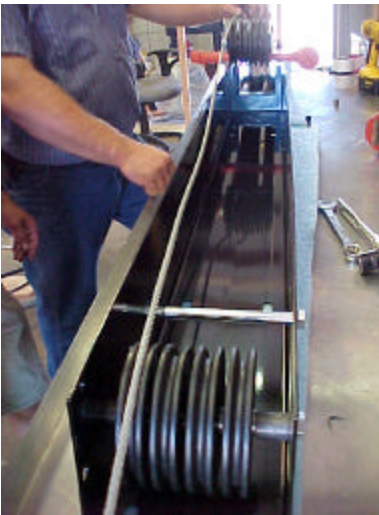
Step 7



Pin or bolt (depending on model)

Loosen and remove the bolt or pin (depending on model) so that the AutoBelay™ cable can be placed around the pulleys. Make sure to place parts in a safe place.

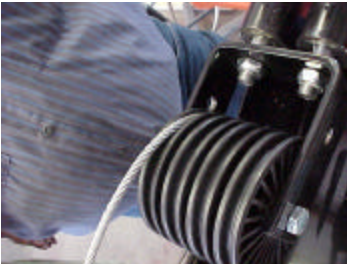
Step 8



From the front end of the AutoBelay™ box, start placing the cable through the pulleys starting from the left side first. (Note: you will have 3 to 5 pulleys depending on your AutoBelay™ system).

Step 9

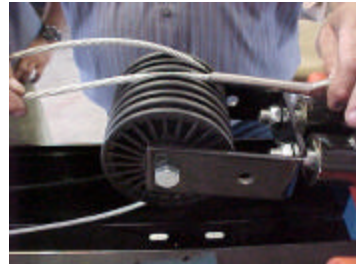
1a.



1b.



1c.



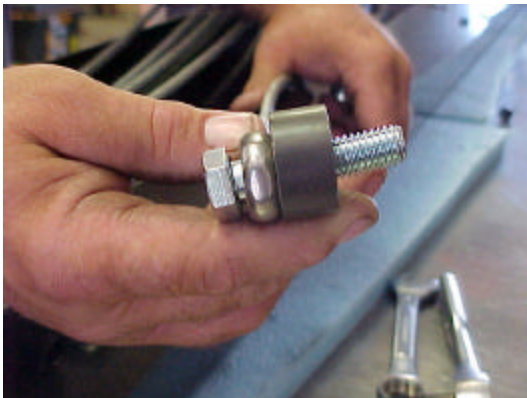
On the other end, wrap the cable over the pulley so it comes underneath. Repeat this process until the eye of the cable ends up at the top end of the AutoBelay™.

Step 10



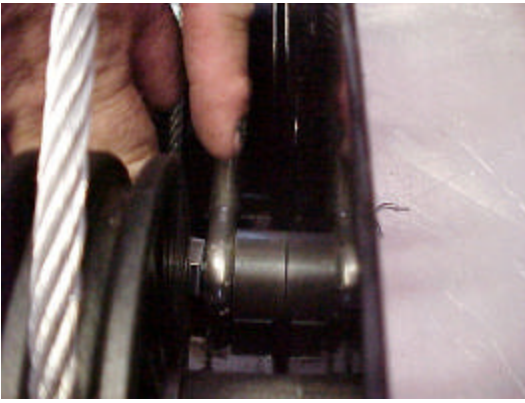
This is what the cable should look like after it is correctly placed through the AutoBelay™ system. Make sure the eye of the cable ends up at the top end of the auto-belay at the opposite side of where you started.

Step 11



At the top end of the AutoBelay™ remove the bolt with a wrench located on the front, lower right hand side of the box. Bolt and place the AutoBelay™ cable eye through spacer.

Step 12



Locate and Place the bolt back into its existing hole.

Step 13



Place the washer and nut back on the bolt and tighten down the bolt. Make sure when you tighten down the bolt that the cable's eye is parallel with the box and not kinked at an angle.

- **AutoBelay™ pulleys**

Make sure the cables are traveling through the pulleys without binding.

Make sure all the pulleys are turning smoothly and are not worn.

- **AutoBelay™ system**

Inspect the AutoBelay™ system thoroughly for wear in the pulleys or cables. Call Customer Service for assistance in ordering and replacing pulleys and cables. Replace lock nuts after any AutoBelay™ servicing.

Make several climbs on the Extreme climbing wall. Be sure that the cables retract smoothly, and your descent is smooth, without any halts or jerky motion.

- **Hydraulic Hose**

Make sure the hose isn't leaking. If you find a leak, call Customer Service for assistance.

- **Air Tank**

Make sure the pressure in the air tank is at the correct pressure, 60 to 65 PSI with the cable extended, or as otherwise marked on the tank.

