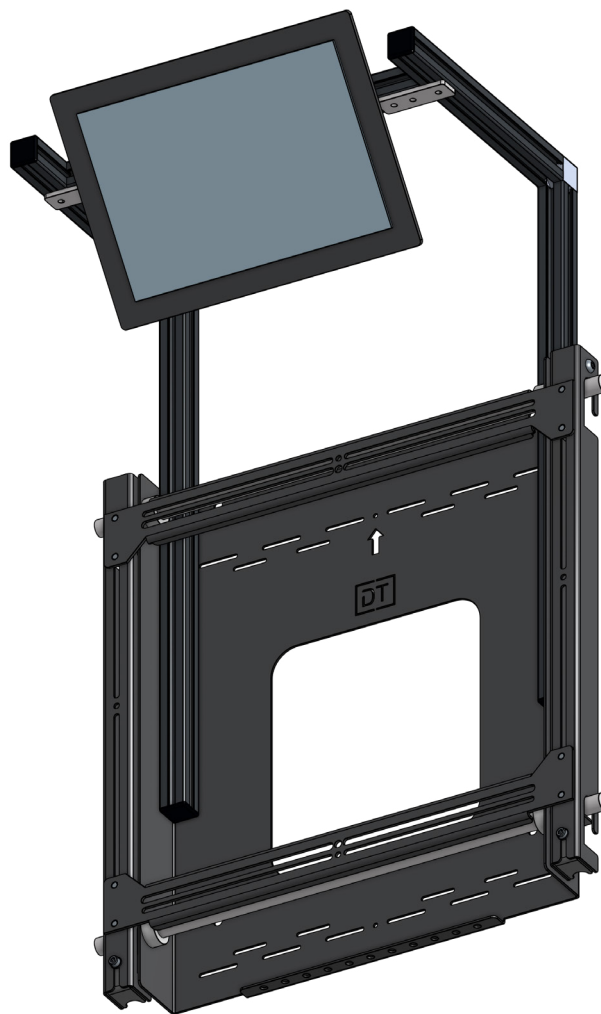


# PROJECTOR VERTICAL MIRROR MOUNT

## DT-VMMv2



# Installation Manual

Revision 2.0



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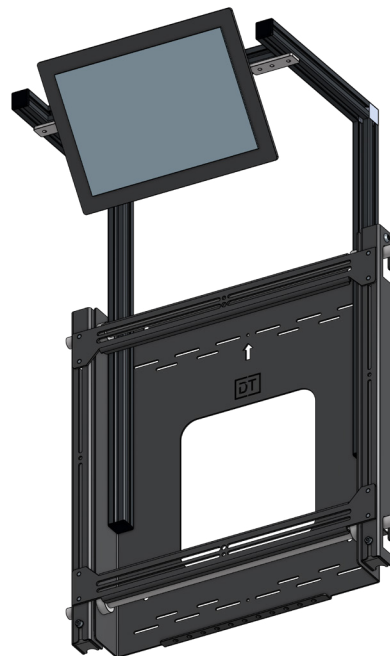
# Vertical Mirror Mount v2

## PRODUCT DESCRIPTION

### VERTICAL MIRROR MOUNT V2 DT-VMMV2

On wall projector mirror mount with universal projector mounting and orientation.

DT Vertical Mirror Mount v2 is an on wall projector mirror mount featuring high performance optical mirrors, universal projector interface and flexible configuration to handle all install scenarios.



## WARRANTY

All Products from Display Technologies Ltd carry a 3 year limited warranty for parts only, against failure due to parts or workmanship.

Any parts required for warranty repair are supplied strictly on an Ex Works basis.

Display Technologies Ltd are not responsible for any damage or repair caused to the product or surroundings by incorrect or unsuitable installation.

## STORAGE AND TRANSPORT

Transport only in the packaging supplied at the time of purchase.

Store in a dry, moisture free environment at an ambient temperature between 18-28°C.

Follow advice on packaging for transport restrictions such as 'Ship Upright'.

