



# Efficient Rescue Operations: Building Your Rescue Playbook

Welcome to the "Efficient Rescue Operations" class at the NYS 2025 Technical Rescue Conference.

In the critical realm of emergency rescue operations, the ability to act swiftly and effectively can save lives. This course is designed to equip participants with the tools and knowledge necessary to create and implement a "Rescue Playbook"—a dynamic resource that enhances the efficiency of rescue efforts across varied environments, including rope and confined space rescue scenarios.

Participants will explore key topics such as personal and positional kits, patient packaging strategies, and the importance of clear communication and commands during rescues.

The course will cover:

- **Personal Kits and Positional Kits:** Discussing the integration of standard kits with position-specific additions to streamline the gear selection process.
- **Patient Packaging:** Identifying the most efficient packaging devices for diverse team capabilities, ensuring readiness without overwhelming resources.
- **The Rescue Playbook Concept:** Similar to a football coach's playbook, this section will include rigging diagrams and photos of proven systems, accompanied by insights into their advantages, disadvantages, and equipment requirements. This quick-reference guide will help teams execute rescues with confidence and clarity.
- **Personal Skills and Techniques:** Focusing on the foundational skills necessary for effective rope and confined space rescue operations, including terminology and communication protocols.

Throughout the course, participants will be exposed to efficient rescue systems that can be built rapidly using predetermined rigging and roles. The goal is to cultivate a mindset where efficiency is prioritized, emphasizing that a "70% plan now is better than a 100% plan an hour from now."

By the end of the course, attendees will have the opportunity to modify the rescue playbook content to align with their agency's specific needs, fostering a culture of preparedness and adaptability in rescue operations.



## Resources Included

**Equipment, Positions, SME, and Commands**

**Rescue Playbook**

**Student Workbooks:** Detailed guides to accompany your learning experience.

**CTR ROE:** Detailed “Rules of Engagement” for rope and confined space rescue

**QR Codes:** Access our Confined Space Rescue Student Manuals and Rope Rescue Operations and Technician Student Manuals.

**Photo and Video Gallery:** Links to our SmugMug gallery for viewing shared class media and uploading your own photos and videos.

**Contact Information:** Stay connected with instructors through provided contact links.

## Motivation and Credit

We extend our gratitude to Ronin Rescue, AERT, Giro Rescue Systems, Rope Geeks, RopeLab, Sterling Rope, Petzl, SPRAT and ITRA for their influence on our training philosophy. Their commitment to developing both personal and technical skills in rescue operations has been instrumental in shaping this program.

Prepare to challenge yourself, collaborate with your peers, and expand your rescue capabilities. We look forward to a dynamic and transformative training experience with you.

If you have any questions or need further information, please don't hesitate to reach out. Let's get started!



## Individual Response Kit (IRK)

- Class 3 Harness (AHJ preference)
  - Installed on Harness
    - Chest Ascender (AHJ preference)
    - [Petzl Interfast](#)
  - [CMC Clutch by Harken 11mm](#)
  - [Petzl ASAP Lock](#) with [ASAP'SORBER AXESS](#)
  - [Petzl Progress Adjust-Y Lanyard](#)
  - [CT Ascender Simple+](#)
  - [KONG Argon K Carabiner](#)
  - [Bluewater Titan Footloop](#)
  - [Petzl Grillon Plus 3m](#)
- CTR [Petzl Toolbag 3](#)
  - [Sterling 12mm Dyneema Sling](#)
    - 24" (2)
    - 48" (2)
  - [Petzl OK Triact Lock Carabiner](#) (6)
  - [Petzl RollClip A Non-Locking](#)
  - [CT Roll N Lock](#)
  - [Petzl Spin S1 Swivel Pulley](#)
  - [Sterling 8mm Sewn Prusik](#)
    - 16"
    - 22"
  - [Bluewater 7mm VT Prusik](#)
  - [Petzl PAW S Plate](#)

## Quick Intervention Kit (QUIK)

- 100" 11mm rope
- [Texora Black Mamba Sling 1.5m](#) (2)
- Auto-locking Carabiner (2)

## First Aid Kit (FAK)

- [Leatherman Raptor Multi-Tool](#)
- Tourniquet ([SOF-T](#) or [CAT](#) or [SnakeStaff Systems](#))
- Chest Seal
- Emergency Trauma Dressing
- Rolled gauze



