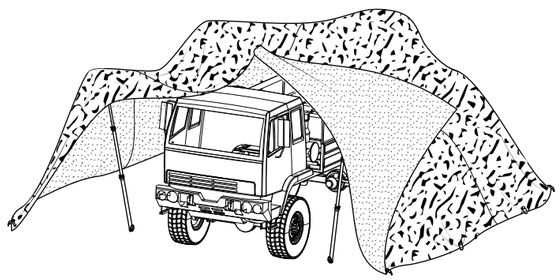
U.S. ARMY ENGINEERING SCHOOL

ULTRA LIGHTWEIGHT CAMOUFLAGE NET SYSTEMS



(ULCANS) INCREMENT 1
Graphic Training Aid
05-04-043
January 2020

SAFETY WARNINGS

To prevent personal injury, a minimum of a two-person lift is required for both the **ULCANS** screen system and the support system storage/transport containers. Components may increase in weight due to trapped or absorbed water. Use additional personnel as needed.

Volatile fuels and vehicle exhaust can create a fire hazard and can cause explosions. These hazards are always present but most prevalent during hot weather. When volatile fuels or vehicle exhaust are present under **ULCANS**, steps will be undertaken to insure adequate ventilation of the camouflaged area.

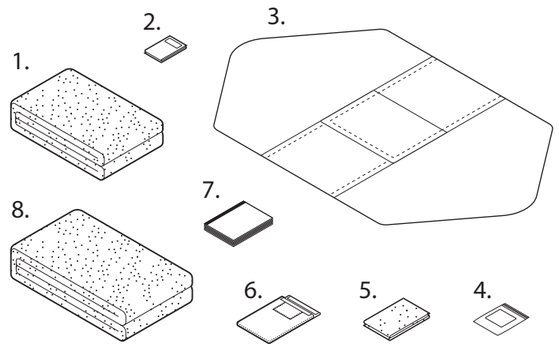
Personnel are subject to being burned by hot components and exhausts if deployment of the **ULCANS** is attempted with the equipment's engine running or immediately after the engine is turned off. A cool down period shall be observed prior to **ULCANS** deployment except in emergency conditions; then wear hand protection and exercise extreme caution when working in area of hot components.

ULCANS tent pins may present a trip hazard. Drive tent pins deeply to minimize area protruding above ground. Select an area without tent pins for entry/egress through the screen.

Climbing on and around the equipment to deploy **ULCANS** can pose a fall hazard. Extreme caution shall be observed to avoid slippery or uneven surfaces and other trip hazards. Use handhold when provided and ladders when available.

SCREEN SYSTEM INVENTORY

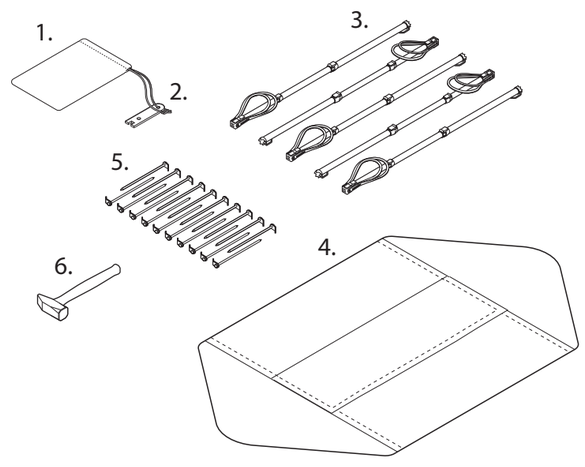
Modular Screen System



Component	Qty.
1. Rhombic Screen	1
2. Graphic Training Aid	1
3. Screen Carrying Case	1
4. Cable Ties (300 count)	1
5. Screen Repair Material	1
6. Repair Kit Bag	1
7. Technical Manual	1
8. Hexagonal Screen	1

SUPPORT SYSTEM INVENTORY

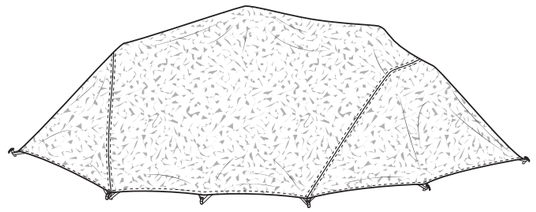
Support System



Component	Qty.
1. Tent Pin Carrying Bag	1
2. Spanner Wrench	1
3. Support Poles	5
4. Support System Carrying Bag	1
5. Tent Pins	20
6. Hammer	1

Preventive Maintenance Checks and Service

Preventive Maintenance Checks and Services (**PMCS**) are performed to keep the **ULCANS** in operating condition. The checks are used to find, correct, or report problems. **PMCS** is done every day ULCANS is deployed using the PMCS tables found in the Technical Manual (**TM**) or by referring to the table below.