# 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 mount and accessories and in order to carry out the installation you will need:

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

In the Installation accessories you will find enclosed:

- Bolts and washers to fix most common projectors
- 10mm Socket Spanner
- Hex Keys

It is recommended that at least 2 people install this mount. Due to the weight relevant lifting equipment must always be used to support the mount and 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)



**DANGER** (Safety)



**INFORMATION** (Installation requirements or tips)

## MANUAL UPDATES

**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](http://www.displaytechnologies.co.uk)



**SCAN QR CODE**  
for latest manual  
and product information

Any support questions can be sent to our support team – [support@displaytechnologies.co.uk](mailto:support@displaytechnologies.co.uk)



# Safety information



Maximum supported projector weight 50kg [110lbs]



Maximum supported projector mounting hole spacing 440mm wide x 453mm  
- M8 Max



**DANGER:** Risk of Electrical shock.  
Only authorised persons 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.

# Safety information

## 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.
18. Only use in marine applications where the product is specifically a Marine model.



# Unpacking

Unpack the mount ensuring that all the relevant parts are present.

- 1] Loosen the two lock plates and slide down to release.



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Fig.1. Removing the projector mount plate

- 2] Remove the projector frame from the mount plate.

# Installation

## POSITIONING THE MIRROR

- 1] Slacken to two M6 Bolts on either side of the mount (Do not fully remove them).
- 2] The Mirror Mount will now be loose.
- 3] Pull out the Mirror Mount from the back plate.
- 4] Align in the desired position to suit the projector. (You may want to 'Dry Fit' the projector to the mount first to gauge the correct position for the Mirror).
- 5] Re-tighten the M6 Bolts.

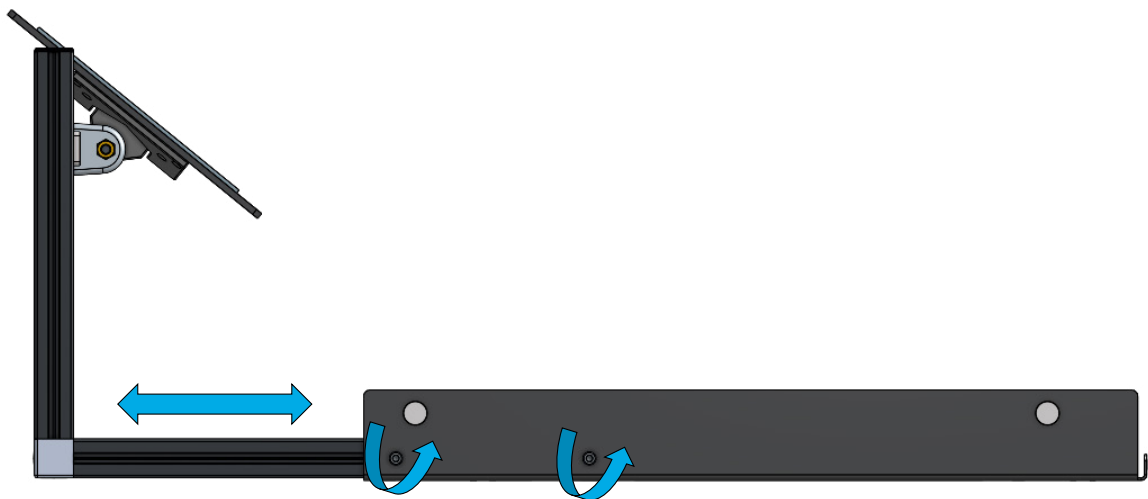


Fig.2. Pulling out the Mirror

## INSTALLING THE MOUNT PLATE

- 1] Using the central top hole on the mount plate screw the plate to the wall.
- 2] Rotate the mount plate to ensure that it is vertical
- 3] Screw a second screw in the middle hole of the rear row of mount holes
- 4] Using suitable fixings (to fix the total weight of the projector and mount) fix the mount plate to the wall using both the top and bottom mounting slots or larger 10mm bolt holes.