### **Patient Comfort Kit (PACK)**

- Safety Glasses/Case
- Small Pillow
- Thermorest Folding Pad
- Waterproof Thermal Tarp
- Woobie
- Balaclava

### **System Bag**

- 200' 11mm Rope
- Anchor Plate
- Auto-locking Carabiner (13)
- [Kong DNA Carabiner](#) (2)
- [Petzl Maestro S](#)
- Single Swivel Pulley
- Double Swivel Pulley
- [Petzl Rescuscender](#)
- Edge Protection Mat
- [Petzl Roller Coaster](#)
- Assorted Anchor Straps (no hardware)



Position	Role/Responsibility	Equipment
<b>Lead</b>	<ul style="list-style-type: none"> <li>• Command and control (may not be the overall Incident Commander)</li> <li>• Safety (unless a dedicated Safety Officer is assigned)</li> <li>• Establish communications</li> <li>• Liaison for other Teams/Divisions</li> </ul>	<ul style="list-style-type: none"> <li>• Command board</li> <li>• Portable radios</li> <li>• May require harness/fall restraint depending on geography</li> </ul>
<b>Rescuer 1</b>	<ul style="list-style-type: none"> <li>• Deploy Quick Intervention Kit (QUIK) to access patient(s)</li> <li>• Patient triage and stabilization</li> <li>• Identify and communicate additional needs</li> <li>• Begin patient packaging</li> </ul>	<ul style="list-style-type: none"> <li>• Harness kit</li> <li>• First Aid Kit (FAK)</li> <li>• Victim harness</li> <li>• Quick Intervention Kit (QUIK)</li> <li>• Additional hazard-specific kits as needed</li> </ul>
<b>Rescuer 2</b>	<ul style="list-style-type: none"> <li>• Ready appropriate patient packaging device</li> <li>• Ready appropriate medical equipment based on Rescuer 1 report</li> <li>• Raised/lowered on system to assist Rescuer 1 with patient packaging if necessary</li> <li>• Attend patient during movement if necessary</li> </ul>	<ul style="list-style-type: none"> <li>• Harness kit</li> <li>• Patient packaging device as needed</li> <li>• Patient comfort kit (PACK)</li> <li>• Additional medical equipment as needed</li> </ul>
<b>Rigging</b>	<ul style="list-style-type: none"> <li>• Select/build anchor(s)</li> <li>• Deploy system bags</li> <li>• Connect ropes to Rescuer 2 and/or patient packaging device</li> <li>• Build mechanical advantage for raise</li> <li>• Manage lower/raise operations</li> </ul>	<ul style="list-style-type: none"> <li>• System bags</li> <li>• Additional anchorage as needed</li> <li>• May require harness/fall restraint depending on geography</li> </ul>
<b>Edge</b>	<ul style="list-style-type: none"> <li>• Identify type of edge transition and associated equipment needs</li> <li>• Assist Rescuer 1/2 with edge transitions</li> <li>• IC may delegate commands to the Edge position when necessary</li> <li>• Assist with lower/raise operation</li> </ul>	<ul style="list-style-type: none"> <li>• Harness/fall restraint</li> <li>• Edge protection</li> <li>• AHD if necessary</li> </ul>

<b>Briefing Format (SME)</b>	
<b>SITUATION</b>	<b>Patient Environment Hazards</b>
<b>MISSION</b>	<b>End State Phases</b>
<b>EXECUTION</b>	<b>Assignments</b>



Commands	
STOP	1 Whistle Blast
RAISE	2 Whistle Blasts
LOWER	3 Whistle Blasts
TENSION	Tension by Hand
SLACK	Make Soft / Slack the Line
<b>REPEAT COMMAND BACK</b> (ensures it was heard correctly)	

# Low Angle Rescue

## Low Angle Rescue

Low Angle Rescue involves rescuing a casualty on sloped terrain ranging from 15° to 40°. For many low-angle rescues, such as a vehicle down an embankment, a single rope system is often sufficient. However, the system is designed to allow for rapid conversion to a mechanical advantage system (e.g., 3:1 or 5:1) if hauling becomes necessary, and a belay line can easily be added along with secondary connections of litter tenders to the system.