- **Wall lift system**

Raise and lower the wall. Make sure the wall lifts smoothly and completely. If the wall does not raise or lower completely, or there is any hesitation in its motion, contact Customer Service.

Check that all connectors on the hydraulic lift pump are properly tightened (control cable, power, and ground). Tighten if necessary.

- **Jacks**

The Extreme climbing wall has a total of four: the two outrigger extending jacks, and the two front jacks.

Let out each extending jack as far as possible and clean the inner ram tube. Coat the tube with a light coat of silicon spray lubricant.

- **Trailer Hitch**

Make sure the trailer hitch is operating correctly. Make sure the trailer hitch lock locks down the hitch to the ball securely, and that it cannot be popped off without first loosening the hitch lock. Inspect the safety cable and its mounting hardware for wear. If at all questionable, replace it.



CAUTION: If you are in any doubt whatsoever about the hitch or the safety cable, consult an automotive or RV service center. This is critical for safe transport! Should the trailer become unhitched during transport, this can be a catastrophic hazard!

- **Trailer tongue**

Make sure the bolts holding the trailer tongue to the trailer are tight.

- **Trailer wheels**

Make sure the lug nuts are tight. Should be checked every 500 miles.

- **Trailer lights/Emergency Break Away Cable**

Connect the trailer light and brake connector to a towing vehicle. Be sure the taillights, brake lights, running lights, emergency break away cable, and turn signals are performing correctly.



CAUTION: Replace any broken or burnt-out bulbs. Keep spare bulbs on hand. Transporting the trailer with any manufacturing lights – even for a short distance – can be a serious hazard!

Check the tow vehicle for a blown fuse, and replace it if necessary. If replacing a fuse or bulb does not correct the problem, then replace the trailer/brake light connector, which is of the standard RV type. If this does not solve the problem, contact Customer Service.

Check for broken light lenses and replace if necessary.

- **Loose or broken parts**

Inspect the entire climbing wall for loose or broken parts. Replace broken parts (call Customer Service to order) and tighten loose parts.

- **Keeper pins**

Keeper pins and safety snap pins are of the standard RV type. Keep spares on hand. Only replace with equal quality.



CAUTION: For both use and transport, never “jury-rig” your equipment with anything other than the correct keeper pins or safety snap pins! Doing so could create a serious hazard!

- Protect your harnesses from constant direct sunlight and heat and from nylon-damaging substances such as acids, alkalis, oxidizing agents, and bleach.

- **Carabiners**

Make sure the carabiners are lock properly. All surfaces of the carabineers should be free of cracks, sharp edges, corrosion, burrs, or excessive wear. Be sure the gate and any locking mechanism closes freely and completely. Gate opening and closing should be quick and easy. If washing and drying does not remedy a gummed-up carabiner, replace it. Rivets should not be bent, loose, or missing. Replace carabiners no more than 5,000 cycles (4 months), or sooner, if they are worn.



CAUTION: If a carabiner does not pass inspection (even after cleaning), destroy and replace it with a new one. This is

absolutely critical for safe operation. Always keep a spare carabiner on hand.

Cleaning and Other Special Care

- **Wall and trailer**

Clean the climbing wall as you would a boat, camper or recreational vehicle. Hose it off. Use a solution of warm water and dish soap to remove dirt from the wall and trailer. Some owners take their walls through a coin-op car wash and spray them down.

- **Carabineers**

Keep carabineers dry and clean. Protect them from corrosion. Do not store them in very humid or salty air, with damp equipment or clothing, or near corrosive chemicals. Do not file carabineers for any reason. If notches appear, replace the carabineer. If a carabineer gate sticks, wash it in warm soapy water, rinse thoroughly and lubricate with either dry graphite or Teflon lubricant around the hinge area, inside the spring hole and locking mechanism.

- **Harnesses**

Hand-wash a dirty harness in cool water with a mild soap. Allow it to dry in a shaded area.

Protection from the elements

Store the climbing wall as you would a boat, camper or recreational vehicle.

- Storing the climbing wall in a covered shelter or garage will keep it cleaner and preserve its appearance longer.
- Storing the climbing wall outdoors is no problem. However, you may want to place tarp over it to preserve the finish from excessive exposure to the sun.
- Do not store harnesses for extended periods in direct sunlight.

Quick Checklists and Log

On the next three pages you will find condensed maintenance checklists, plus a maintenance log sheet, which you can photocopy and use.

