10m 4" Single Mast / RolaCage System User Guide

10m 4" Single Mast / RolaCage System

RolaTube Part Number:
956-410000-3-1

Components Overview

Item	Description
1	10m 4" RolaTube Mast / RolaCage Black
2	Top Cap 4"
3	Guys for Top Cap (red tag)
4	3 x Slot Locker Cuffs
5	3 x Triangulated Guys
6	10 x Rock Pegs
7	6 x Soft Ground Pegs
8	1 x Black Bag

Mallet not supplied with kit

5 Person Deployment*

Person 1	At base of mast:	Deploying mast from RolaCage and Deployment Captain
Person 2	At base of mast:	Application of RolaCage Brake and fitment of Slot Locker Cuffs
Persons 3, 4, 5	At guy pegs:	Maintaining tension during deployment to keep mast central

*Unless purchased with Central Guy Control System (CGC) accessory, which reduces deployment requirement to 3 persons.

Basic Deployment Process

STEP 1 Position RolaCage where you wish to deploy mast.

STEP 2 Pace out position of various guy rope pegs and drive pegs into ground.

STEP 3 Unwind all guy ropes, connect to pegs and lay back snap hooks to RolaCage ready for attachment to mast components.

STEP 4 Arrange Top Cap, Slot Locker Cuffs and payload on the ground in easy reach from the RolaCage position.

STEP 5 Start deploying mast using Top Cap and Secondary Cuff Guy Ropes to support mast centrally at all times.

STEP 6 When fully deployed, lock brake on RolaCage and tension all guy ropes correctly.

TOP TIPS FOR SUCCESSFUL MAST DEPLOYMENTS

Do not start deploying mast until pegs, guy ropes, top load and cuffs have been properly set out and prepared for deployment to commence.

Deploy the mast very slowly and smoothly so that the guy handlers can easily maintain the central position.

Make yourself familiar with the function of all components before starting deployment.

Continued on next page >

Detailed Deployment Instructions

1. Select a clear and level area of at least 20m in diameter. Unpack the system components and check that they are all present and in good condition.

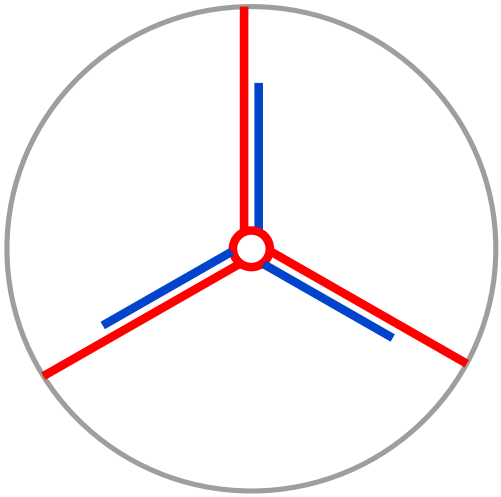
2. Place the RolaCage in the middle of the deployment area, ensuring that the slot gap in the deployed mast faces away from any prevailing wind. Anchor the RolaCage to the ground using 4 Rock Pegs. Arrange the Top Cap, Slot Locker Cuffs (fully opened) and payload beside the RolaCage and in easy reach.

3. Release the RolaCage brake by rotating both black knobs anticlockwise at the same time. **Person 1** uses the strap to pull the mast out of the cage and elevate to 1m high. **Person 1** remains with the mast/RolaCage at all times during deployment and is responsible for controlling the deployment team.

Continued on next page >

4. While **Person 1** holds the mast, **Person 2** places the Top Cap on the top of the mast, lines up the holes, inserts the Drop Nose Pin and locks it into position. **Ensure that the flat edge of the Top Cap is on the opposite side of the mast from the slot gap** (see picture below).

5. **Person 2** takes six pegs and using the guy rope slots in the Top Cap as a guide for direction, fully drives in one guy peg at 6 paces from the mast (Slot Locker Cuff Guys) and one guy peg at 9 paces from the mast (Top Cap Guys). This is repeated for the other two guy rope directions. The orientation of the guys should be directionally similar to the drawing shown



Top Cap Guy Ropes 8 – 9 Paces
Slot Locker Cuff Guy Ropes 6 Paces

6. **Person 3, 4, 5** each take a Top Cap Guy Rope (tagged red colour) and unwind fully from the plastic Guy Tidy. Hook the clip onto the Top Cap and walk the guy rope back to the outer peg. Connect the ratchet hook to the peg, ensuring that all the guy rope has been deployed from the ratchet. **Persons 3, 4, 5** each take a Triangulated Guy Rope and unwind fully from the plastic Guy Tidy. Connect the ratchet hook to the inner peg, ensuring that all the guy rope has been deployed from the ratchet, and walk **one snap hook** back to the RolaCage and position on the ground for easy reach. **Persons 3, 4, 5** then return to their respective guy peg area, grasp both guy ropes in front of the ratchet device and stand ready for deployment.

