



# Dark Star eFinity Series

EDGE FREE® Ambient Light Rejecting Fixed Frame Screen

## USER'S GUIDE




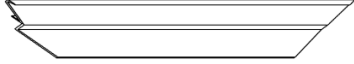

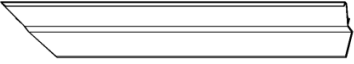

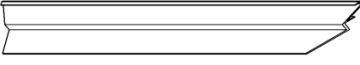
Congratulations on your new *Dark Star eFinity* purchase! The screen material included is our *ISF certified Dark Star 9* which is a reference quality front projection material, precisely formulated for environments with minimal control over room lighting. It was designed to enhance picture brightness, offer accurate color fidelity, and improve contrast levels. The *Dark Star 9* is best for family rooms, educational facilities, conference rooms or any applications in which incident light is a factor.

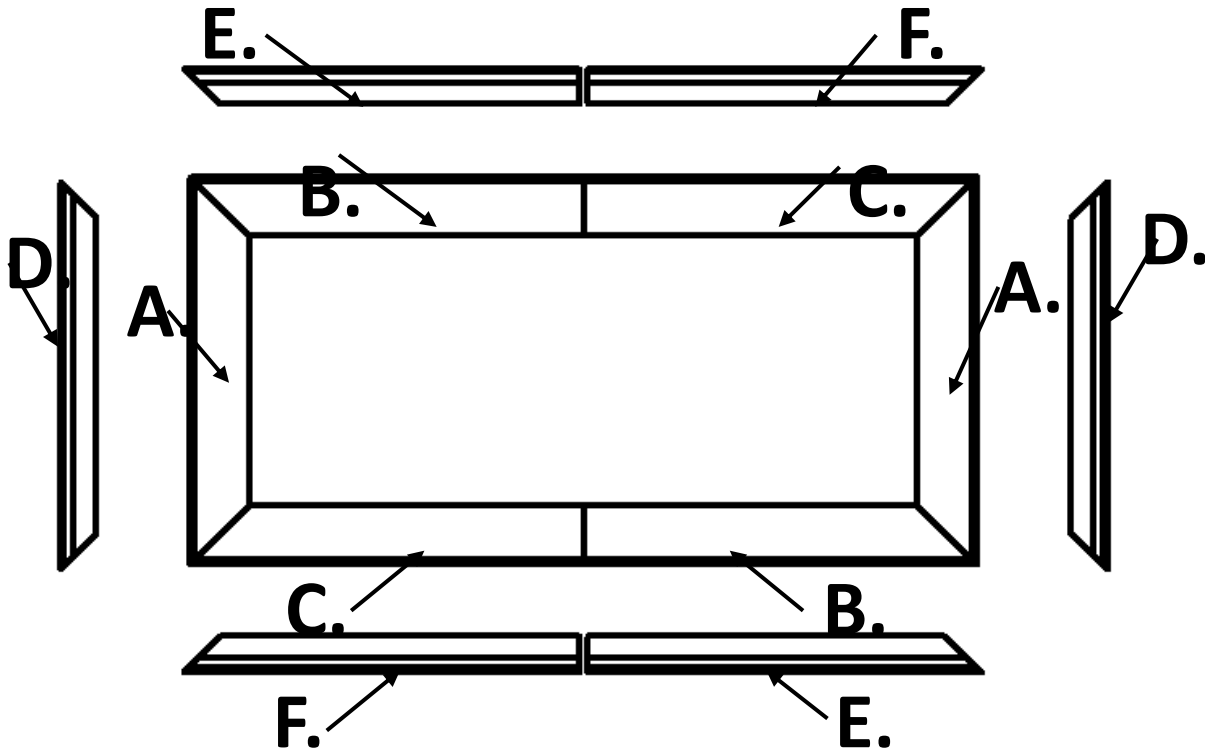
### Cautionary notice for the Dark Star 9 material

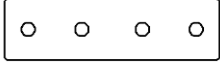
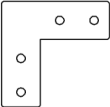



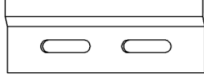


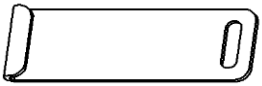


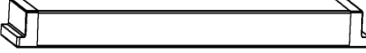


The Dark Star 9 Screen material is composed of high quality sensitive multi-layer projection material. Please follow the precautions below for proper care procedures and to prolong the life of your screen.

***Failure to use [these safeguards] will result in voiding your warranty***

1. Avoid using any chemical compounds or harsh abrasives which will result in permanently damaging the screen material.
2. Use only a soft microfiber cloth with mild soap and water to clean the screen material.
3. Please wear a pair of clean, powder-free glove in the process of installing and operating the screen to keep hand oil and dirt from being transferred to the viewing surface.
4. Be very careful when unrolling and handling the material. Lay the material flat only to avoid permanently creasing the material.
5. Do not rub the cloth with force when cleaning to avoid permanently scratching the surface.
6. Do not touch the screen surface with sharp objects or allow the screen surface to come in contact with anything other than the frame.
7. Use only a soft feathered brush to remove dust.
8. Dark Star 9 material damaged in handling, installation, or use is not covered under warranty.