Per-use Maintenance Checklist

- ❑ **AutoBelay™ cables.** Check for fraying or broken strands. Check for kinks, wear or damage to the cable. *Never repair or mend, always replace suspected cables.*
- ❑ **AutoBelay™ pulleys.** Must not be worn, and must turn smoothly.
- ❑ **Air Tank.** Check that pressure is at 60 to 65 psi (or as marked on tank).
- ❑ **Hydraulic hose.** Check for leaks at ram or pump ends.
- ❑ **Trailer lights.** Tail, brake, running, turn signal lights should be working.
- ❑ **Trailer tires.** Pressure at 65 psi or to manufacturer's specifications. Tread must be adequate, with no objects in treads. Also check the spare tire.
- ❑ **Keeper pins.** Be sure spares are on hand.
- ❑ **Harnesses.** Must be in good condition, not worn. When dirty, hand wash in cool water, and dry in a shaded area (not in direct sunlight).
- ❑ **Carabineers.** Check for bent, loose, or missing rivets. The gate/lock must close freely. If gummed up, clean with soapy water and dry.

Periodic Maintenance Checklist

Thoroughly inspect the Extreme mobile climbing wall before every use.

- ❑ **Do the per-use maintenance checklist first.**
- ❑ **Loose or broken parts.** Replace broken parts; tighten loose parts.
- ❑ **Trailer hitch.** Be sure the hitch, hitch lock, and light/brake cable all are operating correctly. Be sure the safety cable is OK.
- ❑ **Trailer tongue.** Make sure the bolts are tight.
- ❑ **Trailer wheels.** Make sure lug nuts are tight.
- ❑ **Trailer electric brakes.** Check for correct operation of the brakes and breakaway switch.
- ❑ **Jacks.** Extend all jacks and clean inner ram tubes. Coat with silicon spray lubricant.
- ❑ **Wall lift system.** Be sure the wall lifts smoothly. Check that connectors on the hydraulic lift pump are tight (control cable, power, and ground). Tighten if needed.
- ❑ **Battery.** Check terminals for corrosion; clean if needed.
- ❑ **AutoBelay™ system.** Cable slack is taken up, and paid out correctly. Also make sure that the cable is free of broken strands, corrosion, rust, frays, or any other defects.
- ❑ **Clean wall and trailer.** Wash with soap and water, or spray at a car wash, treat like a boat or camper.

Safe Towing Tips

We encourage you to be a safe, courteous driver when towing your climbing wall. Keep the following in mind when towing your wall on public streets.

- Be sure that the lug nuts are tightened.
- Be sure to use the safety cable at all times.
- Be sure the tail lights, brake lights, and turn signals are functioning correctly.
- Be sure the trailer's brakes are working correctly.
- Be sure your trailer is properly registered with your state motor vehicle department.
- Always observe the posted speed limits for trailers when towing your climbing wall, and be especially cautious (and reduce your speed) when encountering windy, snowy, or rainy conditions.
- Install extended side rear view mirrors on your towing vehicle. Your climbing wall is over 24 feet in length and you'll need the mirrors to see traffic directly behind you.
- Signal before changing lanes. When you change lanes, be aware of traffic behind you and at your sides. Allow plenty of clearance before changing lanes.
- Do not attempt to make tight left or right turns.
- Practice backing up where there is plenty of room before you try it in a real-life situation. (As with any trailer, turn the steering wheel the opposite direction of the direction you want the trailer to move).

Specifications for Models MW3, MW4, MW5 and Anniversary Edition (MW4-ANN)

GENERAL	
Height - raised	24' (MW3 & MW4); 25' (MW5); 26' (MW4-ANN)
Width - towed	8' 0"
Weight	3200 lbs. (MW3); 3,300 lbs. (MW4); 4800 lbs. (MW5); 3,800 - 4,200 (MW4-ANN)
Steel	Tubing meets ASTM A500. Flat plates meet ASTM A572. Welds are AWS and A15C compliant.
TRAILER	
Type	Single axle (MW3). Tandem axle (MW4, MW5 & MW4-ANN). Electric Brakes (all models).
Hitch	2" 5/16 RV standard or current.
Wiring	7-prong RV standard, 12VDC.
Wheel diameter	15", 5 lug
Tire type	ST205/75D15 (Standard) – tire type may change without notice
Tire pressure	50 PSI cold maximum or as stated on the tire
Electric Jack Option	12VDC motor driven screw. Fuse: 30A Buss AGC-30 or equivalent
Axles and Brakes	Independent brake suspension. Heavy-duty electric brakes. 3,500 lbs nominal load rating with heavy-duty tapered roller bearings.
BELAY IN THE BOX™ AUTOBELAY SYSTEM	
Hydraulics	Hydraulics are fully redundant and fail-safe. Heavy-duty weld hydraulic cylinders. 1 1/2" cylinder. Dual check valves, cylinders and hydraulic hoses.
Air tank pressure	60 to 65 PSI, or as otherwise marked on tank, with the cable fully extended.
Battery	12VDC deep cycle.
Belay in the Box™ system	Redundant air/oil (pneumatic over hydraulic). Pulleys of top quality engineering-grade polymers. Certified 7,000 lb tensile test cable, with integral swivel. Pulley shields are stainless steel and cover moving parts. US Pat# 6,390,952
Climber capacity	3 (MW3); 4 (MW4); 5 (MW5); 4 (MW4-ANN). One at a time per each AutoBelay™.
Weight Limit	Recommended weights are 45-250 lbs.

