Installation Manual

Dynamic 2s – Projection Screes
DT-DYN-2S

DISPLAY TECHNOLOGIES

Table of Contents

Dynamic 2s (DT-DYN-2S) Installation Manual – Revision 2.0

PLEASE READ PRIOR TO INSTALLATION

Before installation of this mount you should fully read these instructions to ensure you are aware of the full installation procedure. In addition to the screen and accessories and in order to carry out the installation you will need:

- Suitable screw fixing screws/fixings for fixing of the mount
- Spirit level
- Measuring tape
- Philips Screwdriver

In the Installation accessories you will find enclosed:
- **White Cotton Gloves to be used at all times when handling the white screen fabric**
- Fabric Installation tool
- 40mm fixing screws
- Silent Tension System Bands
- IEC power Cable

It is recommended that at least 2 people install this screen. Due to the weight relevant Lifting equipment must always be used to support the mount and the weight of the projector during installation. **Fully read the manual prior to commencing installation.**

Important Notes

The symbols below show important notes that must be read and understood at each stage of installation

⚠ = Warnings (Safety or Installation Quality)

ℹ = Information (Installation requirements or tips)

From time to time we will release updated versions of manuals. To ensure that you always have the latest version always check against the relevant product on our website – www.displaytechnologies.co.uk

Any support questions can be sent to our support team – support@displaytechnologies.co.uk

Dynamic 2s (DT-DYN-2S) Installation Manual – Revision 2.0

SAFTEY INFORMATION

WARNING: Risk of Electrical shock. Only authorised installers should open electrical control boxes contained within or for the control of this product.

WARNING: Do not exceed the weight capacity stated for each product or component. Failure to do so can result in serious personal injury or damage to the equipment.

WARNING: It is the installer responsibility to ensure that any structure that product of component supplied is to be fixed to is of adequate structural strength prior to installation. Failure to do so can result in serious personal injury or damage to the equipment. It is recommended that the structure being fixed to is able to support a weight 5x the weight of the component plus and final equipment being mounted to the component.

WARNINGS:
1. Read all technical instructions fully before installation and use. It is the installer's responsibility to ensure that all documentation is passed on the end user and read fully before operation.
2. Keep all documentation.
3. Heed all warnings.
4. Follow all technical specifications and instructions during installation.
5. Do not use near water unless the product has been specifically designed to do so.
6. Clean only with a dry cloth. Where the unit contains a mirror read and adhere to the Mirror Cleaning Guide
7. Only use attachments/accessories specified by the manufacturer.
8. Refer all servicing to qualified personnel. Servicing is required regularly on an annual basis, when the apparatus is damaged in any way, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
9. To prevent overheating, do not cover the apparatus. Install in accordance with the instructions.
10. No naked flames such as lit candles should be placed on the unit.
11. Observe and follow the local regulations when disposing of batteries.
12. Do not expose the unit to dripping or splashing fluids.
13. Do not place objects filled with liquid, such as vases, on the unit.
14. Do not expose the batteries to excessive heat such as sunshine, fire or the like.
15. For all mounted apparatus, the apparatus should be installed on solid wood, bricks, concrete or solid wood columns and battens.
16. Do not use outdoors unless marked for outdoor use.
17. Exceeding the weight capacity can result in serious personal injury or damage to equipment.

Unpacking

Parts:
- Left Frame
- Right Frame
- Top Left Frame
- Top Right Frame
- Bottom Left Frame
- Bottom Right Frame (Contains control box)
- Left Frame Cover
- Right Frame Cover
- Top Left Frame Cover
- Top Right Frame Cover
- Bottom Left Frame Cover
- Bottom Right Frame Cover
- 4 x Inner screen covers
- 2 x Stretcher Bar
- Black Backing Surface
- White Screen Surface
- Installation Accessories Pack

Each screen is carefully packaged in our factory to ensure that it reaches you in perfect condition. Each section is wrapped in protective packaging or in a PVC sleeve to ensure it is protected and stays clean.
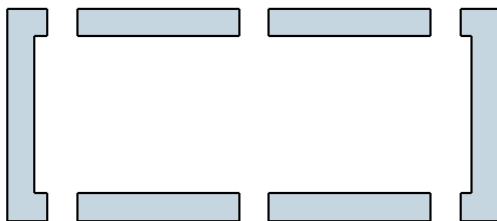
⚠ Do not unpack each piece from its protective packaging until you are ready to install it. This will ensure that you do not damage any of the velvet finished pieces accidentally during installation.