### Overview

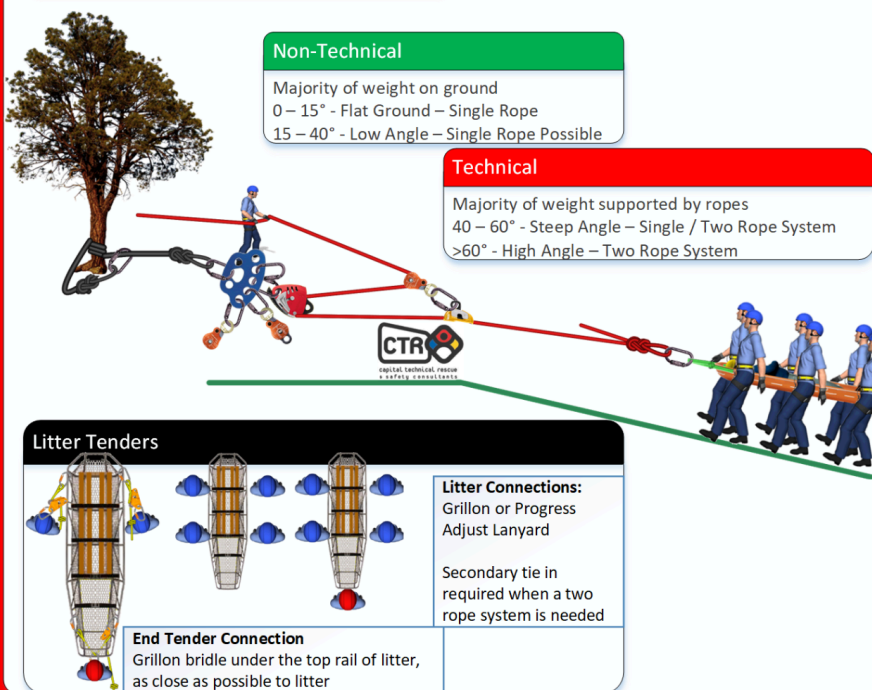
#### Main Line Bag

##### Anchor Plate

- 1 – Anchor Strap w/Carabiner connected to anchor plate
- 1 – 5 hole or larger anchor plate
- 1 – 12.5mm x 200' rope w/figure 8 & carabiner
- 1 – Rescuerender with carabiner and single swivel pulley
- 1 – Double single swivel pulley with carabiner
- 1 – Petzl Maestro L with carabiner
- 1 – Extra Friction Carabiner
- 1 – Single Swivel pulley and carabiner (COD)

#### Team Positions

	<b>Lead</b>
	Command
<b>Rescuer 1</b>	<b>Rigging</b>
Quick Pt Contact	Rig & Operate Systems
<b>Rescuer 2</b>	<b>Edge</b>
Rig Litter, Lead Litter Team	Assist Rescuer 2



### System Benefits

- Provides adaptability to a variety of low-angle scenarios using a single pre-rigged rope system.
- Allows efficient transitions between non-technical and technical operations.
- Maintains simplicity while offering the flexibility to introduce mechanical advantage as needed.
- Simple and efficient setup using a pre-rigged system for rapid deployment.
- Reduces complexity in non-technical scenarios while maintaining readiness for technical needs.
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# The 1 - 2 - Single Operator Dual Main

## The 1 - 2 (Single Operator Dual Main)

The 1-2 is a dual main system operated by a single rescuer, who manages both descent control devices simultaneously to ensure redundancy and efficiency. A tailer supports the operation by maintaining proper rope flow, ensuring ropes are clear, and assisting with non-fouled rope management as they approach the devices.

### Overview

#### Connectors

DNA Carabiners (x2)  
Oval Carabiners (x4)

#### Anchor Plate

1 - 3 Hole or Larger Anchor Plate

#### Descent Control Devices

2 - 11mm Clutches

#### Rope

2 - 11mm x 300'

#### Option Gear

##### DCDs

Petzl Maestro  
Petzl ID / RIG  
Skylotec Sirius / Spark

##### DNA Replacement

Extra Carabiners  
Sewn Prusik / Sling

#### Option Play



##### MAP

MAP w/Unified Butterflies to litter, standard kit for tender.

