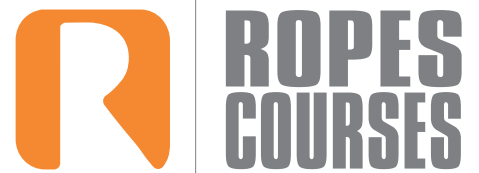


Sky Trail[®] operators manual



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(name)_____.

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Safety Reminder: The reasonable risks present by the activities and operational procedures in the book could result in physical harm, but can be minimized by following the safety suggestions in this manual and specific policies and procedures regarding the operation of safety equipment and Sky Trail®. The authors and publishers do not assume responsibility for the use of information offered in this book either written or implied.

Warning

This manual is only for use by Ropes Courses, Inc (RCI) certified operators that are undergoing training or hold a current certificate.

- This manual is only for use of products that hold a current passing RCI inspection certificate.
- This manual is the property of the RCI trainee or operator.
- Unauthorized use of this manual may result in serious injury or death.

About Ropes Courses Incorporated

Ropes Courses, Inc. (RCI) has been manufacturing ropes courses, zip lines and climbing walls since 1989. RCI strives to meet our customers' needs by providing a safe product with the ability to manage high volumes of participants using minimal staff. We offer efficient and comprehensive training of course operators and operator trainers. RCI also provides services including design and engineering, manufacturing, installation, technical course inspections, equipment and the capability to theme courses.

Ropes Courses, Inc
1300 Lincoln Rd.
Allegan, MI 49010
269-673-0016
www.ropescoursesinc.com



Introducing our entry level Sky Trail® product. Sky Trail® Discovery is purchased as a kit and can be configured in infinite number of layouts to create any size course desired. The base product is 3 poles. The poles are 20' tall in an equilateral triangle. Additional poles and elements can be purchased at any time. If desired, customers can easily install this product themselves. Installation training is provided and a final QA inspection is performed by Ropes Courses, Inc.

SPECS

People per hour: 30 – 100 depending on site

Footing size: Indoor standard floor

of operators: Minimum of 2



Formerly known as the Sky Trail® Original. The now Sky Trail® Explorer uses the same idea as the Discovery by utilizing a 23' square cube design. The Explorer is currently engineered and designed for up to four levels. The most popular configurations are 6 or 8 pole double or triple level courses.

SPECS

People per hour: 40 – 200 depending on site

of operators: Minimum of 2





A voyage unlike any other. The Sky Trail® Voyager is a 2 pole linear design course created to meet maximum throughput design goals. Course can be single, double or triple level. Usually we find customers prefer 2 to 4 elements side-by-side.

SPECS

People per hour: 50 – 400 depending on site

of operators: Minimum of 3



Incredibly versatile and adaptable. Sky Trail® Expedition is a single pole linear design used for traversing distances or returning back to the start in a circular design. Course is 2 elements wide with single, double or triple levels.

SPECS

People per hour: 50 – 400 depending on site

of operators: Minimum of 3





Indoors and out of the way. Designed to be suspended from existing ceiling trusses, Sky Trail® Endeavor uses no floor space and can be designed to be retractable if needed.

SPECS

People per hour: 40 – 60 depending on site

of operators: Minimum of 2



It's time to soar through the clouds. Built off of tower structures, CTS Zip Line can be expanded to multiple towers to create any size canopy tour desired without using trees or wood poles. CTS Zip line is completely safe using patented Track-n-Trail technology.

SPECS

People per hour: 60

of operators: Minimum of 2



OVERVIEW



Sky Trail®

Sky Trail®, a high ropes adventure course, consists of horizontally strung cables, ropes, boards and other materials secured between steel supports to create elements or activities. Each participant is outfitted with a full body harness and a safety lanyard, or sling line. Participants are then allowed to cross each element by walking, balancing or traversing to the opposite platform.

What makes Sky Trail® unique? Every course has an enclosed overhead tracking system, which prevents participants from disconnecting their safety line from the course at any time. This unique system also allows participants to choose their path through the course while going at their own pace with the ability to pass other participants at each platform. On a course with more than one level, this track also allows participants the ability to move up and down between levels without having to disconnect at anytime from the track.

Manual

This manual will cover the necessary materials needed to complete certification of operation. In this manual you will find the definitions of terms used throughout the chapters as well as descriptions and photos of all equipment used on the course. The chapters covered in this manual include Course Operation, Pre-use Inspection of the Course and Safety Equipment, and Emergency Procedures. Terms and paperwork can be found in the back of this manual.

Operators must read this manual in its entirety, pass written tests and complete 100% of all practical training in order to receive a certificate of operation from RCI. Please ask the certified RCI Operator Trainer or contact the Training Department at RCI (269-673-0016) with questions pertaining to Sky Trail®, the materials in this manual, paperwork, rules and procedures, or training.

Training

RCI training aims to deliver the most comprehensive skill set training by evaluating and testing each operator on the skills necessary for safe Sky Trail® operation. Operators who demonstrate competence in skills, knowledge of all policies and procedures, and pass written and practical tests will be awarded an operator certificate.

A certificate may be revoked* for the following reasons:

1. Disregarding any RCI policy or procedure.
2. Operating the adventure course in a careless or reckless manner.
3. Unprofessional behavior while operating an adventure course.
4. Failure to follow paperwork procedures.

*** All decisions made to revoke a certificate will be at the sole discretion of RCI.**

What is covered during operator training?

Operator trainees will first experience Sky Trail® as a participant would for the first time. Our goal is for all trainees to have that “new” experience while also allowing time to become comfortable with the safety equipment and ropes course. Once trainees have had time to become acquainted with Sky Trail®, the RCI certified Operator Trainer will cover all the necessary topics and information contained in this manual. These topics will include:

Operator

- Overview and Qualifications
- Operator Rules and Responsibilities

The Course

- Inspection of the Course and Safety Equipment
- Opening and Closing the Course

Participants

- Participant Rules
- Outfitting Participants

Emergency Procedures

- Emergency Action Plan
- Emergency Take Down Procedures

Recommendations and Guidelines

- Harnessing Members of the Opposite Sex
- Suggestions for Facilitating Sky Trail
- Efficient Loading and Unloading Techniques
- Frequently Asked Questions

Glossary and Paperwork

- Terms
- Written Test
- Disclaimer
- Daily Inspection Check Sheet
- Accident Report Form

Trainees are encouraged to ask questions or voice concerns at any time. Certified RCI Operator Trainers will attempt to answer questions to the best of their knowledge. If a particular question cannot be answered during training please contact our Training Department at 269-673-0016.

How long is a training session?

The length of a training session is based on a number of criteria including, but not limited to:

- The number of trainees in a training session.
- The model and size of the Sky Trail®.
- If a course is indoors or outdoors.
- Weather conditions (specific to an outdoor course).
- The experience level of trainees.
- The skills and abilities of trainees

A typical training session may last approximately 6-10 hours with the most extensive part of training consisting of the practice and testing of the Emergency Take Down (ETD) procedures.

Your facility and the RCI Instructor may predetermine the length of a training session prior to the day of training. RCI Instructors reserve the right to change the length of a training session if s/he deems necessary. Owners, clients, managers, supervisors, trainees, etc. may not influence the RCI Instructor in any way to end a training session by a certain time.

Should a trainee feel the training had become improper or unsafe, s/he should stop the training and contact RCI immediately.

Changing Policies or Procedures

RCI and other manufacturers have developed specific policies and procedures to ensure the proper use of Sky Trail® and all safety equipment. Changing the policies or procedures without written consent from RCI may result in severe injury, death, or the possible revocation of a Certificate of Operation.

RCI aims for Sky Trail® to be a fun and challenging, but most importantly a safe experience for everyone. We recognize that it may be beneficial for a facility to change or amend a policy or procedure in order to better operate your Sky Trail®. However, due to local regulations, manufacturer's recommendations or for the benefit of other facilities, you must contact RCI before making a change.

The process for changing a policy or procedure is simple.

- 1) Identify the policy or procedure to be changed.
- 2) Contact RCI by email or phone with an explanation of why the policy or procedure needs to be amended.
- 3) Send written proposal and or pictures to RCI.
- 4) Ropes Courses, Inc. will review the information and work with you to find the best solution.

SECTION I: **OPERATOR**



*Overview and Qualifications
Operator Rules & Responsibilities*

Operator Overview & Qualifications

There are two types of certification, Operator and Operator Trainer. Both certifications require specific skills and responsibilities. In order to become certified, trainees must meet all requirements and demonstrate appropriate knowledge of the area in which they are seeking certification.

Operator

An Operator is trained by a certified Operator Trainer to maintain safety by ensuring the proper use of the course and safety equipment. There are three areas that operators are required to pass: harnessing; loading and unloading; operator on the course.

Upon successful completion of RCI operator training and the written and practical tests, operators will receive a certificate* of operation. RCI certification is good for one year and it is RCI policy that the certificate is kept on file at your facility. Once the certificate has expired there is no longer an affiliation with RCI or its policies and procedures. Annual updated training is necessary to maintain a certification.

Operator Requirements:

- At least 17 years of age.
- 100 % attendance of RCI training session.
- Successful completion of all written and practical testing

Operator Trainer

An Operator Trainer is certified through RCI to lead operator trainings at their facility. Those who wish to become an Operator Trainer must complete specific criteria before becoming certified to train their staff as operators. These individuals must hold a current operator certificate. Operator trainers must successfully lead an entire training session under the supervision of a RCI Instructor trainer.

Length of certification for an Operator Trainer is two years. It is RCI policy that the certificate is kept on file with your facility. Once the certificate has expired there is no longer an affiliation with RCI or its policies and procedures. Biannual updated training is necessary to maintain certification.

Operator Trainer Requirements:

- Must be at least 21 years of age.
- 100% attendance of operator training session.
- Successfully lead an Operator training session under the supervision of and RCI Instructor Trainer.
- Possess a current RCI Operator certification.
- Demonstrate proper judgment skills and good leadership abilities.
- Previous management record.
- Professional verbal and written communication skills.
- Agree to uphold all RCI policies and procedures as written.

Operator Stations

- **Harnessing**
- **Loading and unloading**
- **Operator on the course**

Operators are trained in three stations, or areas, of Sky Trail® and must demonstrate complete knowledge of all three areas to become certified. Trainees must pass both practical and written tests for each position. Individuals who do not cannot pass all three areas, especially the Emergency Take Down procedures, will not receive a certificate. These individuals may have an opportunity to re-test for certification, but this is at the sole discretion of the Operator Trainer.

Please read the requirements of each area carefully. Be sure you understand and are willing and able to perform these duties.

Harnessing

- Ability to understand and use harness properly.
- Must be able to outfit all participants by choosing the correct size of harness and adjusting it properly fit their body.
- Knowledge of the possible incorrect uses of a harness.
- Demonstrate complete understanding of all harness components.
- Correctly assess harness for any damage.
- Properly attach the sling line to a harness.
- Comfortable being in close proximity to other people.
- Possess excellent communication skills.
- Express appropriate behavior towards customers.

Operators should be able to visually size up a participant and issue the proper harness to that individual. While harnessing participants, it is important to be checking the harnesses for any damage.

While harnessing, operators should review the safety rules with the participants. It is also important to remind participants to remove any objects out of their pockets and gum or candy in their mouths.

When harnessing, operators may need to assist participants without proper footwear with finding appropriate size shoes provided by your facility. Ensure that the shoes are not too large will not fall off the feet of the participant or cause irritation if too tight. As a participant exits the course check participants before they leave the area to be sure they return borrowed clogs and place them in the correct place to be sanitized.

Operators may not leave the area or the safety equipment unattended at any time while the course is operational. Remain mindful of all activity in the area and be ready to harness and direct those individuals coming on and off the course.

Operators working in the harnessing station are responsible for keeping the area clean and organized and putting equipment in its proper place. Never drag harnesses on the ground, place them where they will be exposed to direct sunlight, or store where they may come in contact with harsh chemicals.

For any questions regarding the responsibilities or duties of harnessing participants please ask a supervisor or contact the Training Department at RCI.