⚠ Note that the Dynamic 2s is designed to be assembled on the wall so that a clear floor area big enough to build the screen is not required. However, it can also be built on the floor if preferred you will just need to follow the same instructions but substitute the wall for the floor then lift and attach the screen to the wall once built. DO NOT built the screen face down on the floor under any circumstances as this will result damage to the screen and mechanism.
The screen is a 6-part frame. 2 end sections (containing the masking), 2 top sections and two bottom sections. The bottom right section also houses the control box for the screen.
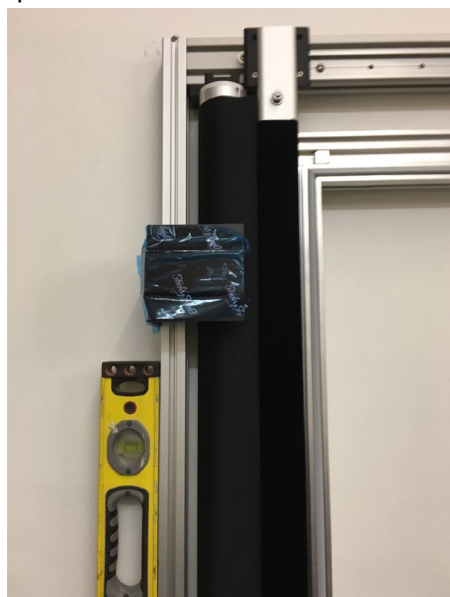

Frame Sections

Frame Section Configuration Fig. 1

Dynamic 2s (DT-DYN-2S) Installation Manual – Revision 2.0

Installation

1. Decide on the height you want the bottom of the visible projected image to be at on your finished screen. Mark this height on the wall where you are installing the screen. Now add 28mm to this further up the wall. This will be the height at which the top of the back plate on the bottom screen sections will sit.
2. Now mark the central left to right point for the screen (normally the centre line of the room.) This will be the centre of the Bottom screen sections.
3. Take the bottom right section of the screen frame (the one with the control box in it). Line this up so that the tip of the back plate is level with your pre-marked height line on the wall and the left end of it is lined up with the centre mark.
4. Screw the frame section to the wall using the holes at the top of the back plate. Use a spirit level to ensure that this section is level. **This is very important as it will form the basis for the rest of the screen to be built to.**
5. Prepare the bottom left section to be fitted. There are two joining sliders which join the bottom sections together.
6. Now lift the bottom left section and mate the joining slider into the respective profile until the two ends of the profile meet fully. These can be secured in place using the grub screws in the joining bars. Screw this section to the wall again using the holes in the top of the back plate.
7. Next take the left screen section and align the joining sliders into their retrospective aluminium profile on the bottom left screen section. Slide these the left section in until the ends of the aluminium profile meet. (You may also need to help guide the white mask slider into the groove on the aluminium profile)
8. Screw the left section to the wall again using the holes in the top of the back plate.
9. Tighten the grub screws in the joining bars between the Left and the bottom left screen sections.
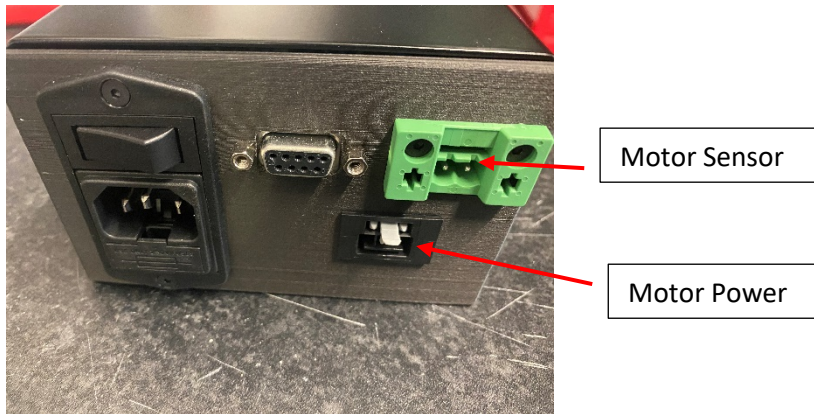10. Using a spirit level check the Left screen section is vertical and adjust if necessary.

