

# The Glasgow School of Art

## GSA Guide to the Safe Use of Projectors within an Art Installation

January 2019

### Policy Control

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<b>Contents</b>	<b>Page</b>
<b>1. Purpose</b>	<b>3</b>
<b>2. Selecting the Right Equipment</b>	<b>3</b>
<b>3. Location</b>	<b>3</b>
<b>4. Turning Equipment On and Off</b>	<b>3</b>
<b>5. Portable Appliance Testing (P.A.T)</b>	<b>4</b>
<b>6. Stability</b>	<b>4</b>
<b>7. Tripping hazards</b>	<b>4</b>
<b>8. Impact of light on eyes</b>	<b>5</b>
<b>9. Flashing images</b>	<b>5</b>
<b>10. Examples of projector use within GSA art installations</b>	<b>6</b>
<b>11. Further Information</b>	<b>6</b>

## **1. Purpose**

This guidance should be used by staff and students to plan any use of projectors in a way which minimises the risks. These measures are in place to protect the health and safety of all students, staff and members of the public, ensuring that all GSA art installations are inclusive and accessible to all.

Any student requiring any support in relation to this guidance should speak to their Programme Leader in the first instance.

## **2. Selecting the Right Equipment**

It is important to select the correct type of projector, ensuring it is suitable for its intended use. Many of the more modern type of projectors use more efficient LED bulbs which produce an intense light but much less heat and are also much smaller in size. Where possible this type should be used as the reduction in heat generated greatly reduces the risk of fire from over heating equipment.

Where an older bulb type projector is used, additional care must be taken to maintain appropriate ventilation around the device. If the projector is being used in a small or enclosed space (as is often the case) care must be taken to ensure that excess heat does not build up. Remember that heat rises, so warm air must be able to escape at the top and cool air enter to replace it. If you are building a room within a room, be it with partition panels or a tent type structure, remember to allow for this heat circulation in your build plan.

Where a projector or other AV equipment is being used in close proximity to other materials particular care must be taken with fabrics, paper and materials such as foam which can ignite on exposure to heat. When creating any work, care should be taken to prevent any dust or debris entering heat sources where they may become a source of fuel. Particular care should be taken with flammable aerosols which may ignite on contact with electrical components and/or hot bulbs etc.

Please note: using aerosols (paints or adhesives) is **not** permitted at any time in all GSA building, unless in a designated spray booth

## **3. Location**

When planning to use a projector within an art installation, it is important that consideration is given to how the installation will work with other elements (e.g. the space or materials being used). This includes the environment in which your work will be displayed and, the impact of your work on others.

## **4. Turning Equipment On and Off**

Whichever equipment is used; it is vital that it is turned off at the end of each day (or at the end of its use). It should also not be left unattended for long periods of time.

When turning off projectors and other equipment it should be by the switch on the machine itself – rather than pulling the plug from the socket – as they often have integral cooling systems which run on to allow them to cool correctly, these functions may not work if they are turned off incorrectly.

The accessibility of switches should be considered at the time of installation, to allow easy access. Instructions should be given to those responsible for turning them on/off, as to the correct procedures, particularly during evenings and weekends (e.g. degree show invigilators, if this is part of their role)

## **5. Portable Appliance Testing (P.A.T)**

As with all electrical equipment used within GSA, AV equipment should be annually P.A.T tested, and have an in-date sticker confirming this.

If you require items to be tested, you should firstly speak to your tutor/Programme Leader who can advise on the arrangements in relation to P.A.T testing.

## **6. Stability**

Projectors, like many other works within GSA, are often positioned on top of plinths or shelves. When this is the case, consideration should be given to the location of the structure and the possibility and potential consequence of it being knocked and the projector falling.

Where this is an issue the projector should be secured either to the plinth/shelf or some other object to prevent fall impacting on the safety of building users. The plinth itself should also be able to withstand reasonable 'jostling' on a busy exhibition night, by incorporating weighting within the structure of the plinth, or by fixing the plinth/structure to the floor using brackets (Please ensure you are permitted to fix to the floor of your studio space before doing so).