Loading and Unloading

- Ability to accurately assess a participant's harness for proper fit and make the correct adjustments if needed.
- Demonstrate knowledge and ability to inspect all safety equipment (ie. harness, sling line) and understand when it is unsafe.
- Correctly attach sling line to participant's harness using girth hitch.
- Consistently inspect slider assembly and puck for damage or deformation before inserting it into the tracking system.
- Properly insert puck into the overhead tracking system.
- Adjust sling line to proper length.
- Review appropriate safety rules with participants before they enter the course.
- Monitor participants on and off the course and stop unsafe behaviors quickly.
- Possess excellent communication skills.
- Express appropriate behavior towards customers.

Loading and unloading refers to inserting and removing the puck on a participant's sling line in and out of the overhead tracking system. While this may appear to be a simple task, it is a very important in the effectiveness of the safety and operation of Sky Trail®.

As participants approach the entrance of the course the operator loading their puck into the overhead track must double-check each participant's harness to ensure it is on correctly. This operator is also responsible for visually inspecting the slider assembly on the sling line before putting it in the track. Once the participant's harness and slider assembly has been inspected, the operator should review all rules with participants.

Once the puck is correctly inserted into the overhead track, operators should adjust the participant's sling line so that it is the appropriate length. The sling line, when pulled away perpendicular to a participant's body should form an "L" shape. It should not droop down below the participant's waist.



SLING LINE - CORRECT



SLING LINE - INCORRECT

BE SURE THE PUCK ON THE SLINGLINE IS COMPLETELY IN THE TRACK. The puck should not be visible underneath the track once it is properly placed in the tracking system. The entrances to the track have two nodules that will prevent the puck from inserting into the track incorrectly.

Should your facility choose to implement a time limit during times of heavy traffic on the course, it may become the responsibility of the operator at the loading and unloading station to keep track of time. A time limit should only be utilized when there is heavy traffic on the course and large numbers of people are waiting to experience Sky Trail®. Applying a time limit is only a recommendation and is NOT necessary for the operation of Sky Trail®, especially if the course is not busy. When the course becomes busy and a need arises to issue participants on and off the course in a timely manner, the loader/un-loader must be able to keep accurate time. This is best accomplished by using a stopwatch. Participants should be notified of the time limit before they go on the course. Timing should begin when the last participant of the group enters the course. At times, it may become difficult to keep track of which particular groups' time limit is up. The operator is at liberty to create their own system of keeping track of groups as long as it complies with all Sky Trail® safety rules and procedures. Assigning groups a name or number can be an easy way to recall a group. Give participants at least a two-minute warning before their time limit is up and ask them to begin making their way towards the exit. Remember to have patience when recalling participants as those individuals who are not as comfortable on the course may take a little longer to get to the exit.

When a participant finishes the course, they will proceed to the exit where an operator will remove their puck from the track. Once a participant is taken off the track, they should be directed to an area where another operator will assist them with removing their harness. The loader/un-loader must be diligent at monitoring the traffic going on and coming off.

At no time should an operator who is designated with the responsibilities of loading and unloading participants leave the area unattended while the course is in operation.

For questions regarding the responsibilities or duties of loading and unloading participants on and off the course please ask a supervisor or contact RCI.

Operator on the Course

- Must be comfortable being at heights of 15 feet or more for extended periods of time.
- Ability to accurately assess a participant's harness for proper fit and make the correct adjustments if needed.
- Demonstrate knowledge and ability to inspect all safety equipment (ie. harness, sling line) and understand when it is unsafe.
- Competency in assessing the difference between a medical emergency and a non-emergency incident for purposes of the ETD procedures
- Ability to successfully execute an Emergency Take Down in under two minutes.
- Monitor all participants and immediately stop any unsafe behavior
- Capability and understanding to assist scared participant.
- Possess excellent communication skills.
- Express appropriate behaviors towards customers.



The number of operators needed on the course will be determined by the size and capacity of participants allowed on a particular Sky Trail®.

Operators on the course must be outfitted with a harness and a staff, or orange, sling line. It is crucial that operators constantly monitor the behaviors and actions of all participants on the course and stop any behaviors before they become unsafe. Operators must have the ability to easily communicate with co-workers and participants from their position on the course.

Operators on the course have the responsibility of assisting any participants who may become scared or who have difficulty manipulating their sling line through the track. Please be sure and pay close attention to any such occurrences and act in a timely manner.

Possibly the most important role of the operator on the course is to determine if a participant may need medical attention and will need to be brought off the course using the Emergency Take Down procedures. It is the responsibility of the operator on the course (or "top" operator) to make this decision and to alert all other staff so the Emergency Action Plan (EAP) may be enacted. Operators on the course should be familiar with the locations of each Emergency Takedown Kit or (ETK) on the course.

It is not necessary for operators on the course to remain stationary at all times. Operators can be encouraged to move around the course. In the event of weather conditions such as high temperatures, prolonged exposure to the sun and/or cold and rainy weather, operators should communicate with their supervisor and other operators to be rotated on and off the course. Be especially sure to stay hydrated in hot temperatures. Courses indoors will not be subject to these conditions and rotation may not need to occur as often.

If you have any questions regarding the responsibilities of the operator on the course please ask a supervisor or contact RCI.

Operator Rules and Responsibilities

- One operator must stay within one level of any participant on the course.
- Operators must wear a whistle at all times to gain the attention of participants and sound alarms in the instance of an emergency.
- Operators must be sure that one ETK is on every level of the course in the designated areas on the course.
- Use experience, knowledge, and course check sheets to determine if any component of the Sky Trail® has become unsafe. Notify manager of any safety issues with the course in a timely manner.
- Complete all necessary opening and closing paperwork properly.
- Operators must properly outfit all participants with a harness and sling line.
- A minimum of two certified operators is needed to perform an emergency take-down procedure. One operator must be equipped with a harness and “staff” sling line. Another operator must have a harness on and the figure 8 should be easily accessible at all times.*
- Operators must enforce all safety rules.
- Operators must place themselves in a position to communicate with co-workers and participants at all times and constantly monitor all participant activity and stop any behavior before it becomes unsafe.
- NO ONE, operator or participant, maintenance staff or otherwise is allowed on Sky Trail® without the proper safety equipment. EVERYONE must be connected to the overhead track at all times while on the course.
- The use of cellular phones for calling or texting while operating a course is prohibited along with the use of digital music devices and handheld video games.

One operator must stay within one level of any participant on the course.

It is important to be able to reach a participant in the shortest amount of time possible. For emergency reasons, if a participant becomes scared, or to stop any unsafe behavior, an operator must be within at least one level of participants. If the Sky Trail is only one level operators may remain on the ground, but one operator must have a sling line attached to their harness and be prepared to go to a participant at all times. The same applies for a multi-level course as long as the participant is on the first level. As soon as the participant ascends to the second level an operator must be on, at least, the first level of the course. If the course has three levels, the operator must be on the middle level at all times unless assisting a participant. If the course has four levels, a third operator must be used to maintain the rule that the operators may not be more than one level away from participants. Operators must NEVER walk away from a course or leave it unattended while a participant is on.

Operators must wear a whistle at all times to gain the attention of participants and sound alarms in the instance of an emergency.

Whistles are very helpful in getting the attention of participants if the course is in an area that is very busy or loud. Whistles are also useful in sounding an alarm in the case of an emergency. Managers or supervisors of your course should work with all staff to implement emergency calls using a whistle if your facility does not already have a protocol.

Operators must be sure that one Emergency Take-down Kit (ETK) is on every level of the course in the designated areas on the course.

Before participants can go on the course, operators must be sure that all ETKs are in place. Operators should know where the designated area for each ETK is on every level of the course.

Use experience, knowledge, and course check sheets to determine if any component of the Sky Trail® has become unsafe. Notify manager of any safety issues with the course in a timely manner.

Operators are trained on how to properly inspect the course and safety equipment and how to use the Course Check Sheet. It is essential that operators inspect the course and equipment daily and using their best judgment, knowledge and the Course Check Sheet, determine that all aspects of the Sky Trail® are safe. If anything appears out of ordinary operators must notify a manager or approved maintenance staff immediately. DO NOT allow participants on a course until everything is determined to be safe.

Complete all necessary opening and closing paperwork properly.

In the back of this manual RCI provides a Course Check Sheet to utilize when inspecting the course and safety equipment. There is also an Accident Report form. Operators must know how to fill out these forms properly and use them in the correct manner. Your facility should keep all forms on file.

Operators must properly outfit all participants with a harness and sling line.

Operators should take care to be sure that all participants are properly outfitted with a harness and sling line. If you did not harness a participant, double check that other operators have done so. All operators must be visually checking participants at all times. It is EVERY operators job to ensure the safety of all participants.

A minimum of two certified operators is needed to perform an emergency take-down procedure. One operator must be equipped with a harness and “staff” sling line. Another operator must have a harness on and a figure 8 attached or easily accessible at all times.

In order to perform an Emergency Take Down (ETD) two certified operators must be present at a Sky Trail® at all times. The operator on the course must be outfitted properly with safety equipment including full body harness, staff (orange) sling line, and a whistle. Operators must use the orange sling line to prevent cutting the wrong rope during an ETD. Never allow a participant to use an orange sling line. Another operator who is certified in the ETD procedures must wear a harness that is properly attached and adjusted. The figure 8 device should be stored in an easily accessible place at all times. Please be prepared for an emergency take down at all times.

Operators must enforce all safety rules.

Operators are responsible for the safety of all participants and it is their duty to make sure that all participants are following course rules. If a participant refuses to follow an operators direction and are putting others in danger, operators must ask the participant to leave the course. Please see the section for Approaching Unruly Participants on page 49 in this manual.

Operators must place themselves in a position to communicate with co-workers and participants at all times, constantly monitor all participant activity, and stop any behavior before it becomes unsafe.

Operators must pay attention to participant activity at all times. Operators should be in a position to monitor participants from wherever they are standing. It may be necessary to move around the course to see all participants.

Operators must also be able to communicate easily with each other. Depending on the course, it could mean that operators have hand held radios to communicate or another method if they are not able to shout to each other.

Lastly, operators are responsible for stopping behaviors BEFORE they become unsafe. With experience it will become easier to know the signals participants give that may lead to unsafe behaviors. These signals could include leaning on their sling line either forward or backwards; walking very fast and not paying attention, and encouraging other participants to disobey the rules. Usually those participants that challenge the rules are those that have been on the course for a longer period of time. These participants may have finished all the elements and want to challenge themselves more by running across elements or climbing parts of the course that are not supposed to be climbed on. Always be on the look out for these behaviors and ask the participant to stop. Stopping a behavior before it happens prevent accidents.

NO ONE, operator or participant, maintenance staff or otherwise is allowed on Sky Trail® without the proper safety equipment. EVERYONE must be connected to the overhead track at all times while on the course.

This rule is very simple. NO ONE, operators, managers, trainers, maintenance, and especially participants is allowed on the course without safety equipment and being attached to the overhead track. It doesn't matter how experienced an individual is or if it's just a couple feet up an incline element. NEVER go on the course without equipment and NEVER allow anyone to go on the course without safety equipment. These are grounds for termination. If you see a co-worker or another staff member of your facility go on the course without the proper safety equipment or without being attached to the overhead track, report them immediately to your superior or their superior.

The use of cellular phones for calling or texting while operating a course is prohibited along with the use of digital music devices and handheld video games. Use of any of these devices is grounds for termination.

Operators should never use a cell phone, digital music device or hand held video game at anytime while operating a Sky Trail course. Please use these devices on your own time. Operators should have their full attention devoted to ensuring the safety of all participants and staff.

* On a single level course, during slower times of operation, a second operator must be available within 20 seconds to help in the case of an Emergency Take Down procedure and must always be in range to communicate with the primary operator at the course.

SECTION II:

THE COURSE

*Inspecting the Course
and Safety Equipment*

*Opening and
Closing the Course*

Daily Pre-use Inspections

A daily inspection of the Sky Trail® and the safety equipment must be completed by a certified operator before allowing participants on the course. The operator will do a visual and tactile inspection beginning from the ground and finishing at the top of the course. During the inspection operators are checking for anything out of the ordinary. When finished with the inspection, operators will need to fill out the Adventure Course check sheet found in the back of this manual for each inspection.