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11. Next fit the Top Left section in exactly the same way again tightening the joining sliders and using a spirit level to check the level.

Dynamic 2s (DT-DYN-2S) Installation Manual – Revision 2.0

12. Take one of the stretcher bars and fit this between the top Left and bottom Left screen profiles. Tighten the grub screws to open the jaws of the clamp on the end of the stretcher profile to clamp onto the screen profile. These should be fitted approximately mid-way on the top and bottom left profiles but can be moved to suite speaker positioning.
13. Fitting the stretcher profile will allow you to confirm that the top left screen section is level and to screw this to the wall.
14. Repeat the installation process for the top Right screen section. Again, fitting a stretcher bar between it and the bottom right screen section to endure it is all level.
15. Take the Right screen section and slide this onto the top Right and Bottom right screen sections, using the joining bars to locate into the aluminium profiles before tightening the grub screws in them when the profiles fully meet.
16. Screw the Right section to the wall.
17. Mechanically you now have all the sections fitted to the wall.

Electrical Connections

1. On the bottom section of the frame is the control box. At either end of this are the connections to make to the mask motors and sensors. The mask motor connections are simple push together connectors.
2. The sensor connectors are on pre attached phoenix connectors and pug into the control box; one at each end.

3. Connect the IEC power cable to the mains supply.
4. Connect the RS232 control cable onto the control port on the left end of the control box.
5. Dress the cables along the bottom of the frame using the cable ties provided. It is important to ensure that you do not have loops in the cable which could impede the running of the masks.

Mask Connections

- The masks are tensioned by 'Silent Tension System' bands which run between each of the masks.
- Take the first band pass it behind the gap behind the control box at the bottom of the screen.
- Pull the Right end and hook it on the steel loop at the bottom of the right mask bar.
- Pull the left end of the band out towards the left mask and hook onto the steel loop at the bottom of the left mask bar.
- Repeat the process to stretch the next band between the loops on the top of the left and right mask bars.

⚠ Take care when pulling out the Silent Tension System bands. If you let go of them they will spring back and could cause injury is allowed to do so under tension.

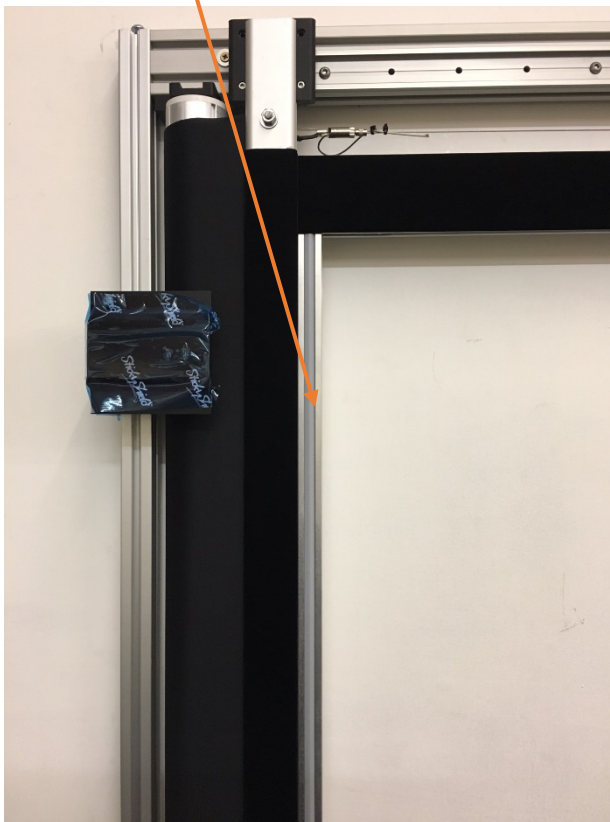Dynamic 2s (DT-DYN-2S) Installation Manual – Revision 2.0