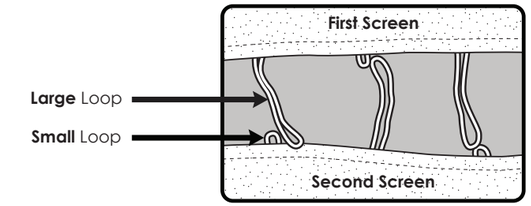


Maintenance Check Interval	Item	Procedure*
Before	ULCANS	• Inventory contents of modular screen system carrying case and the support system carrying case. • Ensure the **ULCANS** is packed in the proper deployment configuration.
Before	Support Poles	• Inspect support pole tubes for damage. • Ensure the foot of the support pole is secure and undamaged. • Ensure the grounding loop of the support pole is secure, rotates freely, and has no damage. • Ensure the locking mechanisms are functional. • Ensure the shape disruptors are moveable and not damaged.
Before	Individual Screen Module	• Inspect screen module for fabric damage or for evidence of many previous repairs. • Inspect screen module for damaged becket loops and grounding loops. • Inspect identification tags to ensure they are present and readable.
Before	Net Assembly	• Ensure that net assembly is properly assembled. • Ensure all becket loops are properly connected and secured with a knot.
During	Net Assembly	• Ensure that tent pins, tie down points, and becket loops remain secure. • Clear any accumlated rain, snow, damp leaves, or other environmental hazards as applicable. • Confirm camouflage pattern matches the other screens in the net assembly. • Confirm there are no gaps of 6 in (15.24 cm) or more in seams of joined screens.
After	Screen Module/Net Assembly	• Inspect screens for debris, sticks, grass, leaves, etc., remove debris as required.
After	Support System	• Inspect support system components for damage and debris. Repair or replace components as required.

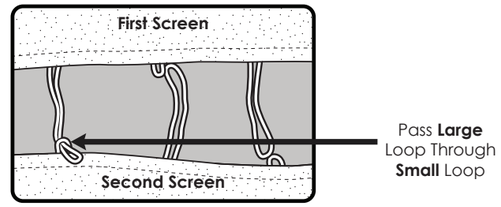
Perform procedures in acordance with the **ULCANS Technical Manual.*

Becket Lacing

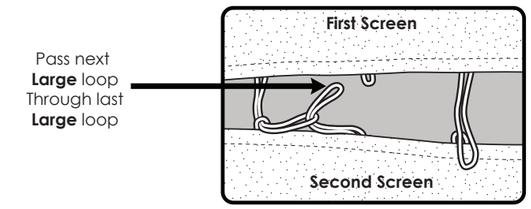
***NOTE:** All screens should be assembled prior to fielding. This will allow for **ULCANS** to be quickly deployed in a hostile environment.



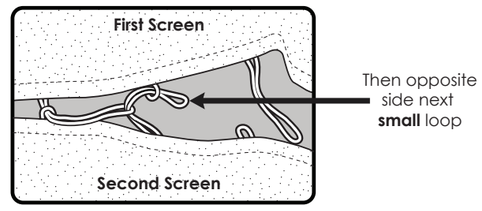
1. **Place** large loop on first screen through small loop on second screen.



2. **Pass** next large loop on second screen through large loop on first screen.



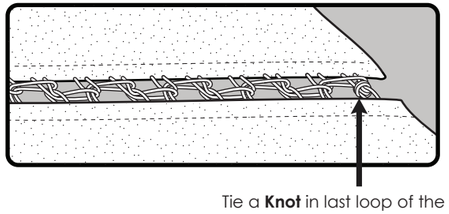
3. **Pass** large loop on second screen through next small loop on first screen.



4. **Repeat** steps 1-3 until all Becket loops have been joined to the edge of the screen assembly.

***NOTE:** Avoid having knots high off the ground or in the center of a screen which can make quick separation of multiple screens difficult.

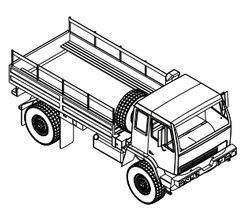
5. **Secure** the seam by tying a knot in the last loop on the seam.

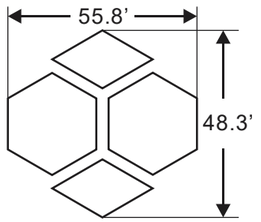


Setup and Preparation For Use:

Net Assembly Selection

You must determine the correct number of systems necessary prior to creating net assemblies and refolding for field deployment. The example shown below is the proper configuration for the **LMTV.***





Screens		Dimensions	
Hexagon	**2**	Length: **55.8'**	Width: **48.3'**
Rhombus	**2**	Area: **1796.2 Sq. FT**	

*Refer to **ULCANS** Technical Manual (TM) for other configurations.