In the event of severe weather the course should be re-inspected for any damage.

Course Inspection

Structure

- Visually check that all bolts are present and do not appear loose.
- Make sure the track is free of debris and that there is no misalignment.
- Note any rust on the Adventure Course check sheet and notify maintenance until addressed.

Elements

- Ropes should not have any broken wires. If wire is exposed it will not affect the integrity of the rope. However, broken wires should be noted. These broken wires usually occur at a “T” joint. Concerns or questions may be answered by taking a photo and sending it to RCI for further examination.
- All bolts are present and secure.
- One lock nut attached to bolt with at least one thread of the bolt sticking out. Some courses may have two nuts.
- Wood components should not have any sharp edges or pieces that could break off and potentially become a splinter. Check for large cracks that go across the entire length of the wood and move when manipulated. Be aware that cracking and warping of wood is normal and will occur.
- Hardware: all metal and plastic should be examined for sharp edges or cracking

Standard Safety Equipment to be Inspected for Sky Trail®:

- Trail Harness; full body
- Sling line
- ETKs

When inspecting the safety equipment, a good rule is: “When in doubt, throw it out.”

HARNESS

Full body harnesses have three components that should be examined for damage: the webbing, stitching, and hardware. Harnesses should be checked for damage or wear every time they are put on a participant.

I. Webbing

The most common types of damage to the webbing caused by abuse or misuse are cuts, abrasions and chemical damage. If you see any of these problems destroy the harness.

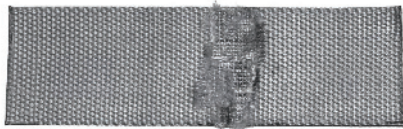
Cuts

Cuts are easy to distinguish and will either be a partial or clean break in the webbing or fibers. Usually this occurs when the webbing comes in contact with a sharp object.



Abrasions

Anytime you see frayed fibers on the surface of the webbing, exposing the cross fibers, it's considered an abrasion. This mostly occurs because a harness has come in contact with a rough surface. It is important that harnesses are not dragged along the ground or stored where the webbing may continuously rub against something rough.



Chemical Damage

Nylon and polyester webbing cannot be exposed to any strong or corrosive chemicals such as acids, petroleum products, acetones, or bleach. Never store harnesses in the same area that you may find some of these chemicals. If you suspect that a harness has come in contact with any harsh chemicals it should be retired.



II. Stitching



Stitching is found in several areas on the harness, mainly at webbing joints and where hardware is attached. Examine all stitching carefully for broken, pulled or cut thread. The thread must not easily be pulled from the harness. The joints of the webbing must not move apart. Occasionally you may see a very minute piece of stitching sticking out from the harness (see picture). This is wear the end of the thread has been cut when sewing was finished. This tiny piece of loose thread is not cause for concern.

III. Hardware



Examine all hardware for signs of deformation including sharp edges, cracks, distortion, or pitting. A small amount of surface rust may develop on hardware and is ok as long as it does not penetrate the surface of the hardware.

All metal hardware should have no more than 5% wear. If wear is seen or suspected, measure with a caliper to assess the amount of wear.

Harnesses must be stored in a cool, dry area away from direct sunlight and any chemicals. Do not allow metal components to bang against each other. We do not recommend storing harnesses at temperatures above 110°F on a regular basis. We recognize the ambient temperatures sometimes reach above 110° F, which is acceptable on occasion.

At no time should the ambient temperature reach 150°F or higher. Harnesses should not be stored when they are damp or wet. Allow to dry completely before storing. Contact with contaminants such as acids, petroleum products, acetone, salt water or bleach must be avoided at all times.

RCI's Recommendations for Laundering a Harness

Laundering normally requires immersion in warm water and adequate rinsing. If webbing is heavily soiled a small amount of mild detergent such as Simple Green may be used. Detergent should be used at ½ oz. per five gallons of water. If detergent is used the harness must be rinsed thoroughly to insure that all detergent is removed. Never force dry or put a harness in a drying machine. Always hang up to dry out of direct sunlight.

SLING LINE

The sling line consists of rope, slider assembly, metal buckle, and two metal ferrules.

I. Rope

Run your hand along the entire length of the rope checking for any sheath damage such as cuts. If the “picks”, the individual squares of thread, are worn down or no longer distinguishable or the core of the rope is visible the sling line must be thrown away. Also feel for any changes in the diameter of the rope as this could indicate stress or wear of the core.



New rope.



Used rope. Note the “fuzzy” appearance, however, individual picks are still easily distinguishable. This rope is safe to use.



Major cut in rope exposing the core.
Rope is NOT safe for use.



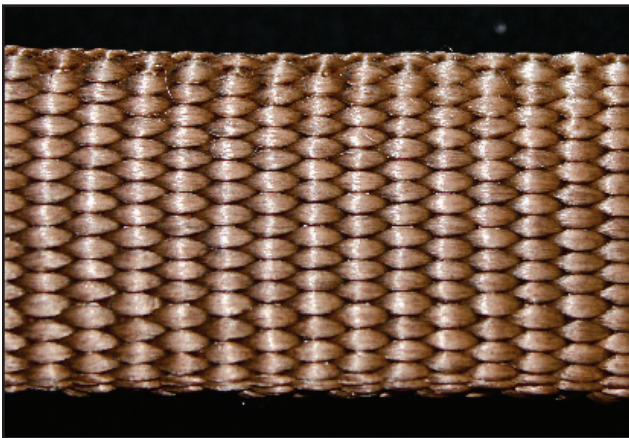
Rope is fraying. Individual picks not visible. Rope is NOT safe for use.

I. a. Nylon Webbing

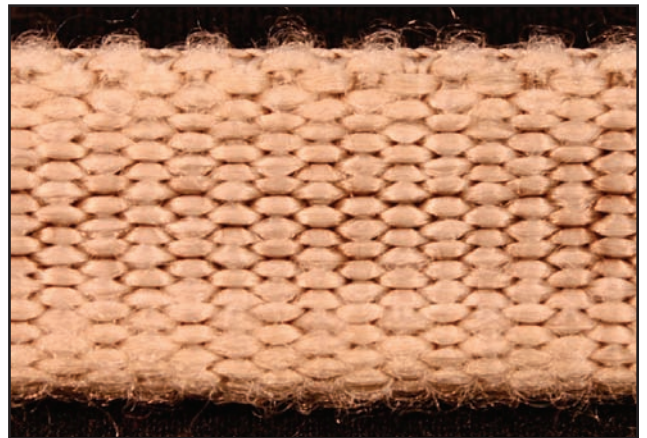
Ropes Courses, Inc. has implemented a new design in the sling line. The new design consists of nylon webbing, a metal buckle for adjustments in the length of the line, stitching and a slider assembly.

When inspecting the nylon webbing of the sling line, run your hands down the entire length of the strap. There should be no major cuts or abrasions to the webbing. You are also feeling for any changes in the thickness of the strap. Major changes in the thickness could indicate damage and the sling line should be retired.

Wear will occur on the nylon webbing and the sides will begin to appear “fuzzy”. Certain areas may tend to wear faster than others. These areas include where the webbing comes into contact with any of the metal hardware, either on the sling line itself or hardware on the harness.



New sling line.
Nylon webbing has not worn yet.



Webbing is beginning to wear.
The sling line is still ok to use.

Stitching occurs in two places on the sling line: where hardware is attached or where the webbing is connected to itself, creating a loop. When examining the stitching look for any loose threads that can be pulled away from the sling line. There could be pieces of thread that are protruding from the sling line. This is where the thread has been cut after sewing was finished. If at anytime a piece of thread is pulled and the stitching continues to unravel the sling line should be retired. Also check that the two sections of webbing that have been stitched together cannot be pulled away from each other. If you find that it is easy to pull the section apart or they can be twisted away from each other, the sling line should be retired.



Piece of thread sticking out where it has been cut after sewing.
This is ok as long as the stitching does not unravel if this piece is pulled on.

Sling lines should be stored in a cool, dry area away from any damaging chemicals such as acids, petroleum based products, alkalines or bleach. The nylon webbing should be kept out of direct sunlight for long periods of time. Prevent dragging the sling line along rough surfaces such as cement or allowing the webbing to continually rub against a sharp object. Sling lines should also never be stored when wet. Allow the sling line to dry completely, out of direct sunlight, before storing.

Occasionally a sling line may become heavily soiled and may need to be cleaned. This should only require submersing in warm water. A mild detergent may be used, such as simple green at a ratio of 1 oz. detergent per 5 gallons of water. The sling line should be rinsed thoroughly and allowed to dry completely out of direct sunlight.

II. Slider Assembly

The slider assembly is attached to the sling line rope and is made up of a drop forged eyebolt, heavy nut, low profile nylock nut and an Ultra High Molecular Weight Polyethylene disk otherwise known as the "puck".

Look for one nylock nut and one heavy nut at the top of the slider assembly and twist the nuts to be sure there is no nylock movement. These nuts "lock" and should not budge when attempting to twist them. Be sure the nut is at least flush with the top of the bolt. Inspect the eye bolt for any deformation of the shaft. If any of the shaft is worn down at any point on the bolt, the slider assembly must be replaced. The puck should be no less than 3/8" in thickness. Use the "no-go" gage to check this. If the gage slides over the puck, do not use the sling line.



Bolt must be at least flush w/nylock nut or have threading sticking out.

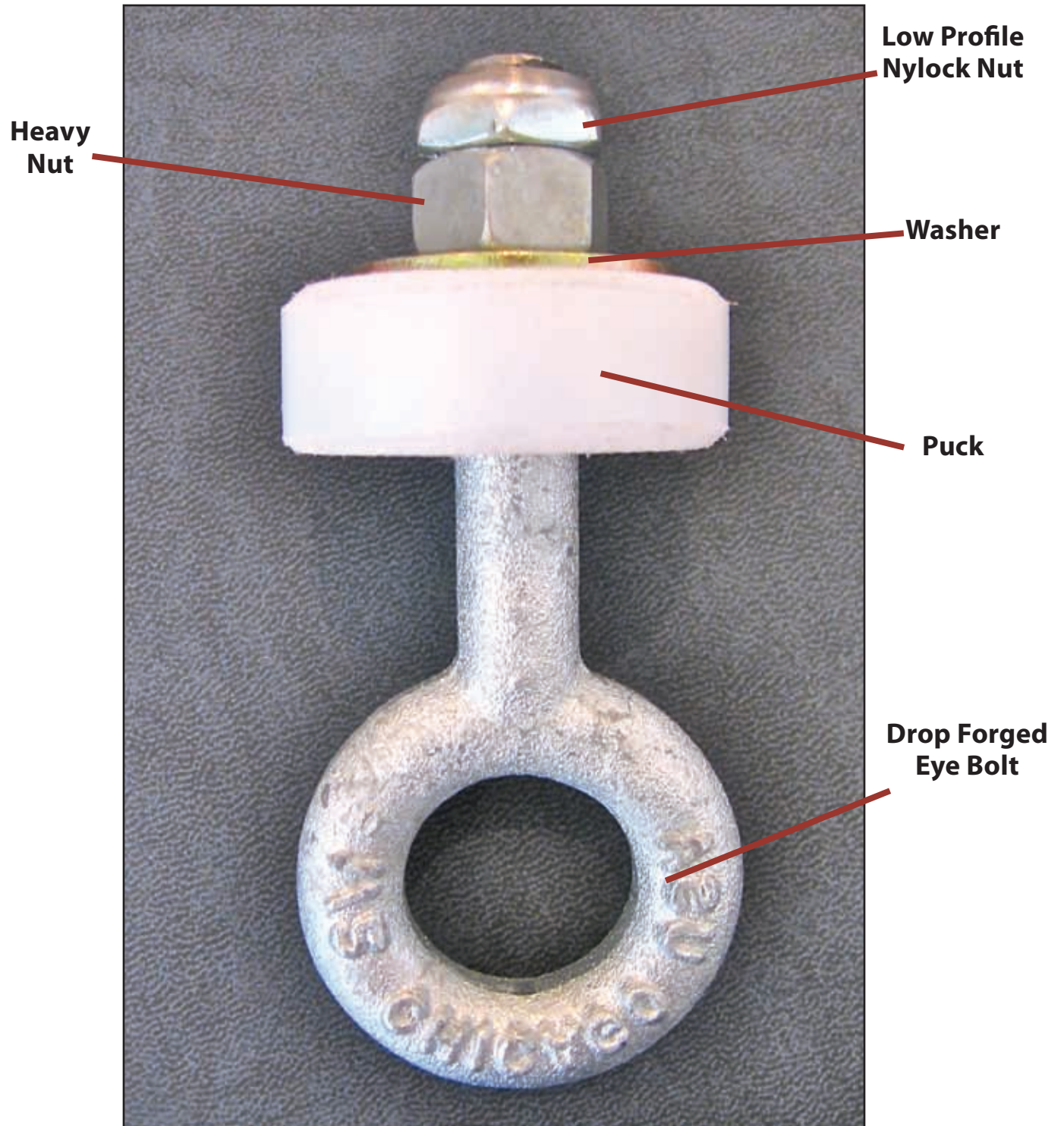


When pucks are replaced, heavy nut will be replaced by another low profile nylock nut. When two low profile nuts are present there must be at least one thread of bolt sticking out.



