



DEEPFRAME BASIC KIT- USER MANUAL

VERSION 1.5 - ORIGINAL USER MANUAL



It is important to read this manual before using the DeepFrame, and to follow advices and instructions on safety, operation and general use to get the best possible experience with your DeepFrame. DeepFrame is a revolutionary new type of mixed reality display that enables digital content to appear as a hologram on top of reality seen through the lens. The window-like display consists of a high-precision optical lens that can be mounted on the floor stand (optional accessory) or hang suspended in wires.

The DeepFrame is patent-pending. Realfiction and DeepFrame are registered trademarks owned by Realfiction ApS.

Content

Security precautions	3
Product warranty	4
When receiving the DeepFrame	6
How to operate the display	8
Unpacking and preparing your OLED screen for first time use	8
Adjusting the hologram	
Adjusting the volume	
Hanging the display in wires, suspended from the ceiling	11
Cleaning the display	11
Using the display in smaller areas	13

Eu-declaration of conformity

EU-declaration of conformity	
<p>Realfiction ApS Øster Alle 42, 7 th DK-2100 Copenhagen Ø</p>	
<p>Hereby declares that DeepFrame Basic Kit meets in Council Directive 2006/42/EC of 17. Maj 2006 on machinery, and amending Directive 95/16/EC.</p>	
<p>DeepFrame Basic Kit is designed to function as RF concave window frame for 3D hologram that can enlarge the image from an OLED screen. Content and scope of the color show is designed in an interchangeable memory card and worked with the client's wishes. DeepFrame Basic Kit consists of a powder painted frame, constructed as an aluminum frame, which holds a very large glass optic in 15 mm thick glass with radius 2800 mm at a length and width of 1150mm x 1150mm. This very large optic with a coated transparent mirror can be used as accessories for CE approved TV / monitor, as magnifying glass to enlarge the screen size, which at the same time can create a mixed reality display.</p>	
<p>Furthermore, the product in accordance with The Danish Working Environment Authority's Executive Order no. 693 of 10 of jun. 2012.</p>	
<p>DK-2100 Copenhagen, date 18/6-2018</p> <div data-bbox="655 1330 898 1576" style="text-align: center;"><p>Clas Dyrholm CEO, Realfiction ApS</p></div>	

Security precautions

- Installation of the DeepFrame must be done according to this manual, and must be performed by an adult (Over 21 years).
- If installed on the floor, the DeepFrame must be placed on a horizontal, stable and plane surface.
- Do not install the DeepFrame in narrow passageways or other places where a lot of people and equipment has to pass close by, thereby risking collisions that might cause the DeepFrame to tip over causing human injuries and damage to property.
- No sand or dust! Fine sand or dust entering the system could cause malfunctions or defects.
- The DeepFrame must only be gently cleaned using a fine fabric cloth and a little water.
- Environmental conditions: Operating Temperature 0 °C to 35 °C , Operating Humidity 10 % to 80 %, Storage Temperature -20 °C to 60 °C, Storage Humidity 5 % to 80 %.
- Do not place the DeepFrame in direct sunlight or near magnetism, corrosive gas or ultrasonic humidifier. This could cause malfunction.

Product warranty

The manufacturer's warranty includes production, materials and function of the supplied equipment. The warranty is valid only if the supplied material is used as described in this manual, and to the purpose to which it has been designed.

The warranty includes repair or replacement of malfunctioning components.

The warranty is no longer valid if any unauthorized repairs or replacement of parts have been performed on the product.

The DeepFrame consists of a high-precision glass optic technology. Due to the very large size of the glass optic, small lines, bubbles or dots can be seen, and some tolerance in color temperature for the transparency can be found from batch to batch. Horizontal and vertical lines can have some distortion, but only minor in mean area, meaning 150 mm from the edges. This shows the limitations of the current technology, and does not indicate a faulty product.

Please note that we cannot be held liable for any damage or failure that has occurred due to the use of third party constructed flight case or packaging. This limitation shall also apply if the original packaging has been altered in any way.

In the event of claims the item must be sent back to us in its original packaging.