If you are having a plinth made to a specific size for your project it may also be possible to fit the upper surface in such a way that a small lip is left around it to prevent the projector becoming unstable (such a lip may even be able to disguise the presence of the projector if this is beneficial).

Plinths must be of sufficient size to accommodate the chosen equipment. The taller the plinth, the wider it needs to be, or additional support measures put in place, to ensure its stability.

## **7. Tripping hazards**

Projectors are often used in dark spaces. This dark environment can result in a higher risk of trips for the simple reason that people don't see the power cable in the dark.

To avoid this - where possible - cables should be positioned in such a way that people won't walk over them. Projector should be positioned close to a power socket on the wall so the cable can be secured along the wall instead of across the floor where visitors could potentially trip over the cable. Please be aware electrical are not designed to run numerous appliances off single sockets, so you should never connect extension leads together in a "daisy chain". More information on this can be found in GSA's Guide to Safe Use of Electrical Extension Systems.

Where the layout of the work is such that the cable must run along the floor it must be protected by a cable protector and not simply taped down – see the following example pictures.



Regular checks should be made to ensure that the measures in place remain effective throughout the duration of the installation of the work.

### **8. Impact of Light on Eyes**

When using projectors within an art installation, the height that the projector is positioned can mean the light can be at, or close to eye level of some people and may present a risk of injury to the eye. Given the intensity of the light and the dark nature of the space it can also be disorientating within the room and could cause temporary vision problems for visitors.

Projectors should be positioned and angled so that the projector is above eye level for the majority of people. This will reduce the impact on visitor's eyes whilst not detracting significantly from the work. Lowering projectors can present problems due to the possibility of visitors with lower eye level (such as children).

If work is of a particularly bright nature which contrasts with a dark room setting, a sign can be placed on the outside of the room to pre-warn visitors of the projection so they could avert their eyes on entering to prevent any dazzling and discomfort.

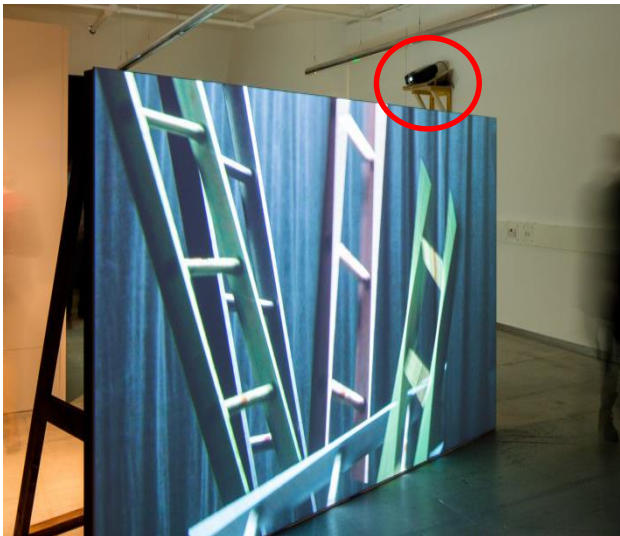
### **9. Flashing Images**

Where flashing imagery is present, a clear notice should be posted outside the space and/or at the start of the performance highlighting this to alert anyone who may be adversely affected.

The warning should be clear, legible and prominently positioned and contain wording along the lines of:

“Please be aware that this film/artwork/performance contains flashing lights/imagery”

## 10. Examples of Projector Use Within GSA Art Installations



## 11. Further Information

For further information, you should refer to GSA guidance, which can be accessed on the GSA webpage here: <http://www.gsa.ac.uk/about-gsa/key-information/occupational-health-and-safety/>

Specific GSA guidance that may be of help include the following:

- GSA Guide to safe use of Electrical Extension Systems
- GSA Practical Health and Safety for Art Installations