1. Frame and Edge Trim Parts List			
Qty item	2 pcs Main Frame Parts	Qty item	2 pcs Edge Trim Parts
Part A.	vertical frame 	Part D.	
Part B.	½ horizontal frame 	Part E.	
Part C.	½ horizontal frame 	Part F.	



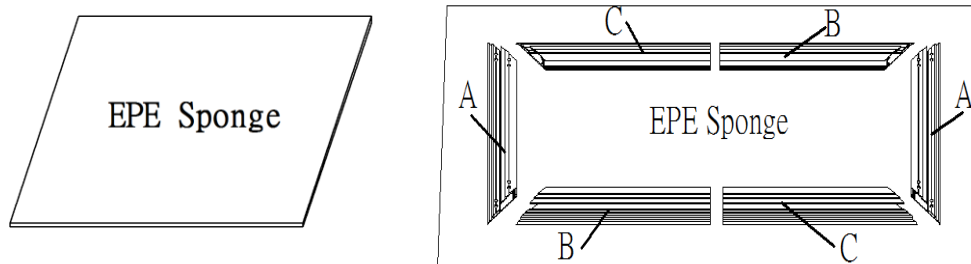
2. Hardware Parts List				
a. 	b. 	c. 	d. 	
e. 	f. 	g. 	h. 	i. 
j. 	k. 	l. 		m. 
				n. 

Item	Parts List Qty	EF108H-DS9	EF124H-DS9	EF158C-DS9
a.	Center Joints (1)	4	4	4
b.	Elbow Joints (2)	8	8	8
c.	M4x6 Screws	60	60	60
d.	Spring Hook	2	2	2
e.	Spring	96	116	132
f.	Top wall brackets	2	2	2
g.	Φ5x50 Wall Screws	6	6	6
h.	Hollow Wall anchors	6	6	6
i.	Bottom wall brackets	2	2	2
j.	Angle cover	4	4	4
k.	LED light strip clip	8	8	8
l.	Center Support Bar	1	1	2
m.	white gloves	2	2	2
n.	rods	6	6	6

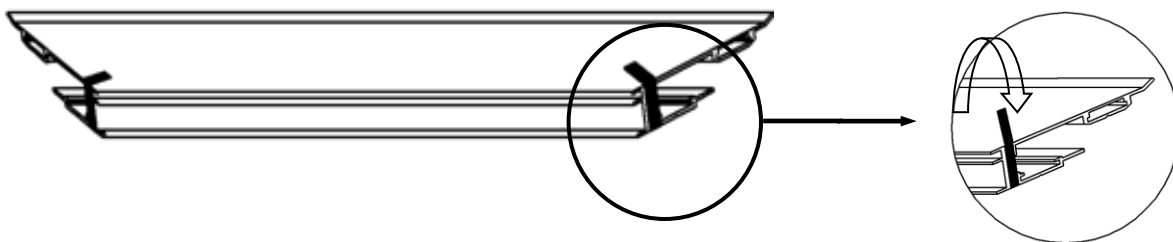
## Frame Assembly

**Step 1:** Place the soft padded EPE sponge on clean area on the ground where the screen will be assembled.

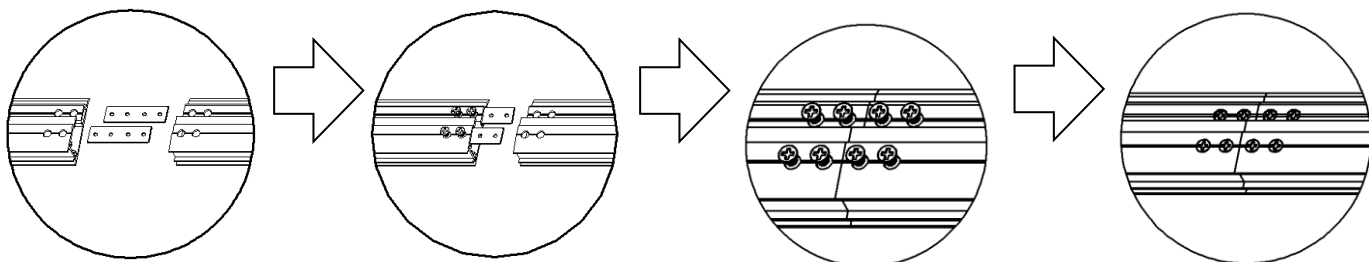
**Step 2:** Position the pieces of the frame on the EPE sponge in the arrangement shown below



**Step 3:** Remove the tape on all frame ends before assembling the frame.

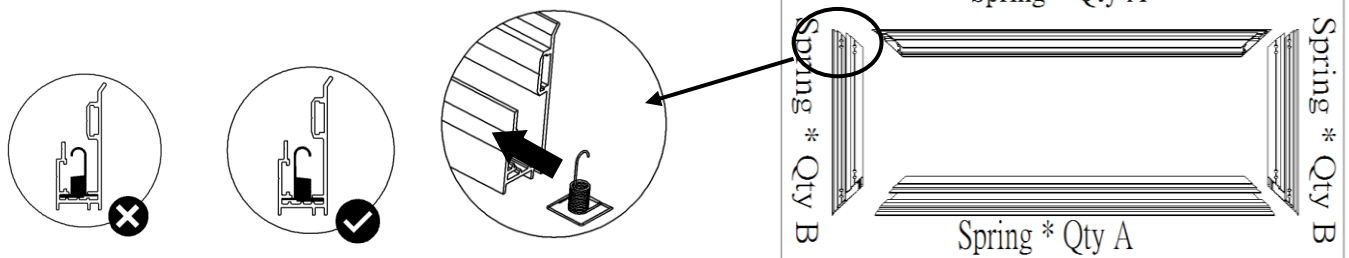


**Step 4:** Insert the *center joint (a)* connectors into *one-half of the horizontal frame (b/c)* and secure with the *M4x6 screws (c)*.