LG OLED screens may get burn-in problems if the same image is displayed on the screen for a long time. To reduce this problem, LG recommends the following:

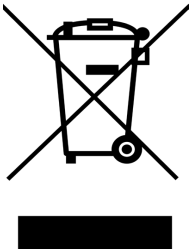
- Avoid displaying static images on the screen for more than a couple of minutes at a time.
- Never have the screen turned on more than an absolute maximum of 16 hours a day.
- When the OLED screen has been turned on for 4 hours or more, the OLED screen must be powered down the following way:
 - Power off the OLED screen with the remote control.
 - Wait 20 minutes after powering the OLED screens down with the remote control, before removing the power from the OLED screen.

Failure to follow these recommendations will result in any active warranty to become void.

Correct Disposal of This Product

(Waste Electrical & Electronic Equipment)

(Applicable in the European Union and other European countries with separate collection systems)

	<p>This marking shown on the product or its literature, indicates that it should not be disposed with other household wastes at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources.</p> <p>Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take this item for environmentally safe recycling. Business users should contact their supplier and check the terms and conditions of the purchase contract. This product should not be mixed with other commercial wastes for disposal.</p>
---	---



WHEN RECEIVING THE DEEPFRAME

The DeepFrame comes in a sturdy flight case that holds the optical lens, floor stand (optional) and OLED mount kit (optional).

Please note that DeepFrame needs to be combined with an HD or 4K screen (not included) for projecting the digital content through the optical lens. We recommend using a 65" 4K curved OLED screen together with the OLED mount kit (optional accessory).

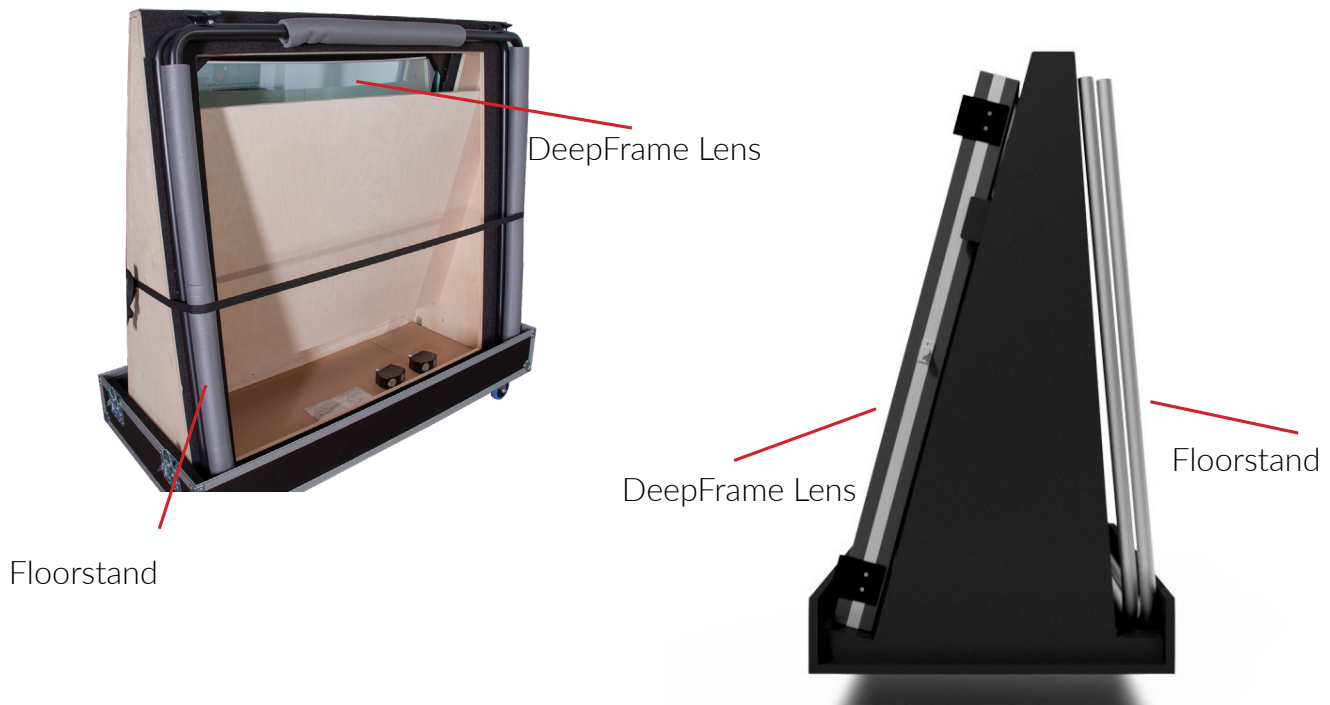
Why should I use a curved OLED screen?