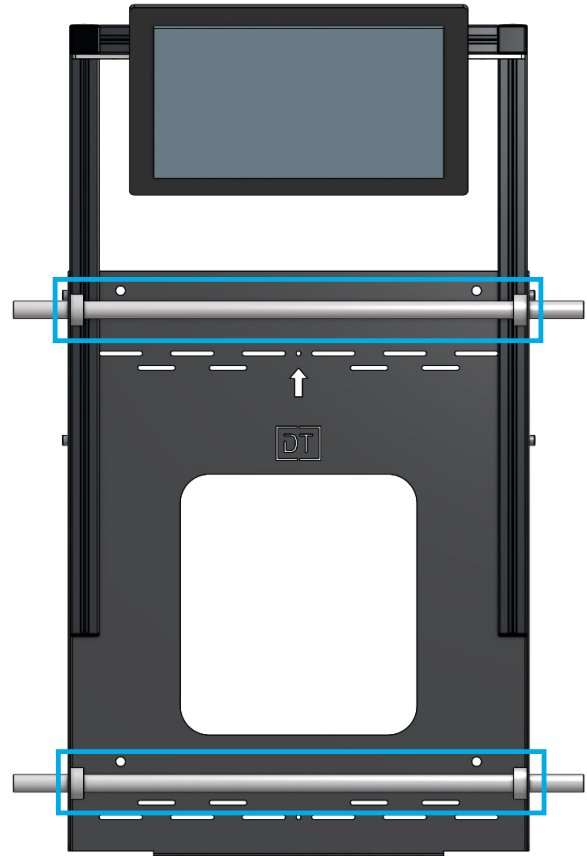


Fig. 3. Top and bottom mounting slots and bolt holes



**It is the installers responsibility to ensure that the wall/ceiling has the relevant strength or additional support along with selected fixings to endure that the combined weight of the projector and mount can be supported. It is recommended that a total weight of 65kg with a safety factor of x5 is used in all calculations.**



**Note that the orientation of the mount will depend if you want to have the mirror mounted up or down. Installation is the same either way just rotate the mount plate 180 degrees.**

## FITTING THE PROJECTOR FRAME

- 1] Lay the projector with its base facing up ready to fit the projector frame. Ensure that the projector is laid on something that protects it from scratches or damage.
- 2] Lay the projector frame on the base of the projector with the hooks of the projector frame facing down towards the back to the projector.
- 3] Use the relevant fixings and washers to fit the top bar of the mount frame to the projector.

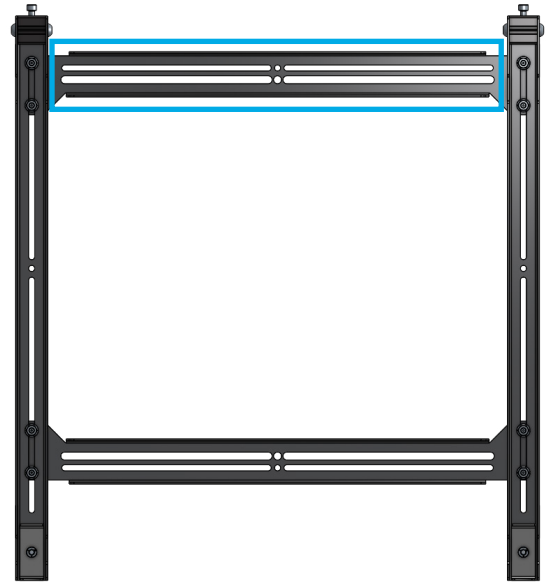


Fig.4. Fitting the projector frame to the projector

- 4] Slacken the M6 nuts holding the bottom bar of the mount frame and move this until it aligns with the projector's rear set of mounting holes. Use the 10mm socket spanner provided for this.
- 5] Use the relevant fixings and washers to fit the bottom bar of the mount frame to the projector.
- 6] Tighten all the M6 nuts holding the bottom bar and top bar of the mount frame. Use the 10mm socket spanner provided for this.