Continued on next page >

7. While **Person 1** holds the mast steady, **Person 2** attaches the top load onto the Top Cap, and clamps into place using the Spigot Lock Screw. If required, the RolaCage brake can be temporarily applied by **Person 2** prior to mounting the top load. The brake is engaged by rotating the two black knobs clockwise, ensuring the brake bar remains even on both sides. Do not over tighten the brake or damage may occur. **NOTE:** The brake will only engage if the two cutouts in the side disks are lined up to allow the movement of the bar holding the brake block.

8. Once the top load is attached and the brake released, **Person 1** deploys the mast slowly and steadily upward while **Persons 3, 4, 5** pay out the Top Cap Guy Ropes keeping tension even in order to ensure the mast deploys as close to vertical as possible. If the mast starts to go off vertical, **Person 1** must immediately stop the deployment and instruct **Persons 3, 4, 5** to adjust their guy tensions until the mast is returned to the vertical position. Continue to deploy the mast until the first set of Slot Locker holes are at chest height and then stop. **Persons 3, 4, 5 must continue to manually control guy tension at all times in order to hold the mast central.** If required, the brake can be temporarily deployed by Person 2 at this stage.

9. Person 2 picks up the first opened Slot Locker Cuff, enters the studs into the 4 holes drilled in the mast and pushes the cuff on until it is flush against the mast. Please note that the vertical guide bar fits into the slot gap in the mast, and the slot gap can be altered slightly by squeezing/opening the slot to help with fitting. Once properly fitted into the slot gap, the hinged arms are then closed around the mast and secured with the over centre latch.

Continued on next page >

10. **Person 2** then attaches the 3x Triangulated Guy Rope snap hooks to the Slot Locker Cuff (one onto hinge pin and two onto plastic pillars).

11. While maintaining the tension in the Top Cap Guys, **Persons 3, 4, 5** then pull the Triangulated Guy Ropes until the second snap hook hits the “Guy Ring” and they are lightly tensioned. They then stand by for further mast deployment.

12. If applied, **Person 2** releases the RolaCage brake, and **Person 1** continues to deploy the mast slowly and steadily upward while **Persons 3, 4, 5** pay out the Top Cap and Slot Locker Cuff Guy Ropes always keeping tension in order to ensure the mast deploys as close to vertical as possible. Continue to deploy the mast until the second set of Slot Locker Cuff holes are at chest height and then stop. (If required **Person 2** can again apply the brake.) **Person 2** then fits the second cuff as per the first cuff. **Person 2** then walks to each “Guy Ring” and brings the second snap hook back to the second cuff. **Persons 3, 4, 5** will have to pay out the Triangulated Guy Rope as **Person 2** walks towards the mast. **Person 2** attaches the second snap hook to the second Cuff, and repeats for the other two Triangulated Guy Ropes. **Persons 3, 4, 5** then take up the tension on the Triangulated Guy Ropes.

Continued on next page >

13. If applied, **Person 2** releases the RolaCage brake, and **Person 1** continues to deploy the mast slowly and steadily upward while **Persons 3, 4, 5** pay out the Top Cap and Slot Locker Cuff Guy Ropes always keeping tension in order to ensure the mast deploys as close to vertical as possible. Continue to deploy the mast until the third set of Slot Locker Cuff holes are at chest height and then stop. (If required **Person 2** can again apply the brake.) **Person 2** then fits the third cuff as per the first cuff. There are no guy ropes on the 3rd Slot Locker Cuff.



14. If applied, **Person 2** releases the RolaCage brake, and **Person 1** continues to deploy the mast slowly and steadily upward while **Persons 3, 4, 5** pay out the Top Cap and Slot Locker Cuff Guy Ropes always keeping tension in order to ensure the mast deploys as close to vertical as possible. Continue to deploy the mast to full height (when roll stops turning in RolaCage) and then stop. **Person 2** must now apply the brake.

15. **Persons 3, 4, 5** now have to permanently set the Top Cap and Slot Locker Cuff Guy Rope tensions by pulling the guy rope through the ratchets. This needs to be done carefully such that tension to the Top Cap and Slot Locker Cuffs is maintained at all times. **Persons 1 & 2** are now available to help with this process.

16. **Person 1** now inspects the deployment and instructs **Persons 3, 4, 5** for any final guy adjustments to be made (for verticality and straightness of the mast), the guy rope tension and the firmness of the pegs in the ground. Guy rope tension should be set as firm, but not excessive. **Person 1** signs off the deployment as safe and complete.