The curved OLED, mounted on our optional OLED mount kit, will curve the image to follow the curvature of the DeepFrame lens, thus straightening out the reflected image and minimizing any perceived distortions in the image contents. Further the OLED technology has an extremely good contrast and color performance, which helps and optimizes the 3D effect.

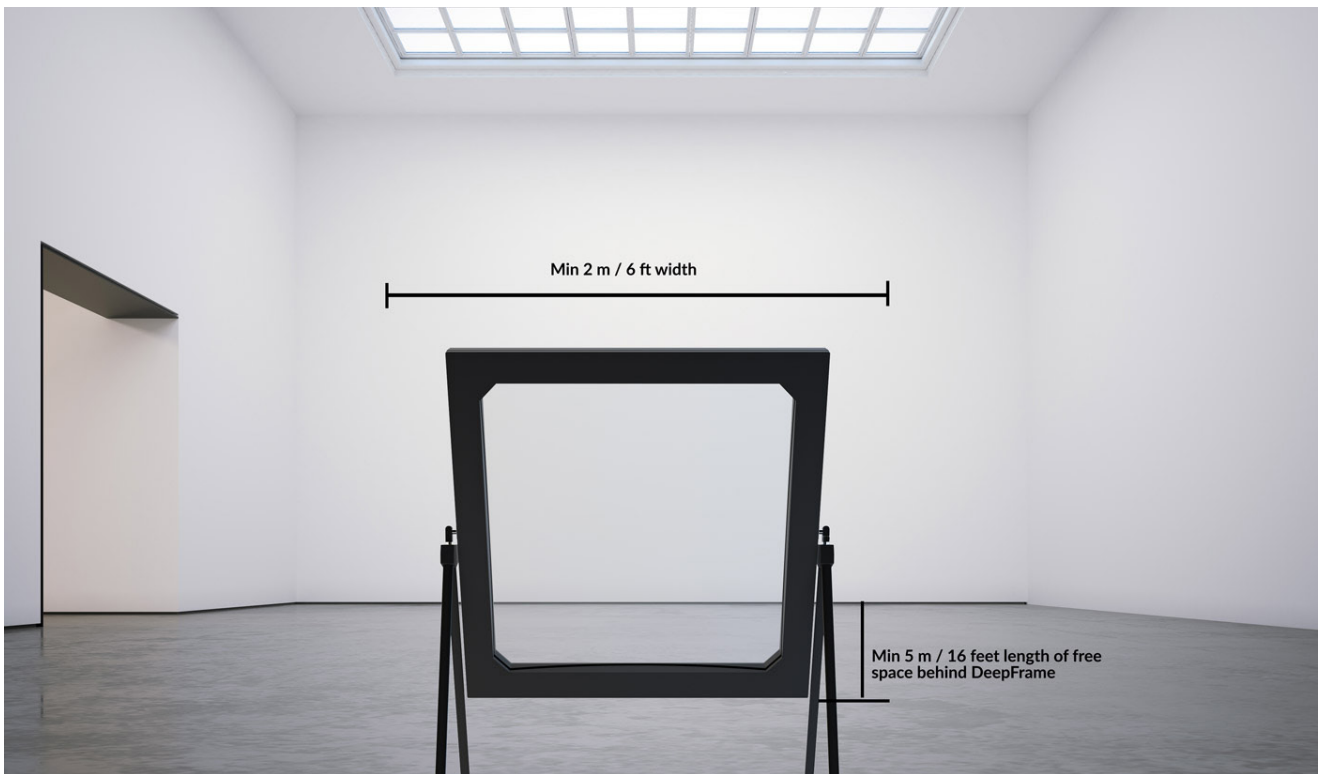
What happens if I use a flat LCD screen instead?

When using any flat display, you should know that the reflected virtual image will be curved and be distorted. On the center part of the image, the distortion is not really noticeable, but the further to the side your contents are on the screen, the more they will seem distorted and skewed in perspective.