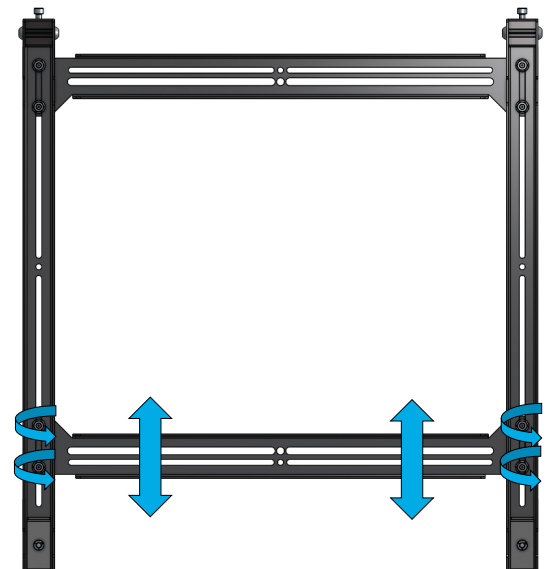


Fig.5. Fitting the bottom bar to the projector

## HANGING THE PROJECTOR

- 1] Lift the projector up to align it with the mount plate on the wall
- 2] Lift the projector so that the hooks on the projector plate engage with the rods on the mount plate and pushed right back.
- 3] Slide in the two lock plates and tighten the lock bolts.



**Ensure that the lock plates are fully pushed up to the silver hanging bar and are bolted tight to prevent any movement.**



Fig.6. Mount Plate with projector alignment

## ROTATION ADJUSTMENT

If during installation the mount was not quite perpendicular to the screen it is possible to have some rotation adjustment on the mount (+/- 5 degrees).

- 1] Slacken the two locking bolts on the locking plates at the bottom of the projector mount.
- 2] Using the adjuster knobs on the top of the mount rotate the adjuster screw pushing it against the hanging bar. Do this until the desired rotation is achieved.
- 3] Tighten the locking bolts on the locking plates at the bottom of the mount ensuring that the locking plate is tight against the hanging bar.

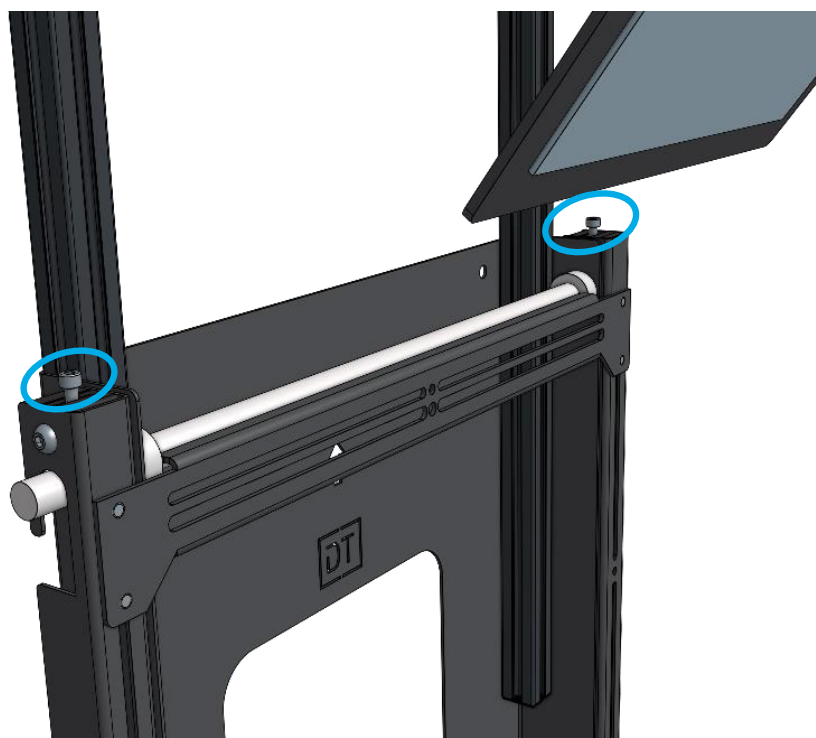


Fig.7. Perpendicular rotation adjustment



# MIRROR ADJUSTMENT

Once installed and with the projector on use a Monoscope Test pattern on the projector to align the mirror.