**Step 5:** Insert the *springs (e)* into the grooves of the frame. The spring's hooks should be facing the front side of the frame. For the correct amount of springs to place into the frame, please refer to the table listed below.

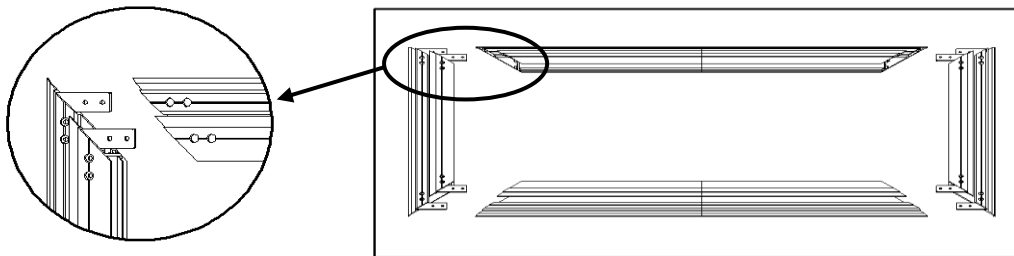
*For reference only as springs have been pre-installed.*



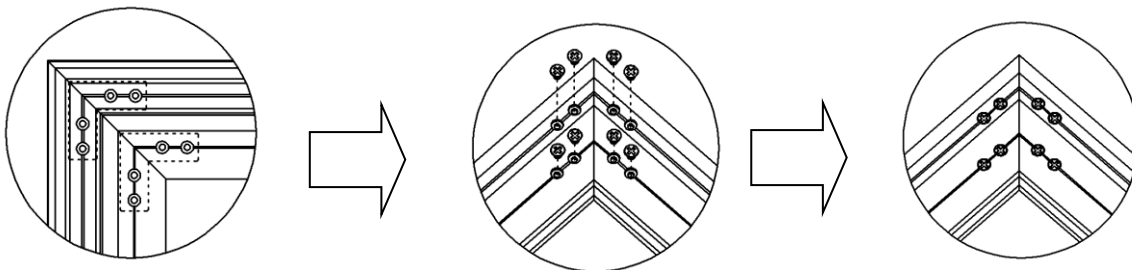
**Note:** The springs are pre-installed into the grooves of the frame.

Model Number		EF108H-DS9	EF124H-DS9	EF158C-DS9
Qty	A (Spring)	33	37	49
	B (Spring)	19	21	21

**Step 6:** Connect the *elbow joints (b)* to the top and bottom sections of the vertical frame. Once inserted, connect the vertical sections to the horizontal frame sections. Make sure all holes are in alignment and the frame pieces are flush (no gaps). They should form perfect right angles.

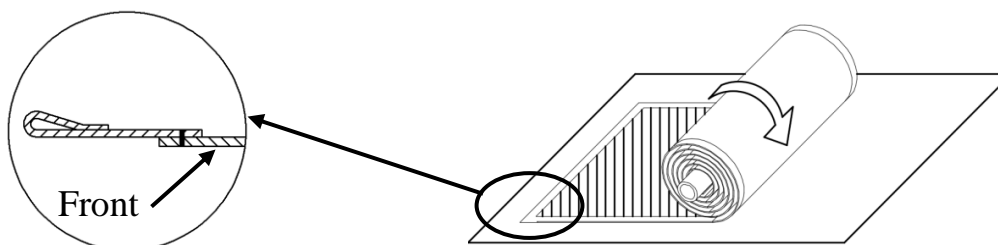


**Step 7:** Secure the elbow joints by fastening them with *M4x6 screws (c)*, 4 at each corner.

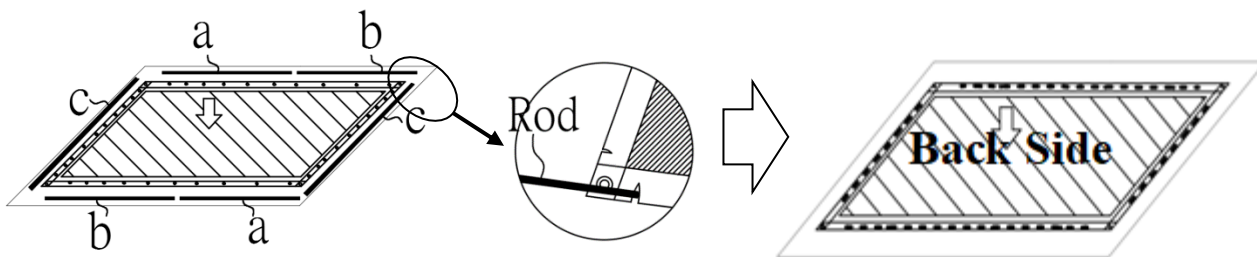


## Screen Material

**Step 8:** Put on the *white gloves (m)* and carefully unroll the screen material on a clean surface from the roller to the other side as shown below. The back side of the screen material should be placed upwards.