Limited Warranty

EXTREME ENGINEERING® warrants to the first consumer purchaser that this product will be free from defective workmanship and materials, subject to the following conditions :

1. Extreme Engineering® agrees that it will, at its option, either repair or replace a defective part or will, at its option, repair or replace the defective product, at no charge to the purchaser for *labor* for a period of ninety (90) days, in house, from date of delivery, and at no charge to the purchaser for *parts* for a period of one (1) year from date of delivery (shipping and handling cost may apply). Warranty does not include consumables (harnesses, handholds, cables, pulleys, etc.) We have a 90-day warranty on electronics, 30-days on labor, 90-day on parts. AutoBelay™ systems are warranted for the original purchaser(s) for one year (does not include AutoBelay™ cables or pulleys).
2. This limited warranty is valid only when the product is installed, operated, and maintained in accordance with the Extreme Engineering® User's Guide. Any deviation from these recommended procedures must be approved in writing by Extreme Engineering®.
3. This limited warranty does not apply to any part which has been subjected to misuse, abnormal service or handling, or which has been altered or modified in design or construction.
4. This limited warranty does not apply to changes in the exterior appearance of the climbing wall.
5. Neither the sales personnel of the seller nor any other person is authorized to make any warranties other than those described herein, or to extend the duration of any warranties beyond the time period described, on behalf of Extreme Engineering®.
6. ANY IMPLIED WARRANTIES ARE LIMITED TO THE DURATION OF THIS LIMITED WARRANTY, AS STATED ABOVE. EXTREME ENGINEERING DOES NOT ASSUME RESPONSIBILITY FOR CONSEQUENTIAL DAMAGE OR LOSS, INCLUDING LOSS OF USE OF VEHICLE, LOSS OF TIME, INCONVENIENCE, EXPENSE FOR GASOLINE, TELEPHONE, TRAVEL, LODGING, LOSS OR DAMAGE TO PERSONAL PROPERTY, OR LOSS OF REVENUES. Some states do not allow limitations on how long an implied warranty lasts or limitations on consequential damages, so the above limitation may not apply to you.
10. THE WARRANTIES DESCRIBED HERE SHALL BE THE SOLE AND EXCLUSIVE WARRANTIES GRANTED BY EXTREME ENGINEERING AND SHALL BE THE SOLE AND EXCLUSIVE REMEDY AVAILABLE TO THE PURCHASER. Correction of defects, in the manner and for the period of time described here, shall constitute complete fulfillment of all liabilities and

responsibilities, whether based on contact, negligence, strict liability or otherwise. In no event shall Extreme Engineering® be liable, or in any way responsible, for damages or defects in the product which were caused by repairs performed by anyone other than an authorized servicer.

11. Extreme Engineering® shall not be liable, or in any way responsible, for incidental or consequential economic or property damage. Some states do not allow the exclusion of incidental or consequential damages, so the above exclusion may not apply to you.

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If you have a warranty claim

In the event of a warranty claim, contact the Extreme Engineering® Customer Service Department, 9198-B Ridge Road, Newcastle, CA 95658. The telephone number is 916/663-1560. The fax number is 916-663-9249.

Warranty claim service must be performed as approved by the Extreme Engineering® Customer Service Department. Warranty replacement hardware systems and components or parts will be furnished freight prepaid. Labor cost to repair or replace will be limited to the amount of the original purchase price of the systems and components. The replaced warranty products or parts become the property of Extreme Engineering® and must be returned to the Extreme Engineering® Customer Service Department freight prepaid, unless prior arrangements have been made.

Replacement parts

Purchase your replacement parts through our customer support center at 916/663-1560 or visit our online store at **www.extremeengineering.com** Always make sure that your extreme products are running at optimal performance

Customer Service

You can always reach us for help with problems. Contact Extreme Engineering® using one of the following methods.

By phone: 916/663-1560

By e-mail: info@extremeengineering.com

By fax: 916/663-9249

By mail: Customer Service
Extreme Engineering®
9198-B Ridge Road,
Newcastle, CA 95658

THANK YOU FOR PURCHAING AN EXTREME ENGINEERING® PRODUCT. THE BEST MOBILE
CLIMBING WALLS ON THE MARKET!!