## LENS CENTRING

- 1] Slacken the mirror bars bolt
- 2] Adjust to centre the mirror to the centre of the lens. The exact location will depend on the model of projector.
- 3] Tighten the mirror pivot bolt



Fig.8. Lens centring

## PIVOT

- 1] Slacken the mirror pivot bolt
- 2] Adjust to align the picture
- 3] Tighten the mirror pivot bolt



Fig.9. Pivot adjustment



When installing the mount and projector in a reverse orientation you will need to pivot the mirror through 90 degrees from the standard shipping orientation.

## MIRROR PIVOT SETUP

If the projector being used has a 'lens centre' function first carry this out. If this is not available centre the lens manually both vertically and horizontally.

Aim: You are trying to get a rectangular image roughly on the screen. You are not trying to use the mirror to get the image exactly to fit the screen.

### EXAMPLES:



Fig.10. Correct pivot setup



Fig.11. Incorrect pivot setup - example 1

*CORRECTIVE ACTIONS: Pivot Mirror forward*



Fig.12. Incorrect pivot setup - example 2

*CORRECTIVE ACTIONS: Pivot Mirror back*

### *Projector Movements*

Once you have a rectangular image the VMM is set up. Now use the projector lens shift and zoom to align the image to the screen.

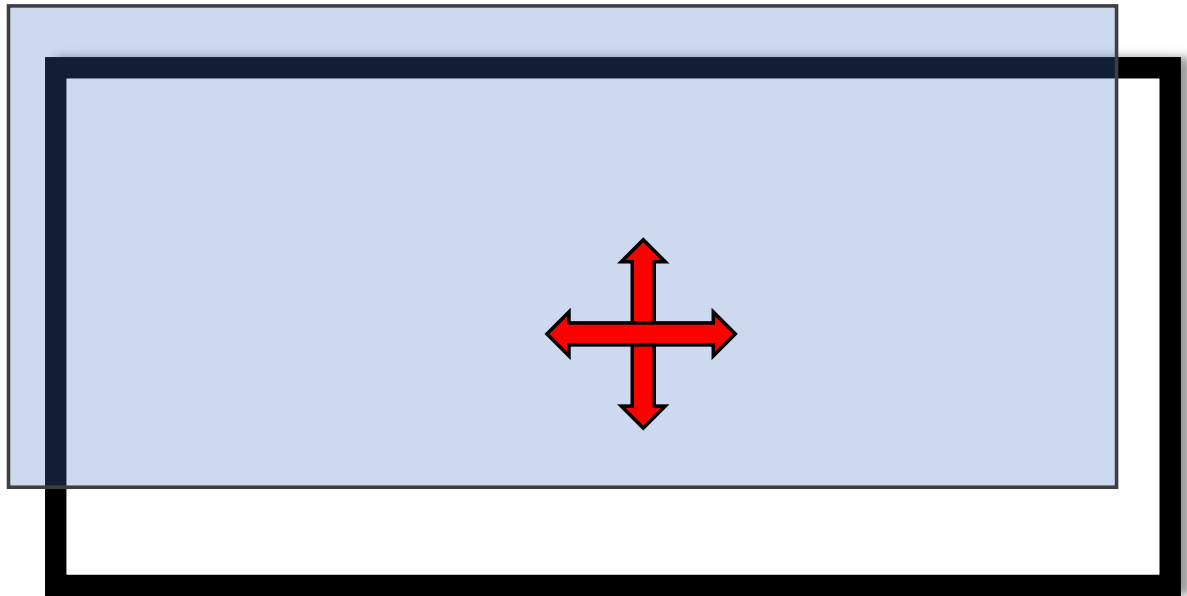


Fig.13. Image alignment after the Mount setup

# DISPLAY TECHNOLOGIES

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