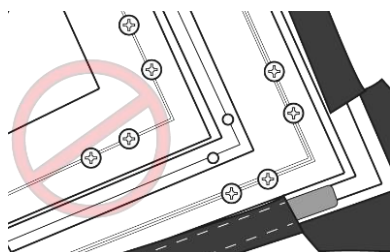


**Step 9:** Insert the screen *rods (n)* through the sleeves according to the labels on each edge of the screen as illustrated below.

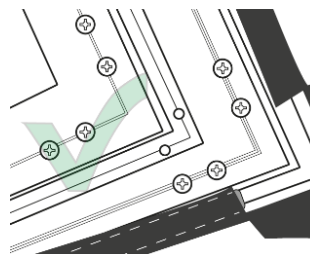


**Tip**

Make sure all rods are properly inserted thru all ends of the sleeves. Rods should not go beyond the end of the material's sleeve or under. *The rods should be right on the end as shown in correct illustration below.*

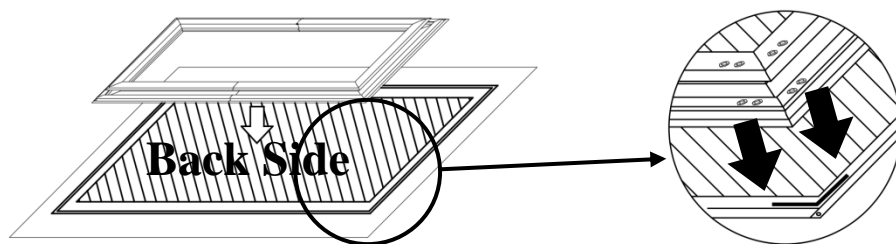


**Incorrect:** Rod is over the material's sleeve

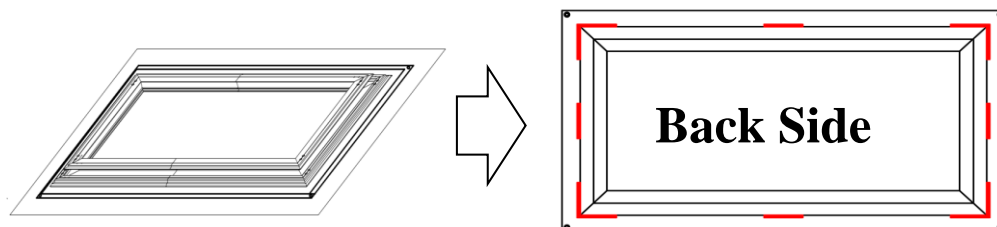


**Correct:** Rod is on the material's sleeve edge

**Step 10:** Carefully and gently place the assembled frame on top of the screen material. Make sure to not allow the angle edge of the frame to come in direct contact with the screen material to avoid puncturing it.



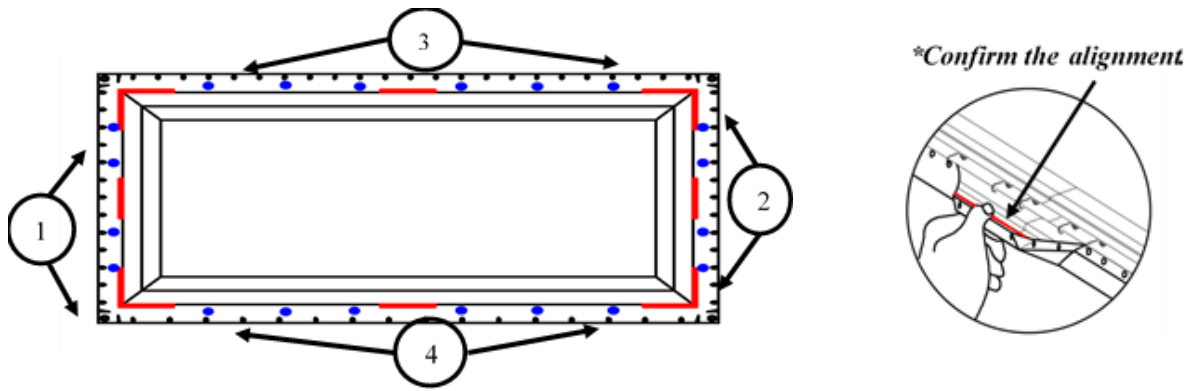
**Note:** Make sure all of the corners of the frame are aligned according to the markings on the back of the material as indicated below.



*\*Make sure the frame is positioned in the marked areas of the material.*

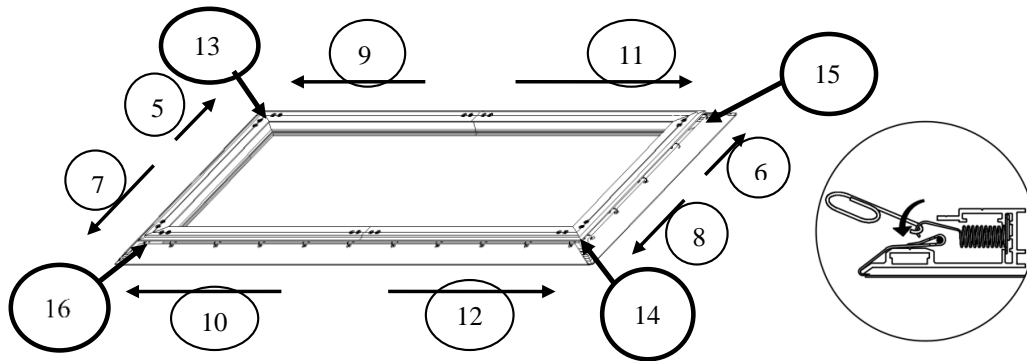
**Step 11a:** Please follow the sequence (below) to hook step by step from number 1 to number 4:

- (1) Attach the **centermost connections** (marked in blue or brown) on the left-side on the back of the frame. Repeat this on the right-hand side (2). Next attach the center-blue connections at the top of the frame (3). Then repeat this on the bottom span (4). There are line markings on the frame to ensure the frame is properly aligned.



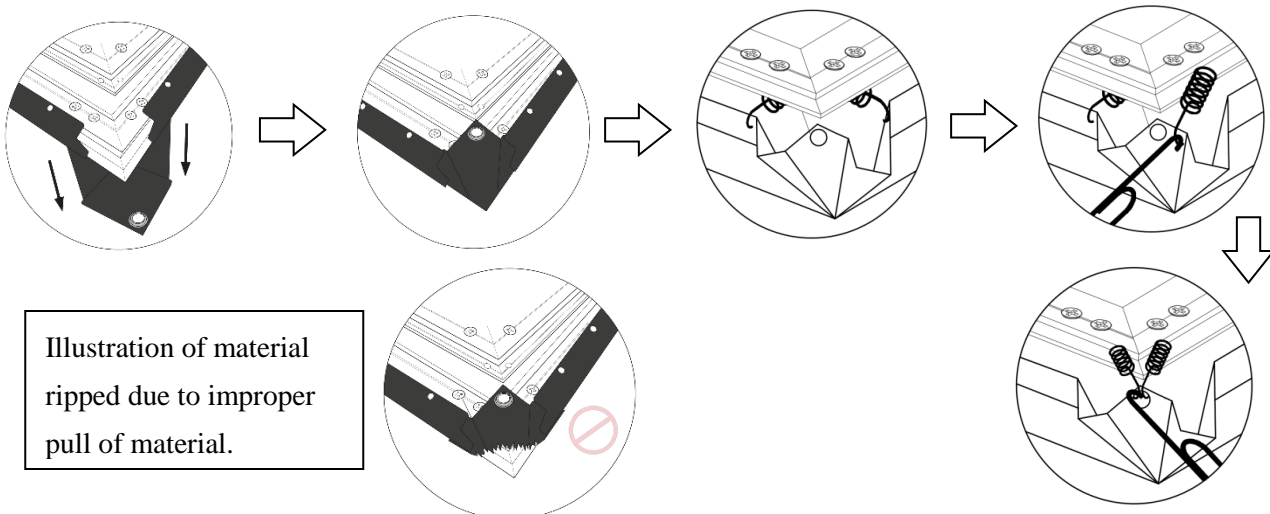
**ATTENTION:** Do not proceed with the next step until confirming that the frame is within the marked lines on the back of the material. If the frame shifted out of place, adjust the material so it is within the marked lines.

**Step 11b:** Follow the diagram below and make sure the attachments (5-12) are connected in sequence. Use the spring-hook tool to make the attachments easily.



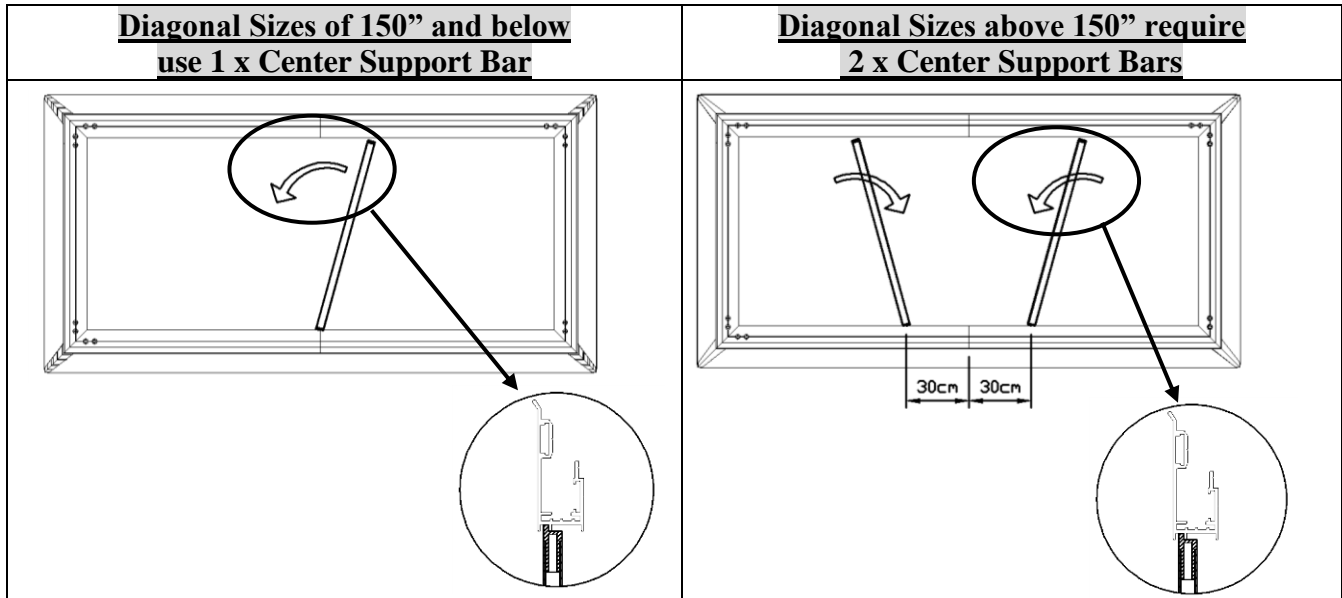
**Step 11c:** The final step is to ***pull out*** the screen material at each corner and fold it as illustrated. Use the last pair of springs in each corner to connect with the frame the top left (13), to the bottom right (14), the top right (15), to the bottom left (16).