Example of the fingernail test when checking for proper threading through the two low profile nylock nuts.

SLIDER ASSEMBLY



III. Ferrules and Buckle on Rope Slingline

There are two metal ferrules, which compress to maintain rope strength, located on the sling line. Run your hands over the ferrules to check for any sharp edges. A serial number must be legible on at least one of the two ferrules located on the sling line. If you do not see a serial number, the sling line must be thrown out. Also look for any cracks in the ferrules.



This ferrule is good.
Serial number is present and
easily visible.



A Crack in this ferrule goes all
the way through to the rope
and is only visible looking
down ferrule.

The metal buckle allows for adjustment in the length of the sling line. The buckle should not have any sharp edges, cracks, be bent or deformed in anyway. If the buckle is bent or misshapen the sling line must be retired.



Twisted Sling lines

Occasionally sling lines will become twisted after a lot of use making it difficult to adjust the length. It is quite simple to untwist sling lines by following these steps:

- 1) Pull down on the yellow buckle until it meets the ferrule at the loop end of the sling line.
- 2) Begin untwisting the sling line while feeding the rope back through the yellow buckle slowly untwisting it as it goes through.
- 3) Once all the rope has gone back through the yellow buckle, pull the buckle towards the ferrule at the loop end once again.
- 4) If the sling line remains twisted repeat steps 1-3 until it is no longer twisted.



EMERGENCY TAKE DOWN KIT

All ETKs must have the following items

- Slider assembly
- Steel Rescue Figure 8
- one orange belay rope
- one tan guide rope
- Aluminum Figure 8
- 3 aluminum auto-locking carabiners
- 1 steel auto-locking carabiner
- Nylon rope bag

Check all components of the ETK separately for damage or wear. The scissors should be attached and in good working condition. They must be able to cut.

I. Slider Assembly

The slider assembly used to attach the ETK to the overhead track is the same assembly discussed in the inspection of the sling line and should be examined exactly as mentioned previously.

II. Rope

Just as you would check the rope of the sling line, run your hands over the entire length of the rope. Look for any cuts, abrasions, damage to the sheath or diameter changes. Be sure the individual “picks” are still visible and that you cannot see the core of the rope anywhere. You must check both the orange belay rope and the tan guide rope. If you see any damage to either rope, throw it out.

III. Hardware

Check all hardware including rescue figure 8, figure 8, and carabiners. Inspect the entire piece for sharp edges, cracks, nicks or breaks in the metal. Look for deformation checking for bent or dented parts. Inspect the surface of the hardware for signs of corrosion. On steel pieces, red dust is evidence of corrosion of the basis metal. Corrosion of aluminum is evident by pitting. If wear is suspected use a caliper to determine the percentage of wear. If the hardware has 5% or more wear, it must be thrown out.



**STEEL RESCUE
FIGURE 8**



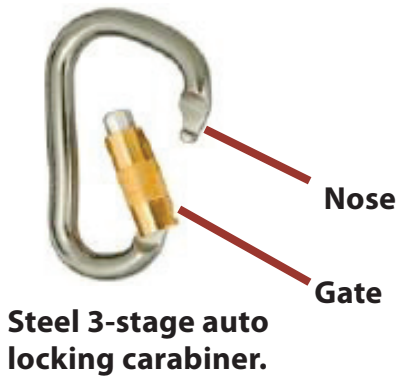
**BLACK ALUMINUM
FIGURE 8**



**SILVER ALUMINUM
FIGURE 8**

Carabiners

Open the gate of the carabiner and inspect the nose for signs of wear, distortion or breaks. Carabiners must rotate and open easily and completely. The gate should close and lock automatically when released. The carabiner must not open under any pressure from any direction unless unlocked.



GECKO



MONGOOSE

Look for any grooves in the metal made by wet, dirty rope. If more than 5% material is worn away from the belay device it cannot be used.

IV. Rope bag

Make sure the rope bag used to house the ropes and hardware of the ETK is in good condition. There should be no holes that would allow the inside components to become damaged. The handles on the bag must be securely attached and the drawstring mechanism should work properly.

Quarterly Inspections

Quarterly inspections must be a 100% visual check of all bolts and a 10% “wrench-on” inspection of the entire course done by trained maintenance staff of your facility.

NOTE: On a brand new course the Quarterly Inspection must be done weekly until there no loose bolts found.

Structure

Maintenance must visually check all bolts on the structure to be sure that they are present and secure.

If surface rust is noted by daily or quarterly inspections on any of part of the structure it should be cleaned off with a wire brush and painted to prevent further oxidation.

All welds should be visually inspected for any cracks. If a crack in a weld is found please contact RCI for the proper welding procedures. Look at the anchorage of the course, checking for any cracking around the base plate. If cracks are found in the base plate please contact RCI.

Be sure that all tracking is aligned properly throughout the course.

Elements

Again, a 100% visual and 10% “wrench-on” inspection of all bolts connecting elements to the platforms must be completed.

Operating staff are responsible for inspecting the elements daily, however, maintenance should perform a similar assessment during their quarterly inspection looking for the following:

- Ropes should not have any exposed or broken wires.
- All bolts are present and secure:
- One nut attached with at least two threads sticking out.
- Wood components should not have any sharp edges or pieces that could break off and potentially become a sliver.
- Check for large cracks that go the entire length of the wood and move when manipulated.
- Hardware: all metal and plastic should be examined for sharp edges or cracking.

AN ANNUAL INSPECTION MUST BE PERFORMED BY THE MANUFACTURER.

Opening the Course

Once the inspection is completed and the course and safety equipment are considered safe, the course may be set up for use. One Emergency Take down Kit (ETK) must be on each level of the course in its designated place. Harnesses, sling lines, and clogs should be set up and ready for use. All restrictions must be removed from the entrance and signage should be easily visible to the public. Utilize the Daily Inspection Check Sheet found in the back of this manual to ensure everything is properly set up.

Steps must be taken to prevent the unauthorized use of Sky Trail®. If it is necessary for all staff to leave the course make sure that all access and entrances to the course are locked. Upon return, staff must complete another inspection. This is especially true if severe weather conditions have occurred.

Closing the Course

When closing Sky Trail® all entrances must be locked and made inaccessible. ETKs, harnesses, and sling lines should be locked in dry storage at room temperature. Check the area around the area for any items left by participants. Utilize the Adventure Course Checklist to ensure that everything is properly stored and closed down.

SECTION III:

PARTICIPANTS



Participant Rules
Outfitting Participants

Participant Rules

- Participants who would like to experience Sky Trail® must be able to understand and demonstrate knowledge of all safety rules to go without an adult supervisor.
- You must be healthy and in good physical condition. This activity is not recommended for anyone with heart problems, back or joint injuries, those who have had recent surgery or women who are pregnant.
- You must be 48" tall to participate in this activity or accompanied by a responsible adult.
- Participant maximum weight is 300 lbs.
- You must safely fit in the harness.
- Ensure that your shoes are secure. No flip-flops or open-heel shoes. Please make sure shoe laces are tied.
- Pockets must be empty.
- No loose objects that could fall such as cell phones and cameras on the course. Eyeglasses should be secured.
- No food, candy or gum in your mouth while on the course.
- Only one participant on an activity at a time unless a child is being assisted by a responsible adult.
- No running, jumping, hanging in harness, falling on purpose or horseplay. Anyone displaying these behaviors will be asked to leave the course for the safety of others.
- Sling line should stay in front of and in between your shoulders at all times.
- Do not touch the overhead tracking system.
- You must notify course manager of any injuries before leaving the area.

Participants who would like to experience Sky Trail® must be able to understand and demonstrate knowledge of all safety rules to go without an adult supervisor.

Participants who would like to experience Sky Trail® must be able to understand and demonstrate knowledge of all safety rules. That is, they must be cognizant. Cognizant is defined as following:

“having or showing knowledge or understanding or realization or perception.”

Another word for cognizant could be “aware”. Individuals going on Sky Trail® must completely comprehend the rules, activities, and the environment of Sky Trail®. Participants who may not understand are those who are developmentally challenged. These individuals may be physically capable of traversing the course, but could have a difficult time understanding the rules and procedures of Sky Trail®. It is possible, however, for these individuals to experience Sky Trail® with a helper. Helpers must stay by the individual at all times and should be over the age of 18.

You must be healthy and in good physical condition. This activity is not recommended for anyone with heart problems, back or joint injuries, those who have had recent surgery or women who are pregnant.

Sky Trail® can require physical exertion by the participant. Participants must climb, bend, stoop, and walk up and down stairs, etc. Those who are not able to easily perform these activities should not attempt Sky Trail®. In the same, anyone with joint or back injuries may re-injure themselves or worsen a pre-existing injury. A slip or fall, while would not cause injury to most participants could be enough to hurt someone with back or joint problems. Some courses may be at heights of over 40 ft. and are not recommended for those with heart problems. Women who are pregnant should refrain from participating.

You must be 48” tall to participate in the activity or accompanied by a responsible adult.

Children under 48” may have a difficult time maneuvering through Sky Trail® without assistance. Sling lines can be harder for them to move around the track, especially in certain corners. Children at this age and younger can also misjudge their abilities to be at higher alone. They will often go on the course and become frightened. Because, only two operators are required to staff Sky Trail®, it would be difficult to operate the course with several participant’s who could require assistance. More than two operators would most likely be needed. For these reasons and based on observation, RCI recommends that any children under the height of 48” be assisted by a responsible adult. A responsible adult should be over the age of 18, fit all criteria pertaining to the rules and they must stay with the child at all times. If the child is under 48” and will be assisted by a responsible adult they must fit safely in a harness to be allowed on Sky Trail®.

Participant maximum weight is 300 lbs.

300 lbs is the manufacturers of the harness recommendations. It RCI policy to follow all recommendations of the manufacturers of our safety equipment.

You must fit safely in a harness.

The full body harness is designed to fit most participants of all shapes and sizes. However, there are occasions where an individual may be too small or too large to fit comfortably, or safely, in a harness. There are a couple of quick checks an operator may perform to know when the harness does not fit safely on a participant.

HARNESS IS TOO LARGE:

If a participant is too small to fit into the harness the shoulder straps of the harness will slip easily over their shoulders. Operators should pull out and down on the shoulder straps to check this. If the harness is adjusted as tight as it will go and the shoulder straps still go over the participant's shoulders, that individual should not be permitted to go on the course.



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HARNESS IS TOO SMALL:

Your facility may have large or extra large harnesses, but there are times when an individual may be too large to fit correctly in a harness. It is simple for operators to check this by making sure that the two metal rings on the front of the individual's harness can touch. If the metal rings cannot easily come together, then the individual should not be allowed to go on the course.



TOO LARGE - RINGS DO NOT TOUCH

The maximum weight limit for an individual to go on the course is 300 lbs. Operators may consider the physical condition of the individual when it comes to the weight limit. If the individual is slightly over 300lbs, but they are in good physical condition, they could be allowed on the course. An example of this could be an athlete. However, the rules of harnessing still apply, if the two metal rings on this participant's harness do not touch, they cannot go on the course. It is also possible that an individual who is under the weight limit may not fit properly in a harness because the two metal rings on their harness do not touch. Operators should use their knowledge and experience when determining which individuals should or should not be allowed on the course.