### Rigging for Raise

Build 2 - 3:1 using equipment on anchor plate

OP: Build 2 - 3:1 systems utilizing rescuers kit

### Team Positions

	Lead Command
<b>Rescuer 1</b>	<b>Rigging</b>
Quick Pt Contact	Rig System / Lead Haul
	Team
<b>Rescuer 2</b>	<b>Edge</b>
Pt Packaging / Litter	Assist Rigging
Tender	

### System Benefits

- Ensures full redundancy throughout the load path, from the anchors to the rescue package.
- Allows for efficient operation with a single operator controlling both devices while maintaining safety.
- The tailer provides additional oversight, ensuring smooth rope flow and preventing fouling, which enhances operational reliability.



# System Based Pickoffs

## System Based Pickoff

Rescuer is lowered on a dual main system with a unified Master Attachment Point (MAP) which ensures true load-sharing between the dual main lines. The rescuer connects to the victim using a combination of a safety/backup device and a positioning device to safely and comfortably transfer the victim to the rescue system.

### Overview

**System**  
Dual Main Rope System (11mm x 300')

**Rescuer Connection**  
Figure 8 on bight from each of the Dual Main Lines with Oval Carabiners (x2)

**Victim Connection**  
MAP: Unified Butterfly in arms reach of rescuer

**Backup (Safety) Connection**  
1 – 3m Petzl Grillon

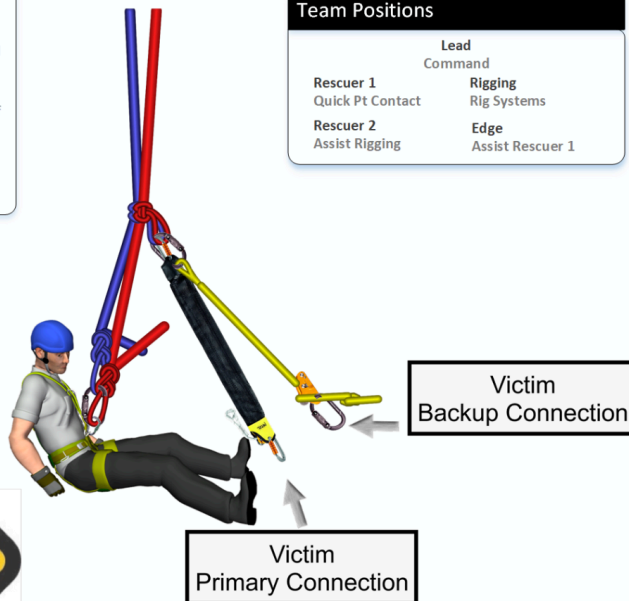
**Primary (Positioning) Connection**  
1 – 2m Petzl JAG

#### Optional Connections

Pickoff Strap  
Harken Wingman  
AZTEKs  
Harness Lanyard  
Quickdraw

#### Team Positions

	Lead
Rescuer 1	Command
Rescuer 2	Rigging
Rescuer 3	Quick Pt Contact
Rescuer 4	Rig Systems
Rescuer 5	Edge
Rescuer 6	Assist Rescuer 1



#### When to Use

Ideal for scenarios requiring precise victim handling and positioning, such as when the victim's condition necessitates additional care.

Suitable for rescues where redundancy and load-sharing are critical, such as high-angle or vertical environments.

### System Benefits

- Ensures true load-sharing between the dual main lines for redundancy and balance.
- Provides precise victim positioning for optimal safety and comfort during the pickoff.
- Keeps the rescuer's connections to the system separate from the victim's, ensuring clear and manageable rigging.
- Maintains rescuer proximity to the victim (18"-2') for effective communication and assistance.

# Tripod Winch ASAP

## Tripod Winch ASAP

Utilizes a CMC Triskellion tripod as a high directional anchor, paired with a Harken LokHead Winch for the mainline, providing controlled raising and lowering, and a Petzl ASAP Lock on the belay line for continuous fall protection.