**CAUTION:** Pull the material away and fold it over the corner of the frame.  
**DO NOT** pull it up as this will cause the corner of the material to get punctured and tear.



## Center Support Bar

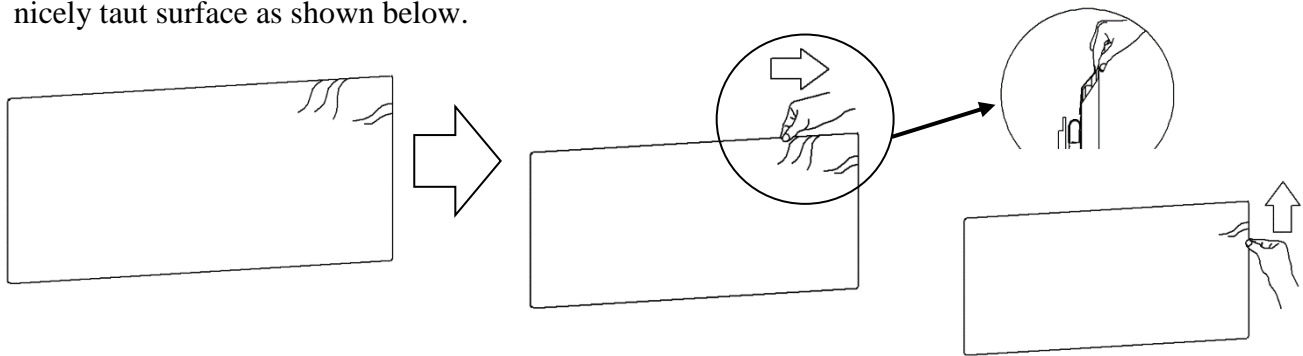
**Step 12:** Insert the *Center Support Bar (i)* into the upper top groove on the back of the frame with the bottom end near the approximate center point of the frame and rotate it in at an angle so that both ends of the bar are in alignment with the groove.



*Attention: Do not proceed with the Edge Trim installation until making sure there are no ripples in the material.*

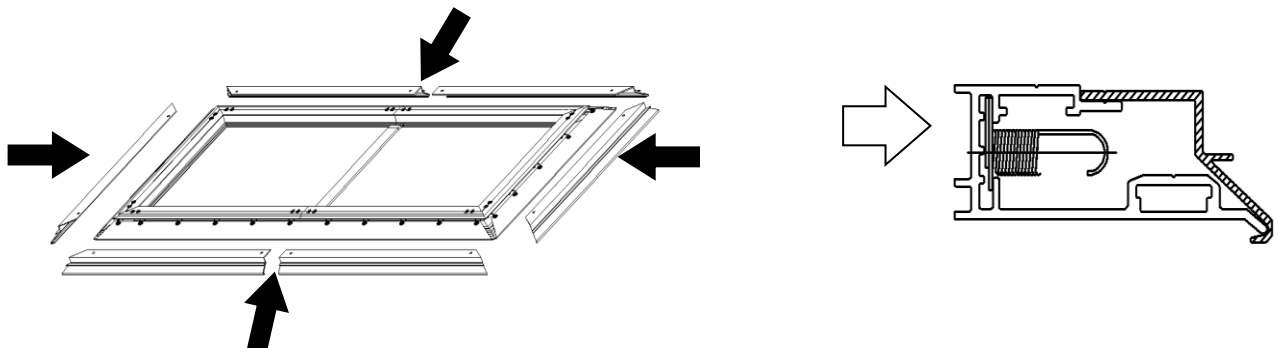
## How to avoid getting ripples on the screen's material surface

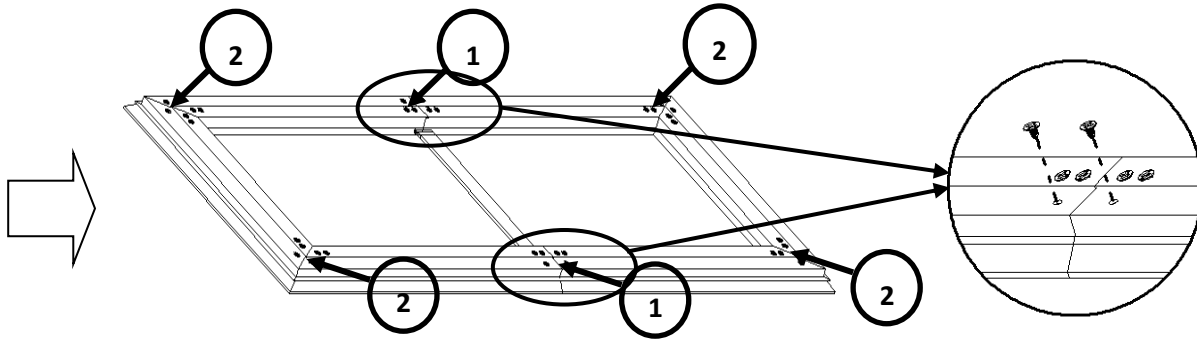
**Solution:** Pull and smooth out the material using your hand from the center to the corners, creating a nicely taut surface as shown below.