Ensure that your shoes are secure. No flip-flops or open-heel shoes. Please make sure shoe laces are tied.

Operators should check each participant's shoes to make sure they are secured. At the very least, shoes should have a strap on the back to hold them on the participant's feet. Operators must verify that participant's shoes are secure, especially if a participant is wearing clogs, or Crocs™. Some of these types of shoes have straps, but often they are attached to the front of the shoe or have broken off. If the participant is wearing pants it is not always apparent whether their shoes have a strap, please double-check.

Pockets must be empty. No loose objects that could fall such as cell phones or cameras on the course. Eyeglasses should be secured.

Participants must empty his or her pockets of all contents. They may give their belongings to another individual not going on the course, or put them in a secure location. Your facility should provide a safe and secure area for participants to place their belongings while on the course.

There will be times when a participant will resist taking their belongings out of their pockets. Remind participants that for their safety and the safety of others on the course they should remove any objects from their pockets especially heavy items such as keys, cell phones, cameras, and wallets. An object could fall out and strike another participant on or below the course and cause severe injury.

Participants need to be fully aware of their actions on the course. Cell phones and cameras can cause distractions and should not be allowed on the course, even if a participant has a pocket that zips, do not allow cell phones or cameras on the course. If an operator sees a participant with a cell phone or a camera while on the course, please ask them to exit the course immediately. The participant may put the object in a secure location and then continue on the course.

No food, candy or gum in your mouth while on the course.

Operators should pay close attention to participants, making sure they are not chewing gum or have candy in their mouth as they are going on the course. This is for two reasons: 1) gum and candy could become a choking hazard; 2) It can fall out of the participant's mouth and get stuck on the elements or safety equipment.

Only one participant on an activity at a time unless a child is being assisted by a responsible adult.

This rule is in place to prevent participants from attempting to provoke another participant to fall off the course by pushing, shaking elements, or any other physical method. It also prevents too many participants on one element, which could produce swaying or bouncing of the element and cause someone to lose his or her balance.

It is only a guideline and operators should use their best judgment when enforcing this rule. If one participant is attempting to help another participant that is scared, regardless of age, it is ok for them to do so.

No running, jumping, hanging in harness, falling on purpose or horseplay. Anyone displaying these behaviors will be asked to leave the course for the safety of others.

This rule is mostly self-explanatory. Any of the behaviors above could cause injury to a participant and should be avoided.

Sling line should stay in front of and in between your shoulders at all times.

The sling line is an essential part of the safety system of a Sky Trail®. When participants are traversing through the course they should have their sling line in between their shoulder the entire time. This is to prevent possible injury if the participant falls. Should they fall and the sling line is behind them it will cause them to twist around and could cause injury such as rope burn or to bang their legs onto a part of the element. One way to explain it to participants is to ask them if they can “hug” their sling line. They are not required to hang onto the sling line, but if at any point they can’t “hug” the line, they need to put it in front of them.



Sling line in front of the participant.
Correct way.



Sling line behind the participant.
Incorrect way.

Do not touch the overhead tracking system.

Most participants cannot reach the overhead track. For those that can reach the track, this rule hinders them from using the track as a method of crossing the element such as using only their arms and swinging across the element or wrapping their legs around it and shimmying along the track. Both of these methods of crossing an element could cause injury to a participant especially if they lose their grip and fall. This rule also prevents any injuries to a participant's fingers or hands due to sharp edges in or on the track.

You must notify course manager of any injuries before leaving the area.

In the course of an accident, a manager should be notified and the participant may be asked to fill out an accident report. An example of an accident report form can be found in the back of this manual.

It is important to report accidents and have a participant fill out an Accident Report. This can help determine the cause of the accident and the actions to prevent other participants from injuring their self. If the accident was caused by operator or course error this must be addressed immediately. If the accident was caused by the behaviors or actions of the participant, filling out the proper paper work can help with preventing further claim by the participant.

Outfitting Participants

Footwear



Participant must wear secure shoes while experiencing Sky Trail®. At the very least, participant's shoes should have a heel strap to secure them on their feet. Your facility may want to provide rubber clogs, or a type of secure shoe that is easy to sanitize, for participants to use should they have inappropriate footwear. Several different clogs in child and adult sizes should be available to participants.

Spray sanitizers, such as Lysol disinfectant spray, and rags work best for cleaning rubber/plastic clogs. Shoes should be sanitized after every use. It is also beneficial to bleach clogs one or twice a week depending on usage. Dilute bleach in water and soak the clogs for approximately 2-3 minutes. Wipe out with a rag and allow clogs to dry completely before use. Replace clogs as needed.

Most times it is easier for participants to choose a pair of clogs before being outfitted for their harness. Clogs should fit tight enough so they will not easily fall off the participant's feet. Take care to ensure that the clog is not too tight with the possibility of causing blisters. The participant's toes should not be sticking out through the vent holes at the bottom of the clogs and the strap should rest on the back of the participant's ankles.

Harnesses

Participants wear a full body harness when experiencing Sky Trail®. The harness fits around the upper body and legs to support the participant's entire body. Try to consider the size of the participant before outfitting them with a harness. Harnesses are available in several sizes to accommodate most heights and sizes of people. The harness is designed to fit over all layers of clothing, including jackets and coats, and should be adjusted as close to a participant's body as possible.

First fasten and adjust the chest strap. The strap should rest in the middle of the participant's chest. Next, adjust the shoulder straps. Shoulder straps should always be adjusted before leg straps. Shoulder straps should not come down over the participant's shoulders when properly fitted.



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Lastly fasten and adjust the leg straps. Leg straps should fit around the legs so they hug the seat of the participant. They must be tight enough so it is difficult to fit two fingers between the strap and the participant's leg. However, there should be some wiggle room to account for movement on the course and to prevent cutting off circulation in the legs.

Sling Lines

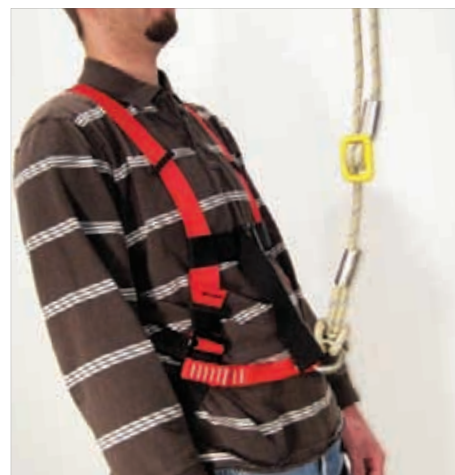
Sling lines are comprised of nylon rope, slider assembly, a metal buckle that allows for adjusting the length of the sling line and two metal ferrules. The sling line should be adjusted so that there is the appropriate amount of slack in the length of the rope. Not enough slack could make the sling line difficult to maneuver through the track because of too much tension in the rope. Too much slack could allow a participant to become injured should they fall off an element or platform. Adjustments to the sling line are best made when the participant enters the Sky Trail®. Once the puck is inserted into the track, adjust the participant's sling line to the appropriate length. When pulled away perpendicular from the participant's body, the sling line should form an "L" shape. The sling line should not droop below the participant's waist or be too tight so the participant may have to stand on their toes on certain elements on the course. The operator may slide the buckle up or down to make an adjustment in the slack of the sling line.



Sling line length - Correct

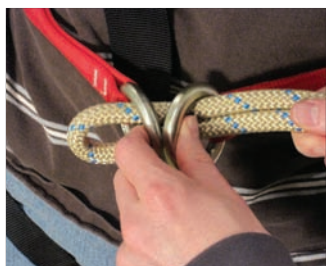


Sling line length incorrect -
TOO LONG



Sling line length incorrect -
TOO SHORT

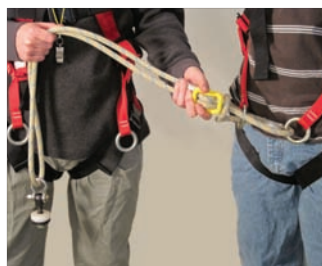
The sling line is attached to the two metal rings in the front of the harness by using a girth hitch. To make a girth hitch push the loop end of the sling line through both metal rings. Once the loop is through both metal rings, place the slider assembly through the loop. Pull the sling line completely through the loop until the rope is tightened all the way down onto the two metal rings. You may have to push one of the metal ferrules through the metal rings when tightening the rope. Make sure the sling line is through both metal rings and is secure.



Step 1 of girth hitch.



Step 2 of girth hitch.



Step 3 of girth hitch.



Finished girth hitch
done correctly.

SECTION IV: **EMERGENCY PROCEDURES**



Emergency Action Plan

*Emergency Take Down
Procedures*

General Considerations

Emergencies that arise on the Sky Trail® are defined as sudden and often unexpected occurrences that demand immediate action to maintain safety. Participant or medical situations are usually the cause of emergencies, but other situations can cause an emergency as well. As an operator, you are responsible for determining when an emergency exists and taking appropriate action.

If an emergency arises on the course, the operators must decide what course of action to take. In many cases, emergencies on the course can be resolved by having the operator go out to the participant and assist them back to the exit area. If, however, a participant's medical condition would be threatened by staying on the course or by moving to the exit, an Emergency Take Down procedure must take place.

Emergency Action Plan (EAP)

Managers and staff should have an Emergency Action Plan (EAP) in place in the event of the need to quickly remove a participant from the course due to a medical emergency. These medical conditions may include, but are not limited to: heart attack; seizures; asthma attack; unconsciousness. All staff members should know what their participation would be in the EAP.

The EAP should also include what to do in the event of severe weather conditions (tornado warnings, lightning, earthquakes, etc.), fires and anything that may warrant the immediate evacuation of participants off the course.

RCI highly recommends that all staff have a whistle on their person at all times while operating a Sky Trail® course. Whistles are helpful with sounding alarms and gaining the attention of participants on the course. Included in the EAP should be the proper alarm calls used when alerting others to an emergency. For example:

- One, long, repeated blow on the whistle indicates to other staff that there is a medical emergency.
- Two, short blows on the whistle indicates a severe weather warning and the need to evacuate all participants off the course.

Please have an EAP in place before opening your Sky Trail® and be sure to practice these procedures on a regular basis so that all staff are familiar and comfortable with them.

It is a RCI policy that First Aid/CPR be available to all participants and implemented in an appropriate manner. Operators for Sky Trail® should be certified in CPR and First Aid as they will be the first responders to any medical emergency on the course. Operators should never put themselves in a dangerous situation or attempt any heroic rescues without full knowledge and understanding of medical aid. If an operator is unsure of how to correctly apply First Aid or perform CPR, it is better to wait for professional medical persons to arrive.

Infection Control

RCI recommends that your program have a proper infection control policy that is up-to-date with the latest information in the field and meets all applicable standards for your organization. Infection control policies include those policies that deal with the management of infectious materials. This program should be understood and followed by all staff members.

Emergency Take Down Procedures

The Emergency Take-down procedure must be able to be safely performed and completed in under 2 minutes.

Once it is decided by an operator that it is unsafe for a participant to continue on the course or a participant is unable to get to the exit, the participant will be lowered to the ground using the emergency take down kit. The Emergency Action Plan (EAP) should be activated to notify all staff on grounds and to activate professional emergency personal should they be needed.

All other participants on the course should be asked to cease any activity and go to the nearest platform away from the rescuee. Remember to remain calm while acting in a quick and diligent manner.

The operator nearest the ETK on the same level as the rescuee slides the bag in the tracking system and makes his/her way to the same element that the rescuee is on. Meanwhile, the operator on the ground will ensure that people and objects below the rescuee are cleared and they have the Figure 8 and carabiner in hand.

At this point, the procedure of the Emergency Take Down will begin.



Top operator removes bag handle from carabiner, loosens the drawstring and when prepared to drop the bag yells "**ROPE**" to the bottom operator.



The bottom operator looks around to be sure the area is clear and there is no one in the way or standing below the top operator and rescuee. When they are positive it is safe, the bottom operator yells "**CLEAR**".