### Overview

**Tripod**  
CMC Triskellion

**Haul/Lower System**  
LokHead Winch w/tripod mount

**Pitch Head Belay**  
1 – ASAP LOCK w/ ASAP'SORBER AXESS

**Connectors**  
Oval Carabiners (x2)

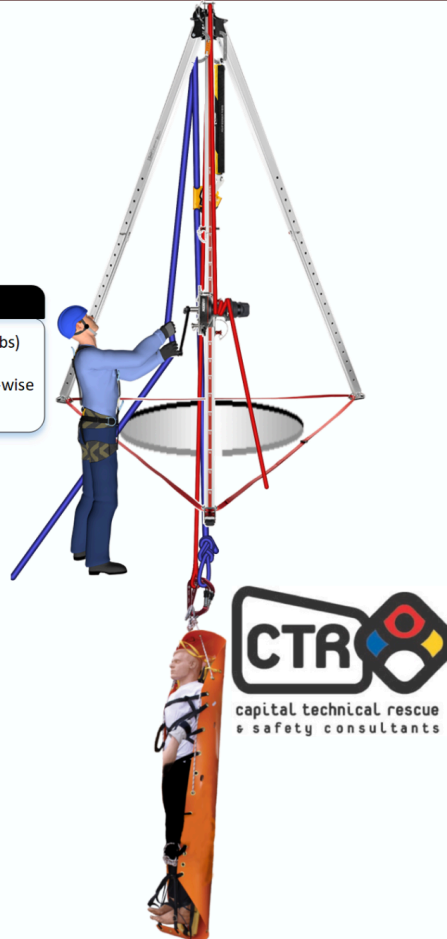
**Ropes**  
2 - 11mm x 300

### LokHead Winch

Max Working Load for Human Suspension: 2.2 kN (485 lbs)  
Power Ratio – 13.5:1 (1<sup>st</sup> gear) / 39.90:1 (2<sup>nd</sup> gear)  
1<sup>st</sup> Gear: Faster / Less Power: turn handle counter clock-wise  
2<sup>nd</sup> Gear: Slower / More Power: turn handle clockwise

### Team Positions

	Lead Command
Rescuer 1 Quick Pt Contact	Rigging Rig & Operate Systems
Rescuer 2 Pt Packaging	Edge Assist Rescuers & Pt



### System Benefits

- Highly efficient and easy-to-control raising/lowering with the Harken LokHead Winch.
- CMC Triskellion tripod offers exceptional stability and versatility, accommodating uneven terrain and confined space entry points.
- Continuous raising function without the need to reset a rope grab.
- Utilizes almost the full working length of the rope.
- Quick and straightforward setup with minimal rope management required.

# Batwing (Tripod Reeve)

## Batwing (Tripod Reeve)

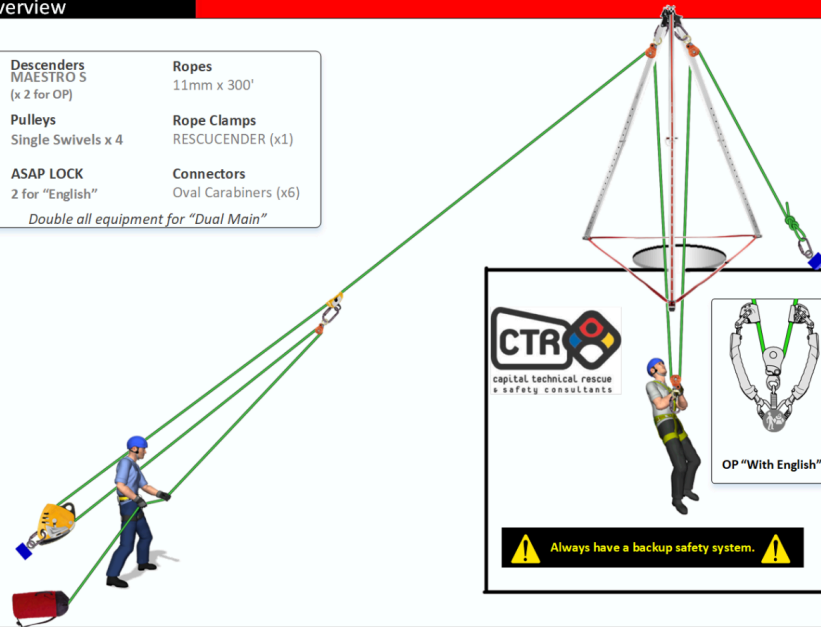
Ideal for confined space rescues requiring vertical entry and retrieval.  
Suitable when a tripod or similar high directional anchor is available.  
Effective in scenarios requiring rapid raising and lowering of the load.