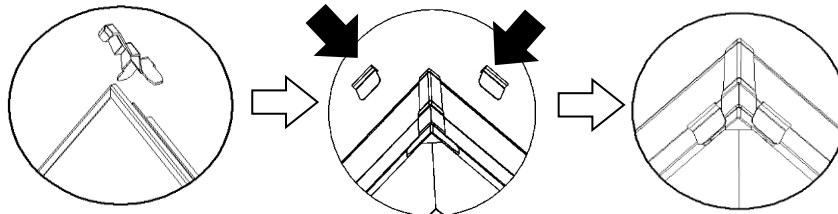
## Edge Trim

**Step 13:** Place the *Edge Trim* over each end of the frame and secure with *M4x6 screws (c)*, Start with the center points first, then the rest of the corners as shown.





**Step 14:** Install the *angle cover (j)* on each corner of the frame and install the LED light strip to hold down the angle cover (or just use the clips if LED kit will not be installed). Then insert the *LED light clip (l)* to hold the LED light strip in place.



### **Notice to Installer:**

Please use the following installation instructions to obtain superior optical performance from the Retro Reflective ALR (Ambient Light Rejecting) Dark Star 9 Screen.

**The following guidelines should also be followed.**

1. Minimum throw distance of 1.5 x the image width

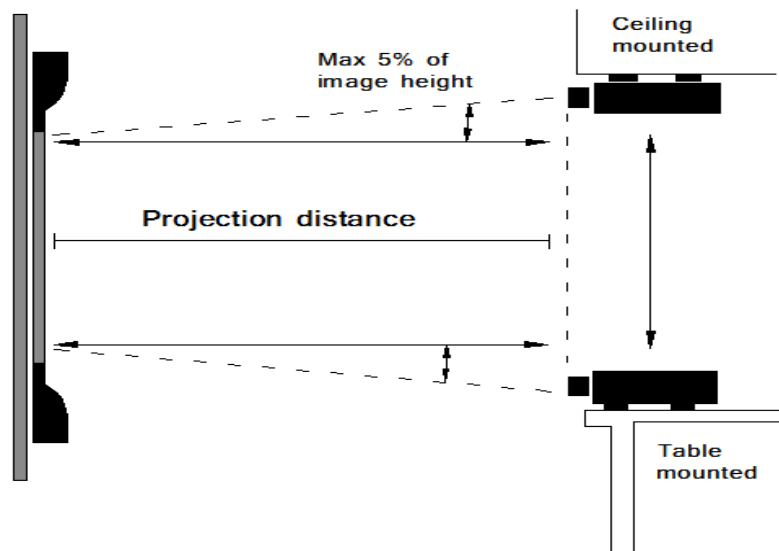
- Avoid a *hotspot* effect
- *Light absorption* – The angle of incident light is too steep and will get absorbed by the optical lenses. This will create a very dim image and affect the overall picture quality.

2. Ambient light should not come from the same direction as the projector's light

### **Proper projector placement**

**Images are not up to scale and are for illustrations purposes only.**

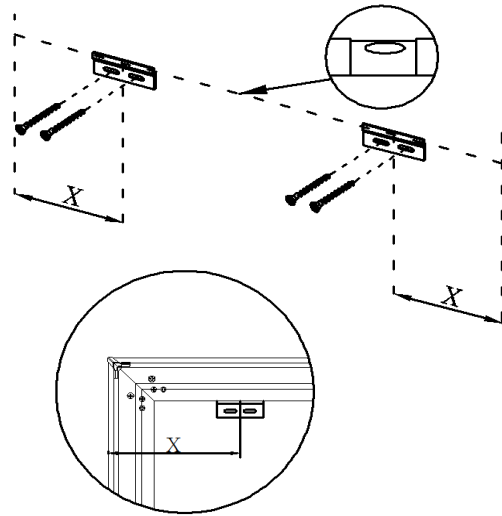
**Note:** Do not install the projector at an angle that is greater than 5° off the vertical axis from the screen. The ambient light filtration layer in the material is designed to absorb off-axis light rather than reflect it.