The top operator then drops the bag directly below where they are standing. NEVER throw the bag towards the bottom operator.



When the bag drops, approximately 3-4ft of rope will be hanging from the Recue Figure 8 with a black and gold carabiner attached to the end. As soon as the top operator drops the bag, they are to take the carabiner and attach it to the two metal rings on the front of the rescuer's harness. The rescuer's sling line will still be attached. AS SOON as the carabiner is hooked into both rings the top operator yells "ON BELAY?" This indicates to the bottom operator that the belay rope is attached to the rescuer. At the same time, this is a question asking the bottom operator if they have belay rope attached to their harness and are supporting the weight of the rescuer.



When the bottom operator has the belay rope properly running through their Figure 8 belay device, the carabiner is attached to their harness, and all of the slack is taken up on the belay rope completely supporting the weight of the participant, they respond with "BELAY ON". This indicates to the top operator that the bottom operator is supporting the weight of rescuer and is prepared to lower the rescuer. The bottom operator must be perpendicular (at a 90° angle) to the rescuer. This prevents the rescuer from swinging out and striking an element as they are lowered.

It is at this point that a series of checks and commands begins. The checks are started by the bottom operator.



Bottom operator: "Check 1"

The carabiner attached to the rescuer's is locked, secured and goes through BOTH metal rings on the rescuer's harness. Top operator must do a squeeze test of the carabiner.

If it is secure the top operator replies: "Check"



Bottom operator: "Check 2"

The top steel carabiner connecting the rescue figure 8 to the slider assembly is locked and secured. The rope though the rescue figure 8 is not twisted and there are two clear lines, one connected to the rescuer and one running down to the bottom operator.

If it is secure the top operator replies: "Check"



Bottom operator: "Check 3"

The bottom operator double-checks the carabiner attaching the figure 8 to their harness (squeezes it) and that the rope is clearly running through the figure 8 and is not twisted.

If all is secure the bottom operator replies: "Check"



Bottom operator: "Check 4"

Looks behind them to make sure the rope is not twisted, there aren't any knots in the rope and that no one is standing on the rope.

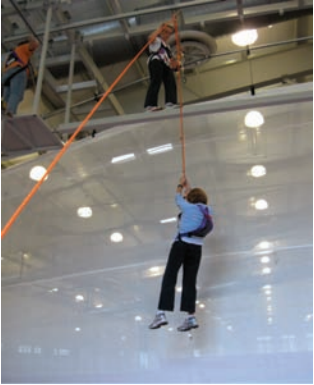
If the rope is good the bottom operator replies: "Check"



When all checks are done the bottom operator yells: "Cut"

The top operator will then cut the tan sling line from the rescuer, checking again that the belay rope is securely attached to the participant.

ALWAYS CUT TAN. NEVER CUT ORANGE (unless an operator is being rescued).



When the top operator is certain that everything is properly attached and it is ok to begin lowering the rescuee, he/she yells: "**DESCENDING?**"



This is also the time when the bottom operator double-checks everything on their end. When they are ready to begin lowering the rescuee they respond by yelling "**DESCEND ON.**"

At this point the top operator guides the rescuee beyond any activities. At the same time another staff member or person may begin pulling the second rope, or "guide" rope, also attached to the rescuee to pull them away from the elements and beams as they are lowered. The bottom operator lowers the rescuee by playing, or feeding, the belay rope through the figure 8. The friction created between the two devices makes it possible for even a person of small stature to lower someone that is larger than they. The bottom operator controls the rate of speed with which the rescuee descends by always making sure both hands are on the rope at all times.

Other staff on the ground should help the rescuee have a safe, soft landing. Once the rescuee has been lowered to the ground, their care should be turned over to professional medical personnel. Staff should take whatever first aid measures they are competent to do and attend to the rescuee until professional rescue personnel arrive.

Once the rescue has been completed and the rescuee is out of the area, the ETK should be taken down, inspected, re-packed, and put back in it's designated spot on the course. The course can then again be ok for use by other participants.

Guide Rope Use

Some ETKs also include a guide rope. As stated previously, a tan, “guide” rope will be attached to the belay rope connected to the rescuer’s harness by a carabiner. This rope will come down with the rope bag and should be thrown away from the bottom operator and only used by a cognizant adult, whether staff or standby. This person does not have to be certified in the ETD procedures but should be guided by staff as best as possible. Guide rope management should be as follows:

- Stand as far away from the element the rescuer is lowered from.
- Lean back with legs bent at the knees and feet shoulder width apart.
- Shift all weight to as low gravity as possible.
- Coordinate pulling rope with the speed at which the bottom operator is lowering the rescuer.
- Understand that using the guide rope is a serious task and pay close attention to your surroundings.

Emergency Take Down procedures should be practiced regularly by course operators. RCI recommends that the ETD procedures be practiced daily by newly trained staff for the first couple of weeks of the operation of a new course. Once operators are fully competent in these procedures, it should be practiced at least twice a month. Supervisors and staff Operator Trainers should be present for all practices and should continue to monitor their staff’s abilities to perform an ETD quickly and most importantly, proficiently.

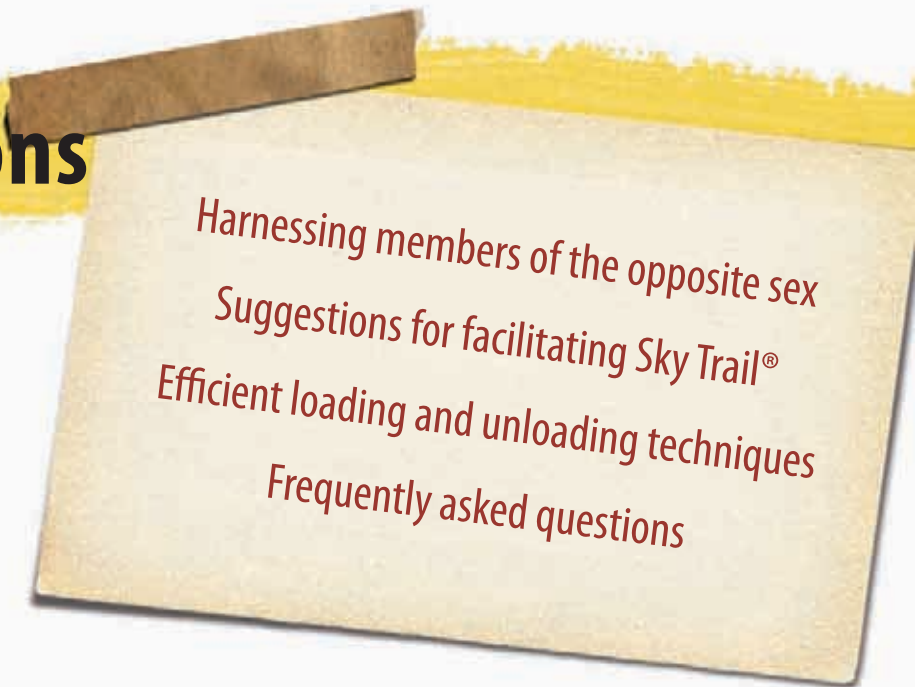
On Going Safety Management Guidelines

RCI recommends all facilities operating a Sky Trail® maintain records of:

- Maintenance and inspections
- Incidents and accidents
- Internal review of incidents as related to the EAP
- Site specific appropriate EAP

SECTION V:

Recommendations and Guidelines



Harnessing members of the opposite sex
Suggestions for facilitating Sky Trail®
Efficient loading and unloading techniques
Frequently asked questions

Harnessing members of the opposite sex

Because the harness used for Sky Trail® is a full body harness with a chest strap and two leg straps that go between the legs of the participant, it may create slight discomfort for male operators harnessing female participants or vice versa. Communication and large, visible gestures are the best way to ensure that both parties are comfortable. Always talk to the participant and explain what you are doing to avoid any confusion or surprise on the participant's behalf.

Chest Strap

Harnessing female participants can become uncomfortable for male operators. This is especially true of women who may have a larger bust. A few of the ways to appropriately buckle the chest strap on a female participant are:

- 1) Operators may ask a female participant to buckle her own chest strap while the operator demonstrates where the chest strap should rest. The participant may also adjust her chest strap so that the harness fits properly. The chest strap should rest just above the participant's chest.
- 2) A male operator may ask a female operator in the area to assist with harnessing a female participant.
- 3) Operators comfortable with buckling the chest harness can do so. The most appropriate way is to take both ends of the chest strap and move them above the participant's chest and then buckle and adjust the strap.

Leg Straps

The harness has two leg straps that must go in between the legs of the participant and buckle at their hips. The most appropriate way to harness an adult is:

- 1) Once the chest buckle is fastened and both shoulder straps have been adjusted to proper length, ask the participant to stand with their feet apart so that their legs form an upside down "V".
- 2) Standing to the side of the participant, stoop down and grasp the leg strap by the participant's knee. As you stand upright, bring the strap up over the participant's knee to the outside of their hip. You can then buckle and adjust the strap without being near the groin region of the participant.

Standing or stooping directly in front of the participant could make them or the operator uneasy. Standing to the side of a participant and communicating clearly what your actions are will make everyone more comfortable.

You can allow participants to fasten and adjust their leg straps, however, participants tend to twist the straps, which can make the straps more difficult to adjust.

Harnessing Children or Young Participants

It is easiest to harness children while sitting down. This avoids constant bending and stooping which could lead to lower back strain. The child should stand facing the operator. Buckle and adjust the chest and shoulder straps first. Then, ask the child to stand with both feet apart so that their legs form an upside down "V". Grasp the leg strap down below the child's knee and pull the strap out towards yourself while bringing it up to the buckle at the child's hip. You can then ask the child to turn to the side accordingly so that you can adjust each leg strap.

Suggestions for Facilitating Sky Trail®

RCI has been manufacturing and operating Sky Trail® courses for several years. It is with our personal experiences that we offer suggestions of facilitating Sky Trail® in a safe and efficient manner. Some of these situations may include large groups, long waiting lines and approaching disruptive, or unruly, participants.

It is highly recommended that operators carry a whistle at all times for emergency uses such as sounding an alarm and to quickly gain the attention of participants on the course.

Large Groups

Certain Sky Trail® courses may operate for groups only. Others that are open to the public may experience large groups of participants that want to go on the course together. Both situations can be facilitated using a similar approach. The number of participants allowed on a course at one time directly coordinates with the number of elements a course has. The rule for capacity is one participant per element. This is not, however, because of weight or the strength of the equipment. The course and safety equipment are designed to support a considerable amount of weight and pressure. A controlled number of participants, however, can help prevent situations such as:

- Too many participants crowding onto a single platform making it uncomfortable and stopping the flow of traffic.
- A large number of participants can prove difficult for operators to monitor.
- Too many participants may become unruly and challenge each other to start behaviors that are unsafe or against the rules.

What is the easiest and most efficient way to harness, attach sling lines and facilitate large numbers of people on the course at one time?

RCI has found that designating specific areas (i.e. deck, ground platform, patios, etc.) for harnessing and attaching sling lines has been the fastest to outfit large groups of participants. Ask participants to come into the area and line up standing shoulder to shoulder with at least 12" of space between them. Once participants have lined up, operators can begin to issue the appropriate size harness to each participant. When all participants have a harness on, the operator/s can begin going down the line and assisting each participant with buckling and adjusting their harness so that it fits correctly. This is also a great time to review the safety rules and procedures of Sky Trail® with all the participants.

Once all participants are harnessed, operators can attach a sling line to everyone's harness by using the girth hitch. Do not allow the sling lines to drag or sit on the ground. Ask participants to hold onto the slider assembly and keep the rope off the ground. Now, loading a large group of participants onto the course can be done easily.

If a group has reserved the course and will be the only participants on it, then it is quite simple to facilitate them. Depending on the size of the group and the time allotted, it may be easiest to split them into two or three smaller groups. If the total number of participants in the group are close to the maximum number allowed on the course at one time, obviously, all participants may go on at once and maximize their time on the course. However, if the group is over the maximum, it may be best to split the group into smaller groups and allot a time limit for each.