ULCANS Net Assembly Preparation

1. After determining required number of screens for your equipment, open **ULCANS**, and inventory the contents to ensure all components are accounted for. (*Refer to screen and support system inventory lists on opposite side of this guide*) Also ensure all netting screens to be assembled are of the same type and class.

2. On level ground, arrange screens to be joined in the pattern determined in the '***Typical ULCANS Configurations***' table from the technical manual.

3. Starting at an intersection of the screens **(Figure 1, Item 1)** working outwards, join the screens together using becket laces. (*Refer to becket lacing steps on opposite side of this guide*) Continue until screens are joined together as one complete net assembly. **(Figure 1, Item 2)**

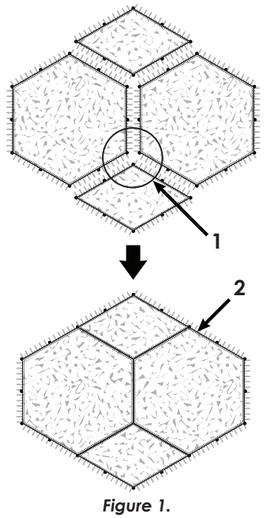


Figure 1.

Note: *These procedures serve as a general guide for multiple screen configurations. Some changes may be needed to prepare the exact configuration for your equipment.*

4. Spread your net assembly on a flat surface free of large rocks, sharp objects and debris and fold the outermost edge of net assembly 3/4 of the way **(Figure 2, Item 1)** across the net assembly.

5. Fold overlapping edge **(Figure 3, Item 1)** of net assembly back over itself until even with outer edge **(Figure 3, Item 2)**. This should create a long, straight, edge on one side end of net assembly **(Figure 3, Item 2)**.

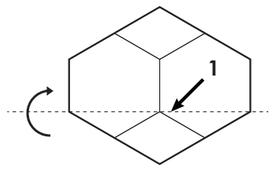


Figure 2.

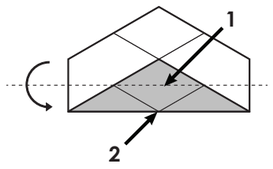


Figure 3.

6. Fold outermost edge on opposite side of net assembly 3/4 of the way **(Figure 4, Item 1)** across net assembly.

7. Fold overlapping edge of net assembly back over itself until even with outer edge **(Figure 5, Item 2).**

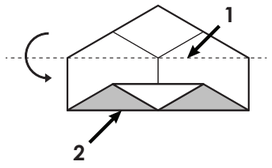


Figure 4.

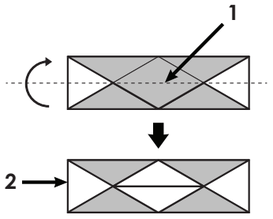


Figure 5.

8 . Roll both ends of net assembly towards center line **(Figure 3)**.

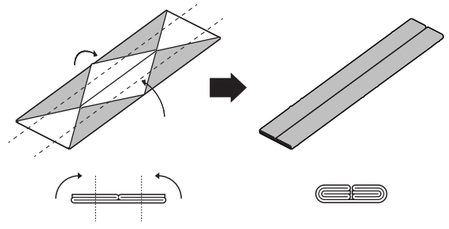


Figure 6.

9 . Roll both ends of the net assembly **(Figure 7, Item 1)** towards the center line until flush with opposing side **(Figure 7, Item 2)**.

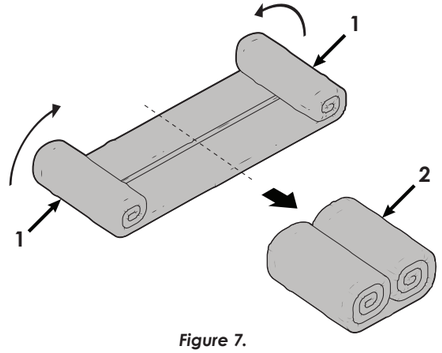


Figure 7.

10 . Secure the rolled net assembly for deployment.

Deployment:

Deploying the ULCANS

Note: *When choosing a location for the concealment of your equipment, consider the following guidelines:*

- *The location of the concealed equipment and **ULCANS** should not stand-out as a foreign object in the surrounding area.*
- *Use the geographical characteristics of the surrounding environment to help assimilate the ULCANS (e.g. locating the **ULCANS** under/near-by trees or hills).*
- *Do not locate the equipment to be concealed and **ULCANS** on the top of a ridge, to avoid creating a silhouette on the skyline.*

1. Extend support pole sections as shown in **Figure 8**, as required.

2 . Position support poles around the equipment or object to be concealed **(Figure 9, Item 3)**.