### Overview

<b>Descenders</b> MAESTRO 5 (x 2 for OP)	<b>Ropes</b> 11mm x 300'
<b>Pulleys</b> Single Swivels x 4	<b>Rope Clamps</b> RESCUCENDER (x1)
<b>ASAP LOCK</b> 2 for "English"	<b>Connectors</b> Oval Carabiners (x6)

*Double all equipment for "Dual Main"*



### System Info

#### Advantages

Efficient for vertical rescues requiring both raising and lowering.  
Reduces edge transition challenges.  
Simple setup / common team equipment.  
Raising / Lowering can be done away from edge.  
Can be rigged as Dual Main (TTRS)

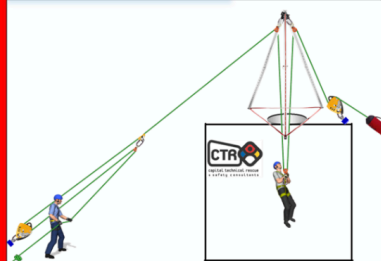
#### Disadvantages

Requires tripod / high point.  
Can be gear intensive depending on team.

### Team Positions

	Lead
	Command
Rescuer 1	Rigging
Quick Pt Contact	Rig Batwing / Up
Rescuer 2	Edge
Pt Packaging	Assist Rigging / Down

### Option Play (OP)



#### "Dueling Maestros"




Allows for hauling on one side and lowering on the opposite.

#### "With English"

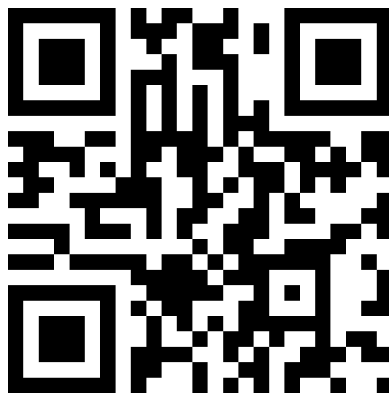
The ASAP LOCK and ASAP'SORBER AXESS can back up a system failure from either side.



# CTR Student Manuals

<b>Confined Space Rescue Technician</b>		NFPA CSR Technician ITRA Levels 1 - 3
<b>Rope Rescue Operations</b>		NFPA Rope Rescue Operations ITRA Levels 1 & 2
<b>Rope Rescue Technician</b>		NFPA Rope Rescue Technician ITRA Level 3 Technician

# CTR Rules of Engagement



<https://tinyurl.com/CTR-RulesOE>



# Photo Gallery

Viewing:



<https://tinyurl.com/trc25eroview>

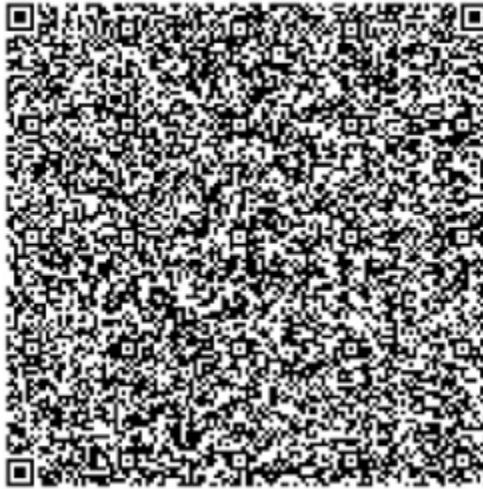
Share Your Photos:



<https://tinyurl.com/nystrc25eroup>



# Contact Information



## **Steve Disick**

Partner - Capital Technical Rescue and Safety Consultants, LLC  
Board of Directors - International Technical Rescue Association - ITRA

Office: 518 930-4500 x 101  
Cell: 518 857-5701  
eMail: [steve@capitaltechrescue.com](mailto:steve@capitaltechrescue.com)

## **William Simons**

Instructor - Capital Technical Rescue and Safety Consultants, LLC

Cell: 914 438-2465  
eMail: [williamburtonsimons@gmail.com](mailto:williamburtonsimons@gmail.com)