If you use an LCD screen, please make sure to try and minimize the so called black level in the screen. This is the amount of light shining through the black parts of the image. A high black level will result in a grey haze being reflected by the DeepFrame, which does not look good and lowers the overall 3D effect and wow-factors.



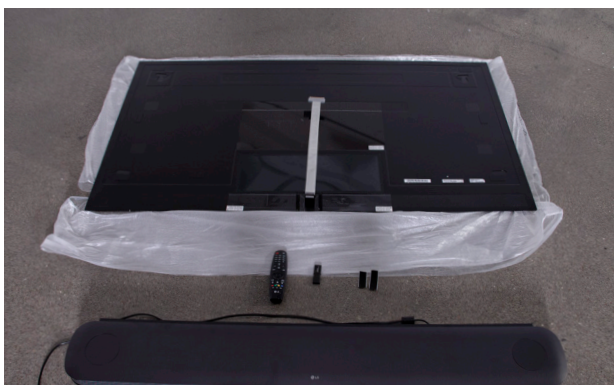
In order to create a free-floating hologram that appears to be in the real world (or a virtual overlay on top of a real object), we recommend having a free space of minimum width 2m x length 5m (~6 x16 ft) for the DeepFrame installation.



HOW TO OPERATE THE DISPLAY

UNPACKING AND PREPARING YOUR OLED SCREEN FOR FIRST TIME USE

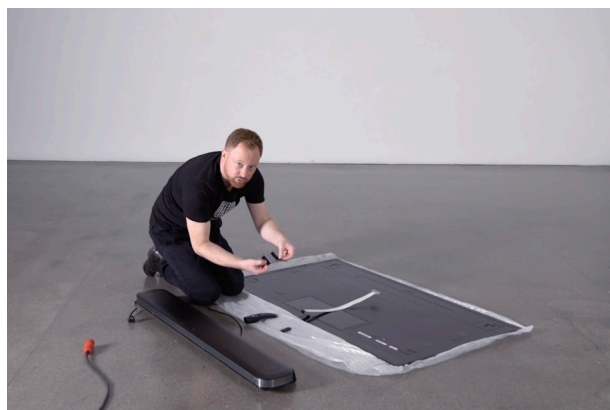
1. Take out your OLED Screen from the box and gently place it on a sheet of protective foam on the floor with the backside up.



2. Remove all the protective foil from the backside of the OLED Screen. Also take off the white cuff that protects the Connection Cable in order to remove the protective foil in that area as well.



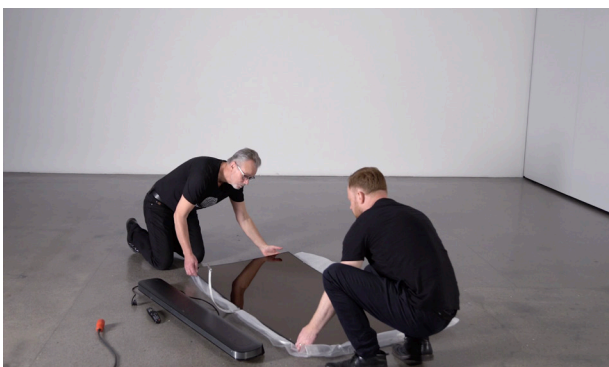
3. Attach 2 pieces of Velcro on both sides of the Connection Cable so you can re-attach the white cuff again for protecting the cable later.



4. Insert the USB stick to the sound bar, holding the specific configurator file for either DeepFrame One or DeepFrame Basic Kit. This is needed to setup your OLED Screen's picture, sound and power settings settings. If you have a DeepFrame One, your toolbox already has a USB stick with the correct configurator file on it. If you have a DeepFrame Basic Kit, you can download the correct configurator file from the support page on our website.