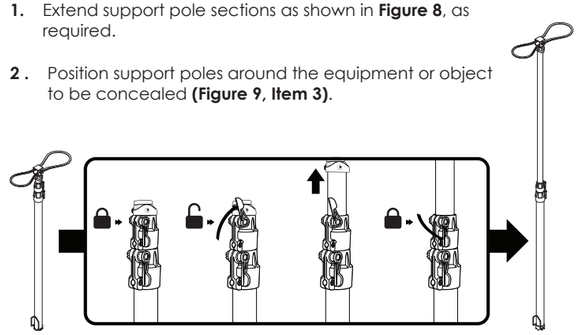


Figure 8.

3. Position the assembled **ULCANS** net assembly **(Figure 9, Item 1)** on top of the equipment or object to be concealed **(Figure 1, Item 2)**.

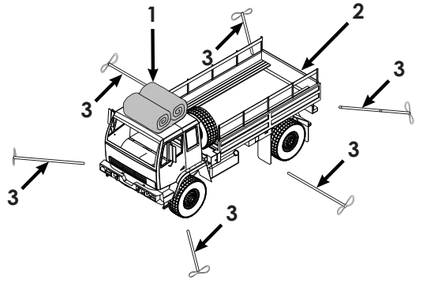


Figure 9.

4. Unroll/Unfold **ULCANS** net assembly, centered atop equipment, as shown in **Figure 10**.

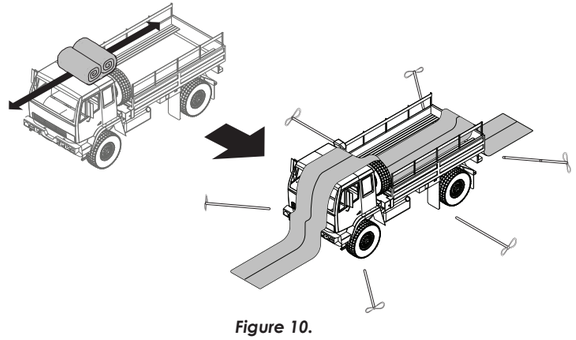


Figure 10.

5. Unroll **ULCANS** net assembly outward, over equipment and support poles **(Figure 11)**.

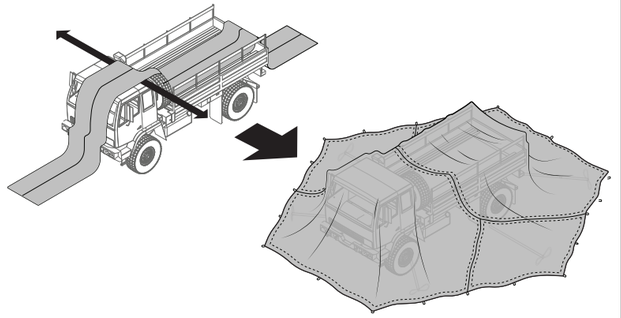


Figure 11.

6. Stretch **ULCANS** net assembly at the outer corners and insert tent pins through appropriate loops.

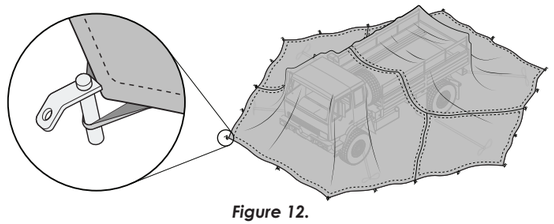


Figure 12.

7. Raise and stake support poles underneath net assembly to create a non-uniform silhouette around and above the concealed equipment **(Figure 13)**.

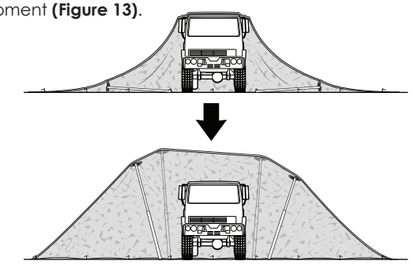


Figure 13.

8. Stake remaining tent pins into **ULCANS** edge loops, repositioning as required to ensure **ULCANS** remains tight.

9. To make a vehicle entry/egress doorway in the **ULCANS** perform the following steps:

a. Untie Becket seam enough to let vehicle pass through **(figure 14)**.
b. Tie off a Becket seam at top of proposed doorway approximately four feet from top of vehicle.
c. Fold back camouflage screen to avoid snagging on vehicle.
d. Reposition support poles and shape disruptors as necessary to allow for vehicle exit. If necessary, personnel may raise and hold poles to provide sufficient clearance for vehicle to enter or exit.

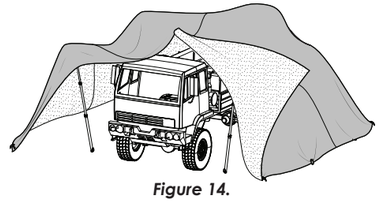


Figure 14.

Refer to **ULCANS** TM for preparation for movement instructions.