## UK Home Cinemas, Extra heavy duty – Low profile ceiling mount - for Sony VPL-VW series, Laser projectors.

**Introduction- Overview:** UK Home cinemas has created a range of products to enable large home cinema projectors with a lens shift feature, to be installed horizontally as close as possible to a ceiling, whilst also providing the possibility to make fine adjustments to horizontal levelling.

This product is specifically for the following Sony projector models: VPL-VW760ES, VPL-VW790ES, VPL-VW870ES, VPL-VW885ES, VPL-VW915ES, VPL-VW995ES. It may also be suitable for other Sony projectors which have a very similar cabinet design and weight.

The mount comprises two steel plates, one of them is designed to be fixed to the ceiling and the other to be fixed to the projector. The two plates (known as the ceiling plate and the projector plate) then fit nicely together and can be secured to each other using the supplied machine screws.

Two Long M5 machine screws are included, which can be used during installation to make slight adjustments to the horizontal tilt (in any direction). The purpose of this is to correct for ceilings which are not perfectly horizontal, (as many are not). The adjustments should be made to get the projector horizontal and the image therefore level in relation to the top edge of the screen.

Once the projector has been installed, the projector's lens shift settings should be used to achieve the desired positioning of the projected image.

**Installation - detail:** First invert the projector and position it on a soft, but supportive surface. Locate the machine screws and spacers shown in figure 2.





Figure 2 – M5 X 16mm Screws with plastic spacers.



Place the 6 Black plastic spacers (provided) directly over the six threaded mounting points of the projector (These are the six points which are circled in red on figure 1 above). Then place the rectangular steel projector plate, onto the spacers as shown in figure 4 below.

Figure 3 A plastic spacer placed over a mounting point. Figure 4: The projector plate, positioned over the six plastic spacers.





Pass the six M5 X 16mm screws through the relevant holes in the projector plate, through each of the six spacers and into the six threaded mounting points of the projector. Please refer to the Sony projector manual and ensure that the screws are not over or under tightened, but are tightened to the correct torque for the projector. This Torque value is specified by Sony in the user manual for the projector, but could differ according to the projector model.



Figure 9: The projector plate, secured to the projector using six X 16mm M5 screws, (with plastic spacers between the projector and the ceiling plate).

Next offer up the ceiling plate and note how it fits to the projector plate.

Please note that the captive rods on the projector plate, locate with and pass through the matching holes in the ceiling plate as shown below.



With the ceiling plate temporarily in place on the projector, measure the distance from the fixing holes on the ceiling plate to the back or front of the projector.

Use these measurements to work out where the ceiling plate should be positioned on the ceiling, in order to place the projector correctly in relation to the screen etc. Please note that the mounting holes on the ceiling plate must <u>all</u> be fixed to structures which are capable of supporting the weight of the projector and bracket, such as ceiling joists, and never to plasterboard alone.

If sufficient structural material is not in place where you need it, you should arrange for suitable material to be installed inside the ceiling. Use suitable fixings according to the construction of the ceiling and if in doubt consult an experienced professional for advice or assistance.



In order to achieve correct image geometry on the screen, It is important to ensure that the front of the projector will be parallel with the screen. This is the case even if you plan to use horizontal lens shift. Therefore, the front of the ceiling plate also needs to be parallel with the screen. It can be useful to initially fit one fixing to the central mounting hole of the ceiling plate, then use careful measurements to check whether the front edge of the ceiling plate is parallel with the screen. Make slight rotational adjustments as necessary to achieve this, before drilling any further holes in the ceiling and installing the remaining fixings to all of the other fixing holes on the ceiling plate.

Next fit the four M5 screws (provided) to the projector plate as shown In the photo to the right.

In particular the longer screws to the left and right edges should initially <u>not</u> be screwed in any further than shown, as doing so at this stage would make it impossible to slot the plates together.



Lifting the projector into place should be undertaken from a suitable platform with a second person to assist.

Lift up the projector so that the ceiling plate and projector plate are very close together, insert the three captive rods on the back of the projector plate into the matching 3 holes on the ceiling plate. Then further raise the front of the projector until the shanks of the two machine screws pass through the slots in the ceiling plate as pictured below.





Continue to support the projector and rotate the central pair of machine screws clockwise until they are finger tight. Please note that they will be tightened fully in a later step.

Carefully reduce your support of the projector, thus allowing the heads of the central two machine screws to slide slightly downwards in relation to the ceiling plate, whilst checking that the projector is securely supported by the mount.

Next push the projector gently upwards (the two main machine screws, which are only finger tight, should slide upwards by a few millimetres). While initially still supporting the projector, begin to rotate clockwise, the two longer machine screws (located to the left and right edges of the projector plate). These screws will interact with the ramps at the two edges of the ceiling plate, to provide levelling adjustment.



By adjustment of these screws it is possible to adjust the height of these two corners of the projector plate, thus achieving the desired left right tilt/levelling or forward backward tilt. The pivot point being the central one of the 3 captive rods at the back of the mount, (the other two rods are located in elongated holes and as such do not impede the tilting of the projector).

Once the desired levelling has been achieved the central two machine screws **<u>must</u>** be tightened fully to lock the position.

NB once the position has been locked it is important not to forcibly tighten the levelling screws, as to do so would be likely to cause damage to the threaded inserts of the levelling screws. The levelling screws should only be adjusted prior to fully tightening the locking screws. It is normal for the levelling screws to continue to protrude to some extent after the installation has been completed.

Examples of left and right tilt can be seen in the two images below and forward backward tilt can also be achieved. (These images show a slightly smaller mount in white with a different model of projector , but the levelling adjustments are the same).



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