RECOVERY

Recovery is a logical reverse procedure of deployment. The mast must be lowered slowly and smoothly back into the RolaCage. **DO NOT** allow the mast to just topple to the ground or damage to payload and mast system will occur.

System	RolaTube Part Number	NATO Stock Number
10m 4” Mast/RolaCage System	956-410000-3-1	

Component	RolaTube Part Number	NATO Stock Number	Qty
10m Mast	851-410000		1
RolaCage	800-007112		1
Top Cap	800-004104		1
Set of 3 14.5m Top Cap Guys	207-004123		1
Slot Locker Cuff	800-000127		3
Set of 3 10m Triangulated Guys	207-004120		1
Steel Rock Pegs	207-002002		10
Soft Ground Pegs	207-002005		6
Medium Bag	502-003050		1
Total packed weight: 24.38kg			
Dimensions: RolaCage + Tube – 420 x 275 x 285mm			

Optional Extras	RolaTube Part Number	NATO Stock Number
Twin Antenna T Bar Mount	800-000036	
Antenna Spigot Mount	207-000094	
Antenna Adaptor	207-000035	
End Cap Camera Plug	207-000029	
4” Tripod Adaptor	800-000037	
Aruba Mount	800-000106	

For weight and composition of individual components, please see the 8m 4” data sheet or our website

Top load must not be exceeded. Deployment and recovery must be undertaken with the tension in all 3 top cap guy ropes being managed to ensure that the top load does not move off centre and create bending load on the mast while top load is being elevated or lowered. This can only be achieved through 4 man operation during deployment and recovery.

Maximum wind loading is based on the bare mast correctly deployed and with guy pegs firmly positioned. End user or system integrator must take responsibility for deployment and ensuring that the final system is fit for purpose with regard to wind loadings once top load or other equipment is mounted.

Safety Instructions

The system is rated to the loads stated and the end user is responsible for ensuring that user guides are followed and loads are secured to the mast in a fashion that is safe and does not compromise the mast itself. RolaTube Expeditionary Systems does not accept liability or provide any warranty for usage not covered in this document.

1.1 Before unrolling a mast ensure that the area is clear of people and objects.

1.2 RolaTube masts are made from damage tolerant materials and will withstand significant abuse, however they can be damaged by heavy and/or sharp objects. To prevent damage, items should not be placed on top of stored RolaTube masts in either reeled or unreeled states.

1.3 Once the RolaTube mast has been unrolled ensure the surface is free from visible damage. Do not use the mast if there is visible damage.

1.4 If damage does occur, masts should be replaced as soon as possible, since the load carrying capacity can be reduced.

Products have been designed and tested to be compliant with the relevant aspects of MIL-STD-810G

WARNINGS

1. Electric shock. Make sure that the proposed deployment site for the mast is free of overhead wires, which must be considered as dangerous electrical shock hazards. Make sure that no overhead wires are present within 50 metres of the mast.

2. Mast deployment. During mast deployment, minimise the risk of injury by taking the following precautions:

2.1 Do not deploy the mast near power lines or in thunderstorms.

2.2 Do not overload the mast top. Make sure only approved system components are fitted.

2.3 Do not allow the mast to bend.

2.4 Make sure the ground is clear of underground hazards prior to guy peg insertion.

2.5 Use the guy ropes provided and make sure that the guy ropes are tensioned correctly and ground pegs deployed and secure.

2.6 Consideration must be given to the routing of the coax between the mast and equipment in addition to the guy rope placement so as not to cause a trip hazard.

2.7 If the mast is leant against a wall, the guy ropes must be in line and placed at the base of the wall to prevent the mast from toppling backwards.

2.8 Consideration must be given to deployment when in close proximity to a helicopter landing site. Notice and recording of the mast site shall be issued to the temporary site / locn commander to ensure that planning considerations for aircraft approach and downwash effects are acknowledged and catered for.

2.9 Only use the mast in the vertical axis.

3 Wind. Ensure that the spine of the mast is oriented to face into wind, make sure the guys are securely pegged down, ensure the system is used within windspeed advice / parameters.

4 Mast Recovery. Ensure that fingers are kept clear as the final section of mast is fed back into the cage and that the draw tab is left protruding.

RolaTube Expeditionary Systems Ltd
130 Wellworthy Road, Ampress Park, Lymington
Hampshire SO41 8JY, UK

t: 01590 688019 **e:** info@rolatube.com
www.rolatube-expeditionary-systems.com
www.facebook.com/RolaTubeExpeditionary

Registered in England & Wales No. 8833973
VAT Reg 181 483 204