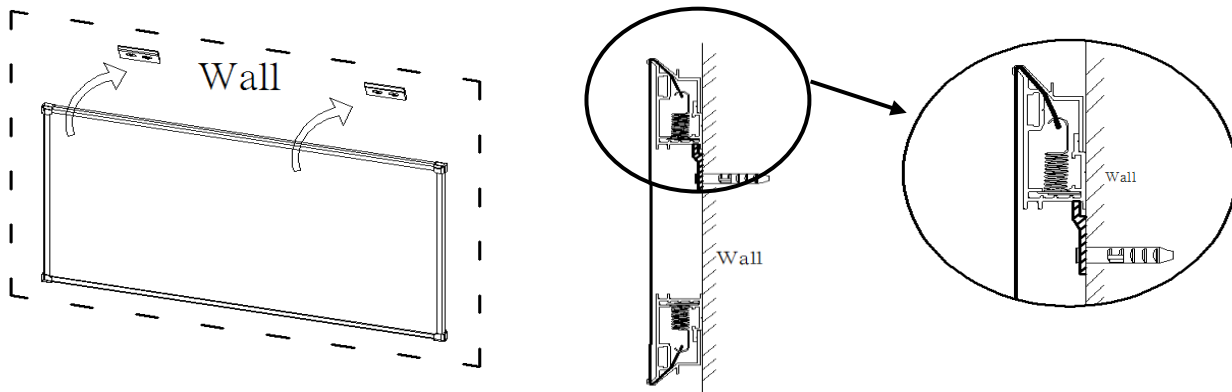


## Wall Installation

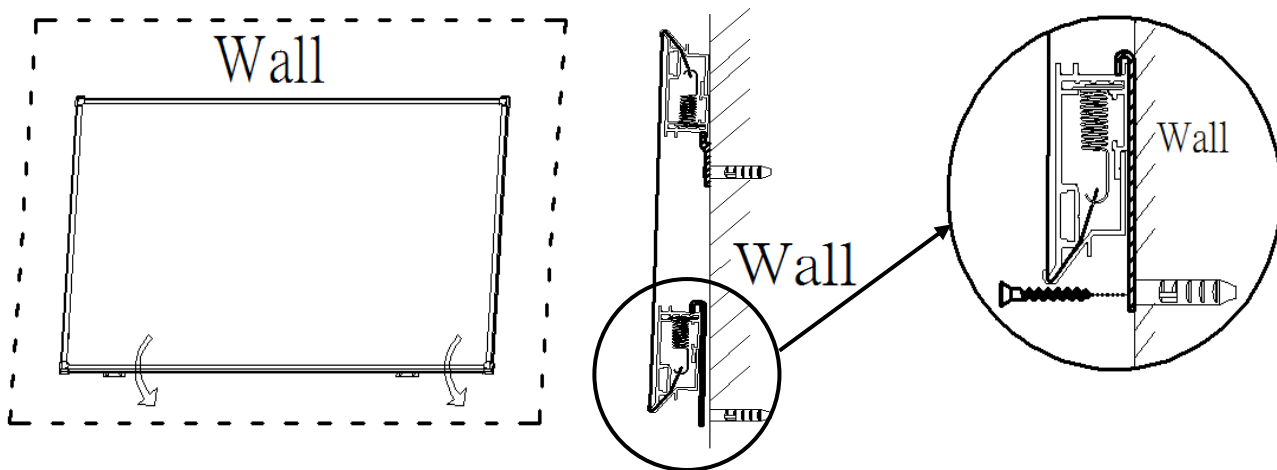
**Step 15:** Measure the overall length and height of the frame and drill holes for the top brackets. Line up the wall brackets with the drilled holes on the installation location and screw them in using a Phillips screwdriver. If not installing into a structural wood stud, use a hollow wall anchor then screw in the M5x50 wood screws with a screwdriver. Make sure the brackets are leveled.



**Step 16:** Position the fixed frame screen onto the top wall brackets as shown below and push down at the center of the top of the frame to secure.



**Step 17:** With the frame slightly tilted outward; connect the bottom brackets onto the bottom groove of the frame. Then secure them by screwing onto the wall.



## INSTALLATION TROUBLESHOOTING TIPS

### Avoid seeing seams, ripples/corner waves after assembly and installation

**Problem:** Seam is visible

**Solution:** **Remove the bezel.** Unhook the springs except the centermost connections on all sides. Gently pull the material and align the frame within the marked locations on the back of the material as illustrated/explained in **Step 11a**. Once it's been aligned, repeat **Steps 11b** and **11c**.

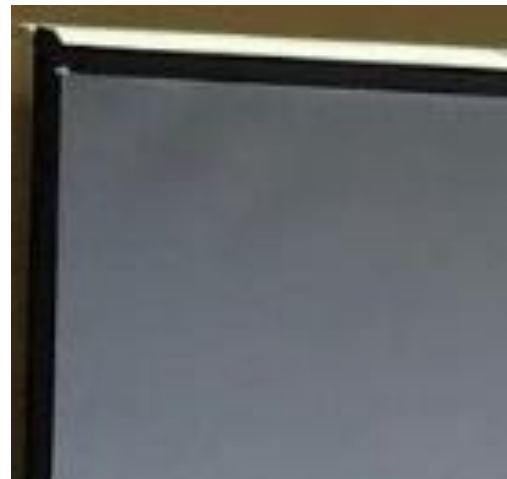
**Problem:** Corner waves and wrinkles

**Solution 1: Remove the bezel.**

Make sure the rods are properly inserted all the way thru the material sleeves.

**Solution 2:** Pull the corners of the material as illustrated/explained in **Step 11c**.

**Solution 3:** Pull and smooth out the material using your hand from the center to the corners (see page 7)



**For Technical Support or an Elite Prime Vision contact in your area, visit**

[www.epvscreens.com](http://www.epvscreens.com)