Most likely, there will be a limited number of harnesses and sling lines. While one group is up on the course, operators can harness those who are waiting. Harnessing as many participants as possible will help with transitioning groups on and off the course in a timely manner. If it is not possible to harness all participants who are waiting, it is best to ask participants coming off the course to find someone of similar height and size and so they can exchange their harness with that person. Less adjusting will have to be done if participants can exchange harnesses with someone of similar size, therefore, lessening the time it will take to harness those participants that are waiting.

Resolving long lines of waiting participants

If a Sky Trail® is open to the general public it may operate different than the scenario above. If long lines of people waiting to experience the course develop, it may be beneficiary to implement a time limit on the course. This will help to ensure that those who are waiting will not be standing in line for too long. A standard 6 pole, two -level course, with a time limit of 10-15 minutes for each participant is usually sufficient. A time limit should only be used to move traffic through the course in a timely manner and is not necessary if the course is not busy. When lines form it is more efficient to harness large groups of participants and rotate them on and off the course. It may help operators to assign each group a number or name (i.e. "you are group 'one'" or "you are the 'Flyers'"). This allows an operator to call out a group name or number when recalling a group, rather than trying to remember the individuals in each group. When the decision is made to establish a time limit, RCI has found that it easiest to equip the operator responsible for loading and unloading participants with a stopwatch in order to keep time. Timing should begin when the last participant in a group enters the course.

Approaching Unruly Participants

Occasionally a participant may become disruptive on the course. They may blatantly disregard the rules and disobey operators when asked to stop their behavior. Different factors such as company policy, the number of participants on the course, and the age of the disruptive participant will influence the operator's course of action.

If a participant becomes unruly and begins to behave in an unsafe manner, it is important for the operator to address this participant and stop the behavior as soon as possible. Most disruptive participants will cease their behavior once approached by an operator. An example of such a situation may go as follows:

Several adolescent participants are on the course. The operator on the course notices a particular participant starts to become extremely comfortable on the course and begins running across elements, falling on purpose, and hanging in their harness. The operator decides to address this participant before s/he injures themselves or another

participant. The operator should first blow their whistle to get the attention of all participants on the course. Once all activity has ceased the operator can then directly address the participant whose behavior has become unsafe. In a calm manner the operator can then say:

"I noticed you have started running across the elements and hanging in your harness. I am asking you to stop this behavior or I will have to ask you to get off the course."

The operator could also choose to ask the participant to come to them and then ask the participant to stop their behavior. Most participants will then stop their behavior. It is important for the operator to remain calm and speak in a respectable tone to avoid upsetting the participant.

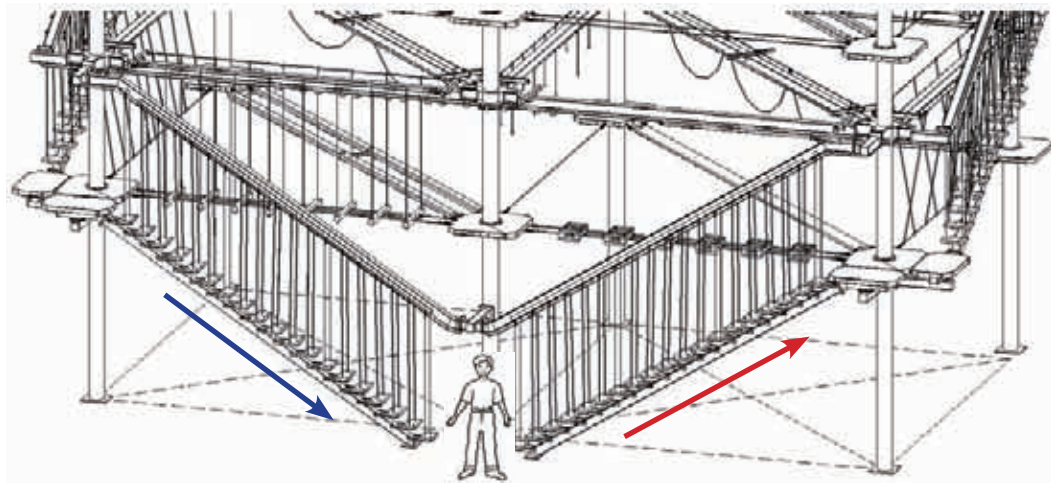
Again, most participants will cease their unsafe behavior. Sometimes, however, a participant disregards the first warning and continues their behavior. At this point it is necessary to ask the participant to leave the course. It is evident that the participant is not willing to listen and may become a hazard to them self, other participants or staff. This situation would be handled similar to the example above. The operator would blow their whistle to get the attention of all participants. When all activity has ceased the operator should ask the unruly participant to meet them at the course exit. When the participant and operator have arrived at the exit, the operator will either direct or escort the participant off the course. Explain that the rules are in place for their safety and the safety of others and because they did not obey these rules they must now leave the course.

In the event that a participant is unwilling to get off the course or becomes confrontational, the operator should call a manager or security on grounds. Operators should ask all other participants stop their activity and stay on a platform until the disruptive participant is off the course. This type of behavior is uncommon and will likely only occur in extreme situations. Remember, it is not the responsibility of an operator to put their self in any danger in order to persuade a participant to get off of the course. At no time should an operator attempt to physically remove any one from the course. Operators must be familiar with their company's policies and procedures.

On occasion, a participant may become disruptive before going on Sky Trail®. The most common situations occur because of the use of alcohol. A participant who is under the influence of drugs or alcohol should never be allowed on Sky Trail®. If an operator should suspect that a person is intoxicated they may politely refuse the participant or contact a manager/ supervisor to approach the individual. If a participant's behavior is not related to drug or alcohol, but they are disruptive prior to going on the course, an operator should reserve the authority to refuse them. Further instances should elicit the help of upper management or security.

Efficient Loading and Unloading Techniques

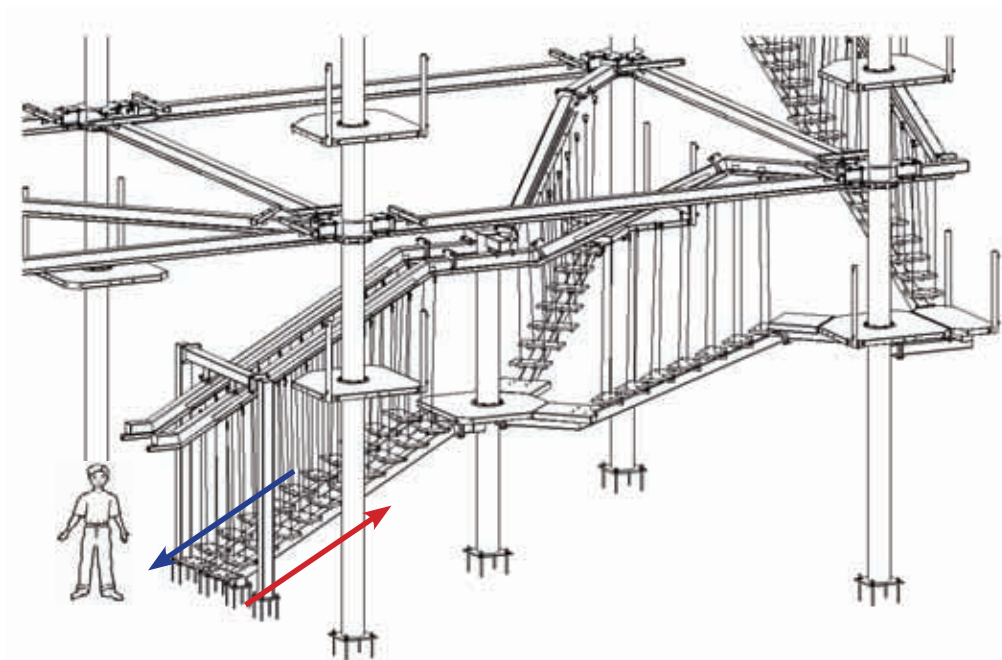
For a Sky Trail® with two separate inclines (stairs), designating one as an entrance and the other as an exit allows for a better flow of traffic on and off the course. Certainly, there will be participants who get to the top of the entrance incline and become too scared to go any further. These participants should be allowed to come back down the same set of stairs.



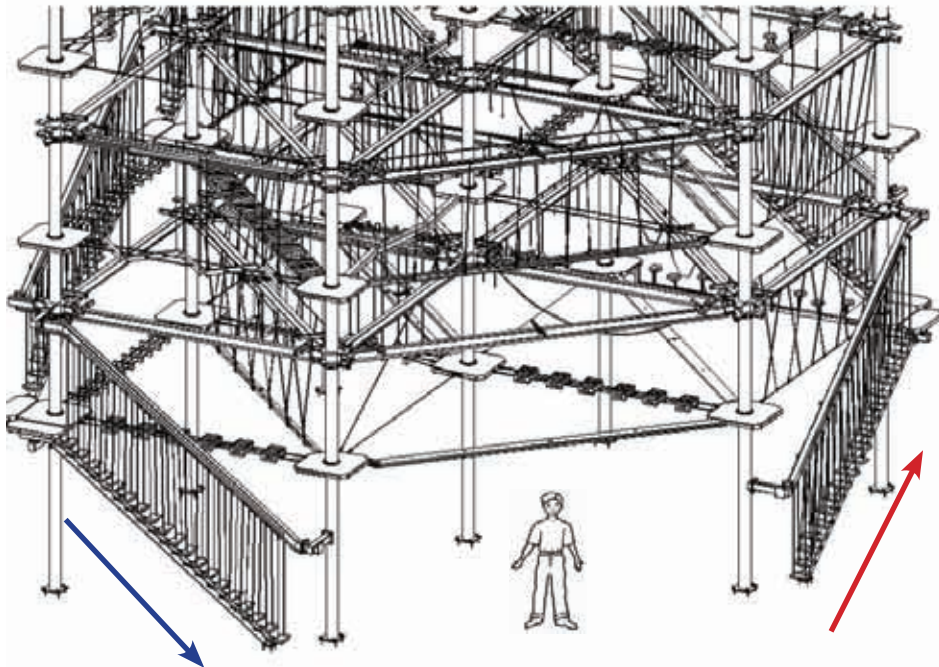
This course has two incline elements (stairs) with a joint track and a single entry point. Participants may go up either incline once their puck is in the track. Traffic will flow easiest with one designated "Entrance" and one "Exit". Operators should place himself or herself in the middle to regulate the flow of traffic and prevent congestion.

→ = Entrance

← = Exit



This course also has two incline elements, however, the entries are separate and not on a joint track. This type of entry allows the Operator to choose which track their puck goes into. Operators should place himself or herself in front of the two entries and again, designate one as the "Entrance" and the other as the "Exit".



This last example could prove to be slightly more challenging for an Operator as the incline are farther apart. Depending on the size and amount of traffic on a course like this, more than one operator may be needed to staff the loading and unloading station. When only one Operator is present, he/she should stand in between both inclines to assist both sides. Designating an "Entrance" and "Exit" is an important strategy when operating a course like this.

Assisting Young Participants

A majority of participants who go on Sky Trail® are children ages 7-12 years old. Many children do really well on the course. Unfortunately, some children are not prepared experience the height of the course and they may react in different ways. Below are some common reactions children have and how to handle the situation appropriately.

1) **Child freezes up.**

Operators should never pressure a child to go on Sky Trail®. If a child is scared, talk in a calm, reassuring voice. An operator may encourage the child to try one of the easier elements or assist the child across an element, or two, to help the child gain confidence. If the child is on an element away from the operator, the operator should immediately go to the child. Help them to the nearest exit if they would like to get off the course. Operator may assist a child through the course as long as the operator is still able to observe ALL participants on the course.

2) **Child panics.**

An operator should go to the child immediately. Reassure the child and talk in a calm voice. Many scared or upset children will ask the operator to hold their hand and physically guide them through the course to an exit. Once the child has made it to the exit it is important to make the child feel good about their self. Occasionally, the child will want to continue through the course alone once their initial fear is over.

3) Child urinates in their harness while on the course.

Facilities and operators should take all precautions to prevent a child urinating their harness. Most times this happens because a child has been waiting in line for long periods of time to get on the Sky Trail®. RCI recommends two things to remedy this situation. 1) If a child is spotted that may need to use the restroom, or is overheard saying they need to use the restroom, operators should encourage the child to use the restroom and return to their place in line. 2) Signs should be posted addressing this issue. Signs should clearly state that those who are waiting in line and may need to use the restroom may do so without the penalty of losing their place in line.