Fabric Installation

Your screen is delivered with two fabrics

The first one to be installed is the black backing fabric then the white fabric ensuring that the projection side is facing out.

⚠️ Care and time should be taken during handling and installation of the fabric. On larger screens you will need 2 people to complete this task.

- Take the roll of Layer 1 fabric and the fabric installation tool. Start to unroll the fabric from the roll by about 500mm. Holding the top corner of the fabric in one hand, line it up with the top left hand corner of the screen so that the edges of the fabric are in line with the outer edges of the screen frame.
- With the fabric tool push the tool onto the fabric and down into the grey plastic fabric retaining track.
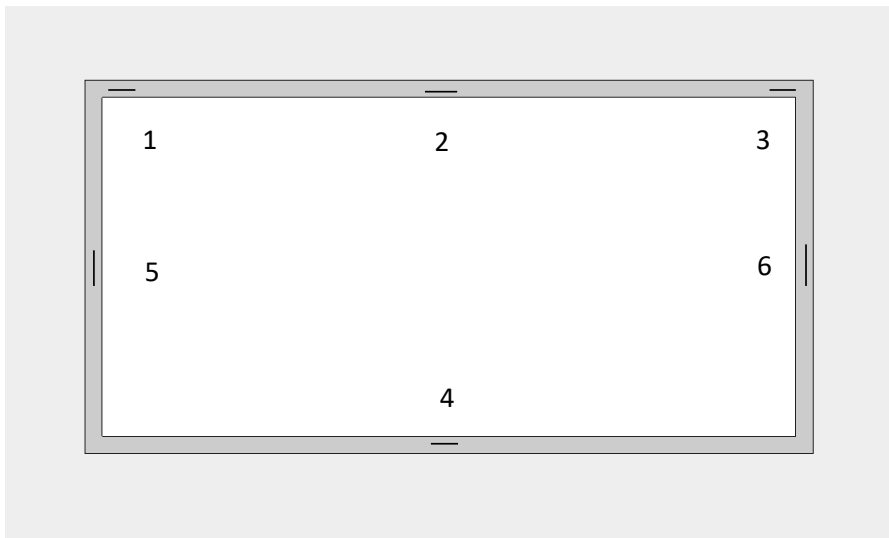

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ℹ️ You may want to try pushing the fabric tool into the fabric retaining track without any fabric first to get a feel for where it goes in and how much force is required.
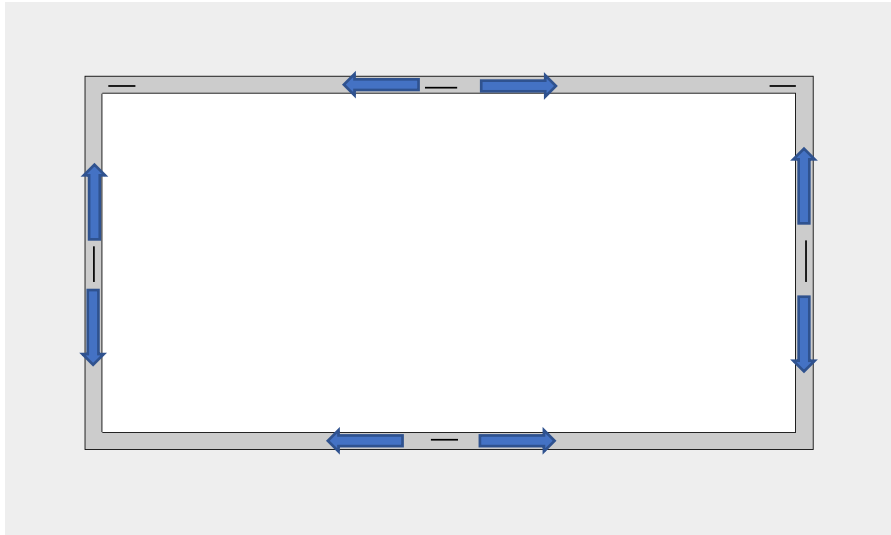
Dynamic 2s (DT-DYN-2S) Installation Manual – Revision 2.0