5. Flip the OLED Screen around and gently place it on the protective foam again, front side up. **Important: Always make sure to handle the connection cable with care. Never pull or apply force to it, as this might damage the part where the cable is attached to the screen.**



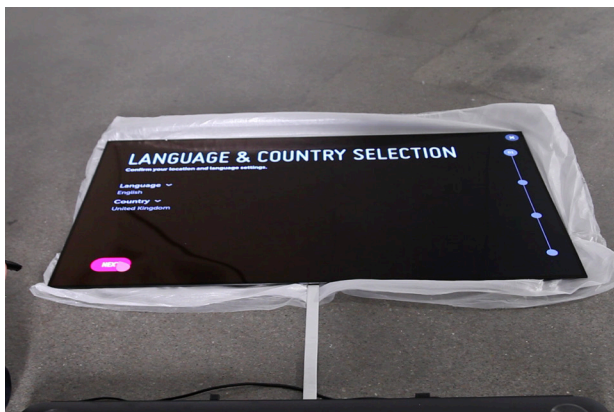
6. Insert the Connection Cable to the Sound Bar and then connect it to a power outlet.



7. Take the remote control and turn on the OLED Screen by pointing it towards the sound bar.



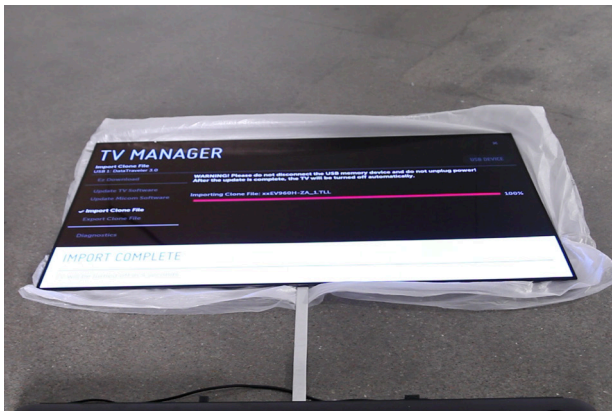
8. Select 'English' as your language and your country. Then click 'Next'.



9. Click 'USB configuration', then 'Import clone file' and select the file on the USB stick. Finish by clicking 'Update'.
IMPORTANT: Beware not to cut the power or remove the USB stick while the OLED Screen is updating the settings.

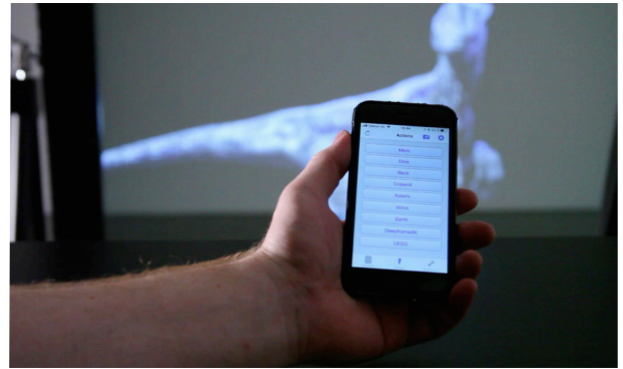


11. When the settings are correctly installed, the message 'Import completed' will appear and the OLED Screen will turn off.