When an occasion occurs where a child does urinate in their harness, the child will most likely be very embarrassed and will not want anyone to know. At times it will be obvious and others it will not. If you suspect a child has urinated in their harness be compassionate and understanding and never draw attention to a child. Remove the harness from the child. If your facility has an area for cleaning harnesses take the harness to be cleaned as soon as possible. If the harness cannot be cleaned immediately, it should be hung up to dry out of direct sunlight and cleaned at first convenience.

If urine is on the course, operators should clean it off as soon as possible. Prevent other participants from traversing the area with the urine. Rinse the area several times with warm water. Allow the area to dry.

4) Upset parents.

Occasionally parents watching their children on the course become upset for a couple of reasons. Either they are frustrated that they cannot help their child or they may believe their child is legitimately in danger.

At Sky Trail®, sometimes it is hard for the parents who are observing their child on the course to know exactly what is happening. It is possible that from where they are observing, it is difficult to see or hear what is taking place. Many times parents think their child is stuck when, in fact, the child is taking his/her time choosing which direction they would like to go or may be waiting for another participant to finish an element. Operators should always have their full attention on the participants and be prepared to assist a participant at any time, especially a child. Operators who are confronted by an upset parent should always remain calm. Reassure the parent that their child is safe and an operator on the course will assist their child. Staff approached by a parent should be sure the operator on the course is aware of the situation and attends to the child immediately.

Most times these situations are a misunderstanding. However, be sure to check on the child for the parent regardless if you believe the child to be ok. This reassures the parent that you care about the well being of their child. If a parent becomes irate or uncontrollable for any reason contact upper management immediately.

Frequently Asked Questions

Sky Trail® operators should be prepared to answer several questions from participants, parents of children who are going on the course, and the general public. It is common to be asked the same questions over and over, but remember, this is a new experience for each participant. Operators may be very familiar with the course and how it operates, but the participants are not.

Some of the most common questions you should be prepared to answer are as follows:

1) What is this? How does it work?

Explain that Sky Trail® is a high adventure ropes course with a unique closed tracking system that allows participants to go throughout the course without the need to disconnect their sling line at any time. Participants have the ability to choose their path through the course and go at their own pace. Operator's can also explain and demonstrate how the full body harness, sling line and tracking system work.

2) What happens if I fall?

Again, educate participants on the different components of their safety equipment. Reassuring them that should they lose balance or slip off any part of the course the harness and sling line will catch them. Participants will only fall a couple inches and end up sitting in their harness. They can use their sling line to pull themselves back up onto the element or platform. An operator on the course can assist them if they need help.

3) Does someone go on the course with me?

There are professionally trained and certified staff on the course at all times if a participant should need assistance, however, the staff member does not follow each individual around the course. If a participant appears apprehensive or a parent is questioning a child's ability to go through the course alone, suggest that an adult accompany the child to make the experience more fun.

4) Why do my pockets have to be empty?

Many adult participants will ask this question, especially in regards to bringing a camera on the course with them. Explain that for the safety of all participants, any heavy objects (i.e. keys, wallets, cameras, cell phones, etc.) are at risk of falling out of a participant's pockets and injuring anyone on a lower level or standing underneath the course. Cameras with wrist bands are still not safe because the band could get caught on an element and break. Eyeglasses are another item to watch for. Be sure a participant's glasses are secure. If a participant can go without their glasses, suggest that they remove them or they may use a band to secure them on their head.

5) How many people have fallen off the course?

Unfortunately, some people believe that it is possible for participants to fall completely off the course and become severely injured or die. Explain the safety features of Sky Trail, including the tracking system, the sling line and the full body harness. Let the questioner know that it is virtually impossible for anyone who is outfitted with the correct safety equipment to fall off the course.

SECTION VI:

Glossary & Paperwork

Terms

Written Test

Daily Inspection Check Sheet

Accident Report Form

Terms

Belay - Refers to the act of attaching a secure rope to a person to offer stable support while allowing person to safely ascend or descend from a climbing structure or ropes course.

Carabiner - An oblong metal ring with one spring-hinged or screwed gate side that can be used to quickly and reversibly connect components in safety-critical systems.



Steel



Aluminum

ETK - Emergency Takedown Kit. Used to bring a person off the course in the event of an emergency.



ETD- Emergency Take Down.

Ferrules - Type of metal object generally used for fastening, joining or reinforcement



Figure 8- A friction device in the shape of the number 8, which is made of aluminum and used in conjunction with the belay rope by the operator on the ground to lower the rescue during an emergency take down.



Policies* - The written governing principles developed by RCI and cannot be changed without written RCI approval.

Procedures* - Procedures are the methods of action developed by RCI that must be adhered to when operating a Sky Trail®.

Puck - Ultra High Molecular PolyEthylene disk that is inserted into the overhead tracking system.



Rescue Figure 8 - Belay device made of steel with two “ears” to prevent belay rope from slipping up to the top and forming a girth hitch, which can strand the rescue and not allow them to be lowered.



RCI - **Ropes** Courses, Incorporated

Rules - Specifications or regulations that must be adhered to.

Slider assembly - An assembly made of a swing bolt and shackle with an Ultra high Molecular Weight PolyEthylene disk that is inserted in to the steel overhead tracking system.



Sling line – Safety lanyard made of nylon rope attached to slider assembly.



*Written approval must be attained from Ropes Courses, Inc. in order for your company to change.

SKY TRAIL® WRITTEN TEST FOR OPERATOR CERTIFICATION

DATE: _____ NAME: _____

ORGANIZATION: _____

1. What makes Sky Trail® unique from other high ropes courses? Circle ALL that apply.

- A) The full body harness. B) It requires transferring to get to the next obstacle.
- C) The ability to pass other participants at each platform.
- D) The overhead tracking system. E) The belay rope.

2. A trainee may still become certified as an operator if they miss the first day of training as long as they finish the training at another time.

TRUE

FALSE

3. An operator certification is valid for how long?

- A) Two years.
- B) Six months.
- C) As long as you are employed through your organization.
- D) Both A and C
- E) None of the above.

4. Staff are allowed to go on the Sky Trail® without being attached to the overhead track as long as another operator is present and it is under 2 minutes time. Circle one.

Absolutely not In case of emergencies only Before the course is open to the public.

5. When performing a safety inspection on the slider assembly, it should be retired:

- A) When the puck width is 3/8" or less. B) More than 5% wear of the eye bolt is noted.
- C) Either A or B D) Surface rust is noted on the metal.
- E) All of the above.

6. Label the slider assembly with the letter of the correct part.



- A) HEAVY NUT
- B) DROP FORGED EYE BOLT
- C) WASHER
- D) LOW PROFILE NYLOCK NUT
- E) PUCK

7. When on the course, it is essential for operators to stop any behaviors before they become unsafe. List two behaviors that are considered unsafe and how you would go about getting participants to stop their behavior.

1.

2.

8. According to the manual, leg straps should always be adjusted before shoulder straps.

TRUE

FALSE

9. List the three components of a full body harness.

1. _____

2. _____

3. _____

10. The Sky Trail and safety equipment should be inspected by operators when?

Circle one.

End of the day

Once a week

Prior to use

Once a month

11. Mark each photo as CORRECT or INCORRECT.



12. Place the letter of the following statements under the proper heading.

TRUE

FALSE

- A) Participants should remove outer layer of clothing before being outfitted with a harness.
- B) Leg straps should be tight enough so it is difficult to fit two fingers between the strap and the participant's leg.
- C) If the harness is adjusted as tight as possible, but the shoulder straps go over the participant's shoulders, they should be allowed to go on the course.
- D) It is possible that an individual under 300 lbs would not be allowed on the course because the two metal rings on the front of their harness do not touch.
- E) Operators harnessing participants are not required to check the participant's footwear.
- F) It is all right to leave harnesses unattended for under 5 minutes of time.
- G) Harnesses should be examined for damage each time they are put on a participant.

13. Circle ALL the reasons a participant would NOT be allowed to go on the Sky Trail®.

- A) They are less than 48" tall and do not have an adult to assist them.
- B) The two metal rings on the front of their harness cannot touch.
- C) Shoulder straps do not come down over the participant's shoulders.
- D) The participant states that he/she has had a couple of beers within the last hour.
- E) The participant is wearing flip-flops, but refuses to wear the provided footwear.

14. List the commands in their correct order for an Emergency Take Down. In the parentheses next to the command, write "T" for top operator or "B" for bottom operator indicating who says the command and who performs the physical check.

- | | |
|-----|--------------------------|
| 1. | A. Belay On! () |
| 2. | B. Cut () |
| 3. | C. Check 1 () Check () |
| 4. | D. Rope! () |
| 5. | E. Check 3 () Check () |
| 6. | F. On Belay? () |
| 7. | G. Descending? () |
| 8. | H. Check 4 () Check () |
| 9. | I. Clear! () |
| 10. | J. Check 2 () Check () |
| 11. | K. Descend On! () |

Sky Trail® Checklist

Date _____ Manager _____

Operators _____/_____/_____/_____/_____

☐ Indoor ☐ Outdoor Weather: Temp _____ Wind _____ Rain _____ Snow _____

Pre-Use Inspection

INSPECT ALL SAFETY EQUIPMENT:

☐ Harnesses ☐ Slider/slings ☐ ETK

INSPECT ALL PARTS OF THE ACTIVITY AND SURROUNDING AREA

☐ Steel structure ☐ Bolts ☐ Track ☐ Platforms ☐ Surrounding area

ELEMENTS

<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____
<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____
<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____
<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____
<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____
<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____
<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____
<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____
<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____

Notes: _____

Activity Set up

- | | |
|---|--|
| <input type="checkbox"/> All access restriction removed | <input type="checkbox"/> Set out harnesses and slider/slings |
| <input type="checkbox"/> Set up any stored away entrance access | <input type="checkbox"/> ETK inspected and set up |

Outfitting

- ☐ Check all participants for harness fit
 - *Shoulder straps snug and don't come down over shoulders*
 - *All buckles properly buckled and snug*
- ☐ Attach and adjust slider/sling so slack is within 3" - 6"
- ☐ Participants must see operator if they remove their harness

Adventure Course Operational Procedures

- ☐ Point out all Posted Safety Rules

Closing

- | | |
|--|--|
| <input type="checkbox"/> ETK take-down and stored properly | <input type="checkbox"/> All access restriction replaced |
| <input type="checkbox"/> Store all harnesses and slider/slings | <input type="checkbox"/> Check area for lost articles |
| <input type="checkbox"/> Put up any removable entrance access | |

Operator Reports

- | | |
|-------------------------------------|--|
| <input type="checkbox"/> Accidents* | <input type="checkbox"/> Course Maintenance or Repair Needed |
|-------------------------------------|--|

*Fill out Safety Report if any accidents are reported.

Safety Report

Date of Incident: _____

Time of Incident: _____

Name of Activity: _____

Type of Group: _____

Instructor(s): _____

Weather: Temp. _____ Clouds _____ Precip. _____ Visib. _____

Participant Name (M/F) _____ Age _____ Height _____ Weight _____

Narrative: (Describe what happened in detail. Were any rules broken?)

What actions were taken?

Analysis: (Include any recommendations, suggestions, and observations)

How does this relate to updating your EAP?"

Report prepared by _____ Date _____

Review by Challenge Course Manager _____ Date _____



Disclaimer

I _____ (your name) acknowledge that I have read this manual in its entirety and understand all warnings, policies, procedures, rules and contents as written in this manual.

I further acknowledge that I will not reproduce or transmit by any means electronic, mechanical, photocopy or otherwise, this manual without the prior written consent of RCI.

I promise to follow all policies and procedures to the best of my ability.

I agree that I will not distribute any portion of this manual to any other person who has not completed the required training for operator certification.

I am comfortable that I have received the proper amount of training and confident that I can perform the responsibilities required of me when operating a Sky Trail®.

Training session start time: _____

Training session end time: _____

Name of Trainer: _____

Your Name _____ Date _____

Signature _____