Retaining track insertion point Fig. 8

- Now unwind enough fabric from the roll to take you to the middle of the screen. Again ensuring that the top of the fabric is in line with the top of the screen push the fabric into the fabric retaining track in the centre of the top rail of the screen.
- Now unroll the remainder of the black backing fabric and repeat the process of tucking the fabric into the top right of the screen.
- You should now have the fabric hanging from the three tucked points on the top of the screen.
- Now using one hand apply a little bit of tension to the fabric at the bottom in the middle and then using the fabric installation tool tuck fabric into the centre bottom of the fabric retaining track.
- Now repeat this process on in the centre of the left and then right sides. See Fig.9.

Fabric Tuck Order Fig. 9

- Now continue to tuck in the fabric along the length of the retaining track working out from each central tuck. Only tuck max 300mm at a time in each direction and then go to the opposing side and tuck the same amount. This will ensure an even stretch across all the fabric.

Dynamic 2s (DT-DYN-2S) Installation Manual – Revision 2.0

Direction of fabric Tucking Fig.10

- Continue this process until you reach the corners of the screen. You may have to pull out the original tucks in the top left and right corners and re-tuck them to ensure that you have no wrinkles in the fabric.
- Ensure that you are happy that the fabric is flat and wrinkle free.
- Using sharp scissors cut the excess fabric off on the outside of the fabric retaining track leaving a 15mm – 20mm excess.
- Work around the screen to push this excess down into the fabric retaining track. It is best to do this in the same manner as the original tucks working out from the centres until all the excess is tucked in.
- Now repeat the exact same process you have just done for the black backing to install the white projection fabric. Ensure that you have the 'FACE SIDE' label of the fabric facing out in the room as this will be the side the projector will project onto.

⚠️**Ensure that you use the white cotton gloves to handle the white projection fabric at all times and keep it away from dust or dirt as it can easily be marked.**

Inner Screen Cover Installation

- Install the bottom covers first. The covers are magnetic and simply align and clip into place allowing the magnets to 'grab'. The barb on the back of them will slot into the groove on the aluminium profile just below the grey plastic fabric retaining track. There are two sections for the top and two for the bottom with a central join. You will need to slide the outer end in behind the bask bar and you will be able to feel when the magnet has made contact with the steel plate on the cover
- Next install the top sections.

If you need to remove the covers at any point, lift up the cover from the edge nearest the screen fabric and rock up and lift away from the magnets.

Electrical Operation

- Power on the electrical control panel using the power rocker switch

- To start operation press 'Home' this will set the masks to their home position (just covering the edge of the screen surface but showing the full width aspect of the screen).
- Now press 1.78 this will move the masks to a 16/9 image size.
- Cycle between Home and 1.78 2-3 times just to initialise the masks and ensure that everything centralises in the mask runners following transit.

The screen is now ready for operation and external RS232 control of operation.

Fitting the Outer Covers

- Take the Right Cover (C-Section with the [DT] Logo badge in the bottom right. Line this up onto the black steel plates on the right end of the screen. Allow the magnets to grab into position.
- Next fit the bottom Right hand top Right covers in the same way again lining up the magnets with the steel plates.
- Next fit the Top Left and the Bottom left covers.
- Finally fit the Left C-Section cover to complete.

Dynamic 2s (DT-DYN-2S) Installation Manual – Revision 2.0