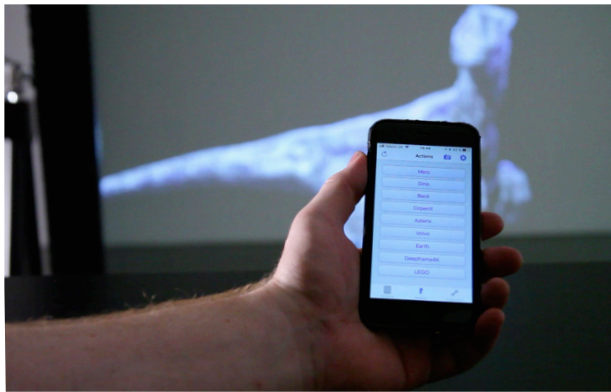


HOW TO OPERATE THE DISPLAY

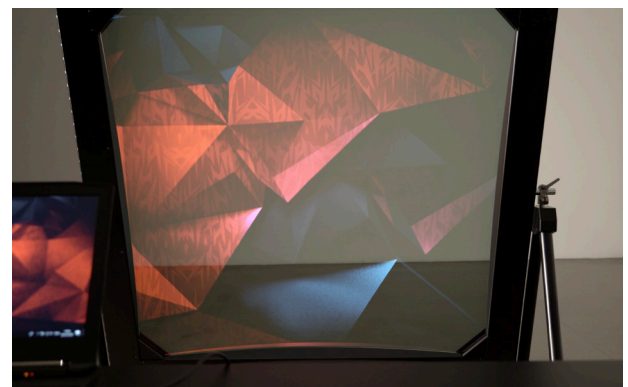
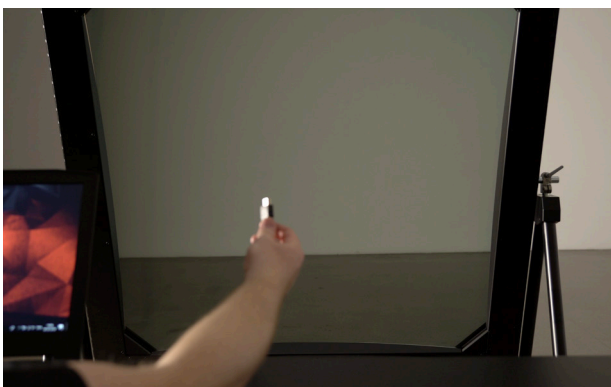
1. DeepFrame can be connected to many different input channels using HDMI.



2. In this example, we have connected the BrightSign media player with a wireless router to the HDMI input found on the OLED Screen's sound bar. This will allow us to use the free BrightSign App to easily switch between different content using a smartphone.



3. As another example for creating an interactive solution, you could connect a PC running Unity and play the software directly through DeepFrame.



ADJUSTING THE HOLOGRAM

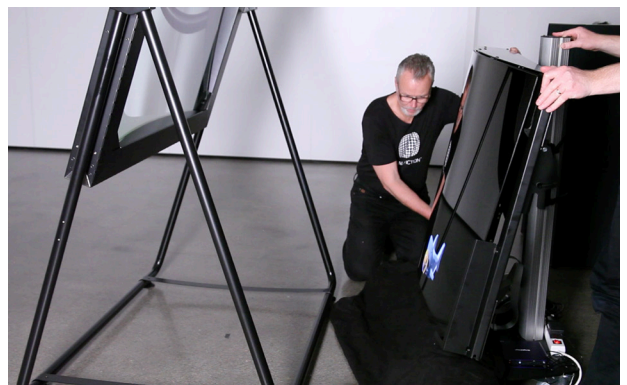
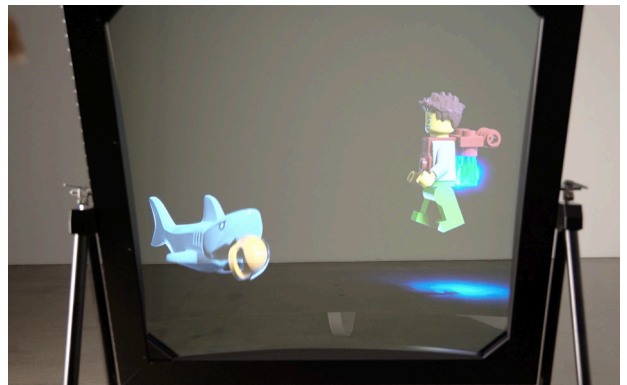
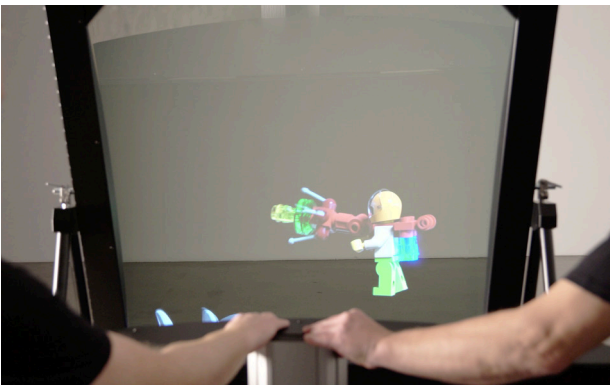
1. Important: Make sure you have attached the long Connection Cable Extender, as the built-in cable on the OLED Screen may not be long enough to allow you to position it at the maximum height or tilt.



2. We always recommend placing the OLED screen as high on the OLED stand, as this will limit the line distortion as much as possible.



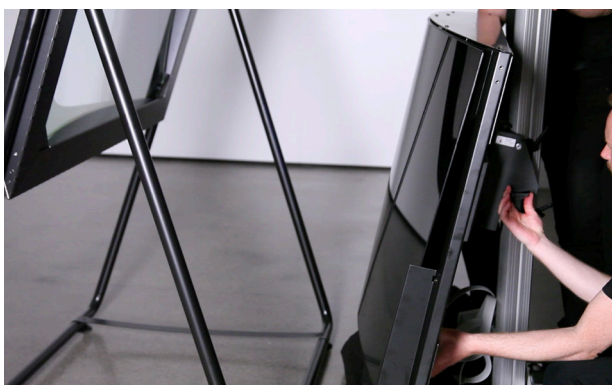
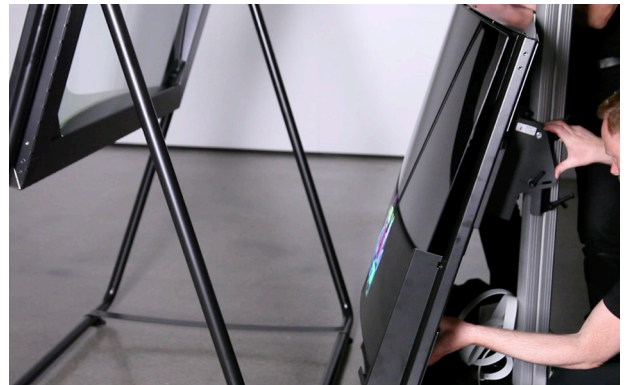
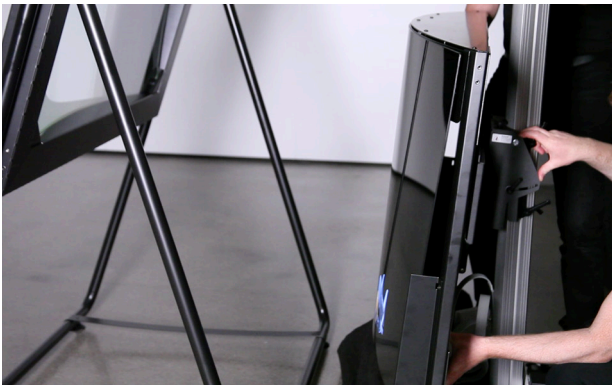
3. Move the OLED Stand back and forth to adjust the distance your hologram appears in, and also the size of it.



4. Then gently open the locks on the Optical Lens frame and rotate it to adjust the height your hologram appears in. When the right position is found, tighten the locks again to secure it in place.



4. Finally, tilt the OLED Screen to obtain the same angle as the Optical Lens. This step is to eliminate distortions in the hologram.



4. Then gently open the locks on the Optical Lens frame and rotate it to adjust the height your hologram appears in. When the right position is found, tighten the locks again to secure it in place.



ADJUSTING THE VOLUME AND TURNING THE DISPLAY ON/OFF

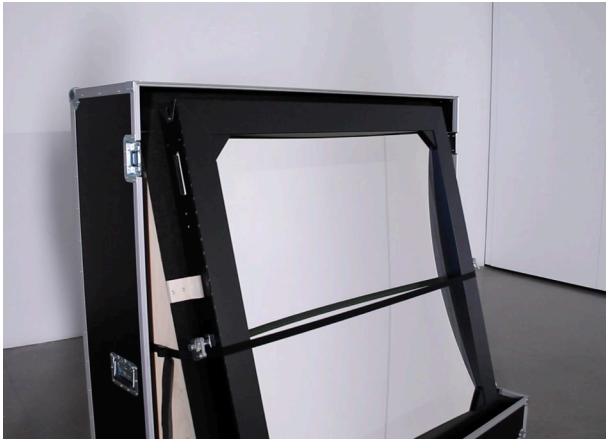
1. Use the remote control for your OLED Screen and point it directly towards the sound bar underneath. Press the volume buttons to adjust the sound. Press the On button to turn the display on and off.



Hanging the display in wires

Besides being mounted on the optional floor stand, DeepFrame can also hang suspended in wires from the ceiling or a truss rig by using the built-in eyelets in the display frame.

Note: We do not recommend installing DeepFrame as a ceiling installation if the hologram is intended to appear less than 6 meters behind the lens.



Calibrating the DeepFrame

Depending on your digital content, you can adjust the size of your hologram and the distance it appears in.

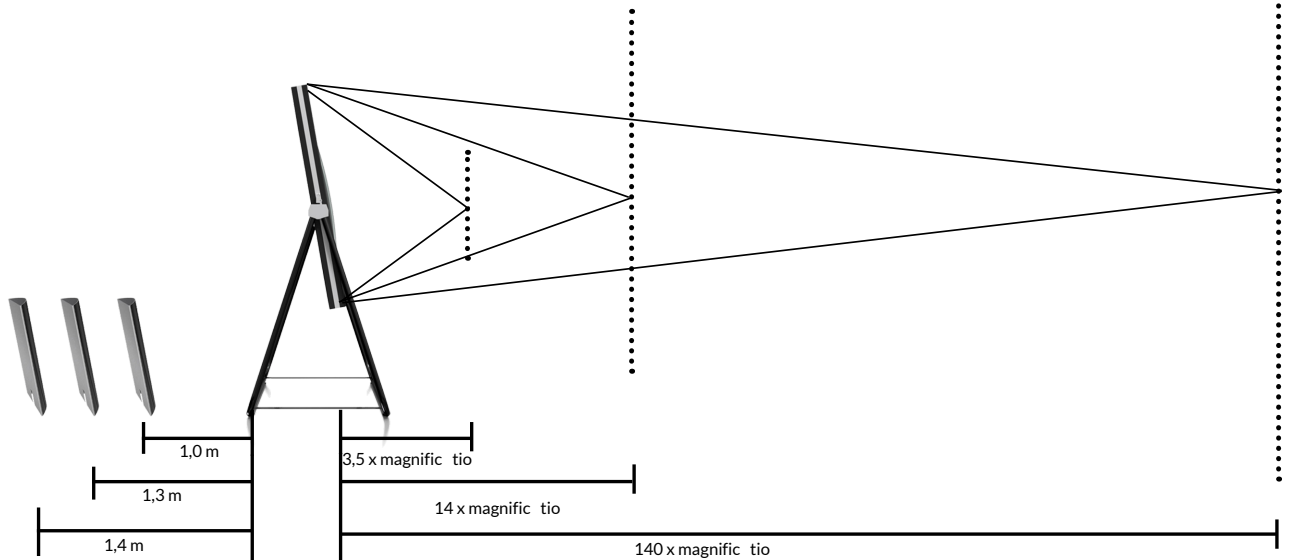
The distance between your screen and DeepFrame can be a maximum of 1400mm (~55 in) and a minimum of 800mm (~31.5 in). The hologram can then appear to be anything from 50x50 cm (~20x20 in) up to a maximum of 2x2 km (~1.5x1.5 mi)

1. Rotate and position the DeepFrame so it faces the area where you want the hologram to appear.



2. Slightly adjust the distance between your screen and DeepFrame, to create the desired size of your hologram (magnification) and distance it should appear in.

Note that you only need to adjust the distance slightly in order to magnify the digital content exponentially.



Cleaning the display

The DeepFrame consists of a high-precision glass optic and must only be gently cleaned using a fine fabric cloth and a little water if necessary.

Note that it is the inside of the optical lens that is delicate.

Using the display in smaller areas

It is possible to use DeepFrame in smaller areas, thus disregarding the recommended minimum free space of width 2m x length 5m (~6 x16 ft).

This is done by closing the backside of the DeepFrame optical lens with black fabric or a black box, making it impossible to see through the display as originally intended.

By doing so, you transform DeepFrame from being a mixed reality display, into a large virtual reality window instead. The 3D effect and sensation of endless depth is still maintained, making it possible to create a view into a different reality, in a very small space.

Please note that when using DeepFrame in this configuration, the limit for showing true-to-size objects is approximately that of a car.



Magic Matters



REALFICTION™

For further information and pricing please contact Realfiction
Phone: +45 70 20 64 90
email: contact@realfiction.com

Realfiction and DeepFrame are registered trademarks owned by Realfiction ApS. Other marks may be mentioned here in that belong to other companies. © 2018 Realfiction ApS. All rights reserved.

Realfiction ApS | Øster Alle 42, 7th floor | DK-2100 Copenhagen Ø Denmark | Phone: +45 70 20 64 90