Guide for Video Outreach
Large-Scale Street Projections ~ Outline

Part 1 → Equipment

1. **Projectors**

2. **Video Sources**
   - Laptop or Netbook
   - Portable DVD Player
   - Tablet or iPad

3. **Power Sources**
   - Generators
   - Battery/Inverter
   - Combined Battery/Inverter emergency car device

4. **Cameras & Camcorders**

Part 2 → Preparing Projection Material

1. **Preparing Video**

2. **Creating Slideshow**

3. **Real Time VJ Editing**

Part 3 → Projector Placement

Large-Scale Street Projections ~ Details

Part 1 → Equipment

Street projections need:
- projector
- video source
- power source
- camera/camcorder.

Projectors

The higher the luminosity (brightness) of the projector, the larger the image. Projectors spread the same amount of light on different areas depending on how far you are from your projection surface. Hence the larger the image the less bright it is.

Keep in mind that if the dimensions double (for example from 12'x9' to 24'x18'), the area is quadrupled the area… thus, the image will be only be 25% (¼) as bright.

The table below outlines the brightness and approximate maximum size images given the type of projection surface and surrounding lighting.

Rough Size Area for Different Projectors & Conditions

Luminosity	White Not Lit	Off Color	No Ambient Light	Street Light (w/Dark Back)
2500	20x15	18x14	16x12	12x9
3000	22x16	20x14	18x13	13x10
4000	25x18	23x16	20x14	15x11
5000	28x20	25x18	22x16	17x12
10000	40x28	36x25	32x22	24x17
20000	57x40	51x36	46x32	34x24

A new 2500 lumen projector is decent quality and costs about $400. Brighter projectors cost more. If finances are limited, a used projector may be worth the increased quality/lumens.

Grants from A Well-Fed World may be available. Visit www.awfw.org/films for details.

A good resource for projectors is www.projectorcentral.com. It has basic specs on all the projectors, as well as a light/distance calculator on the bottom right of the page.

Video Sources (Mobile)

The most versatile video source is a laptop or netbook that can put out video over vga (computer monitor out). The easiest and cheapest would be a portable DVD player. Visit www.awfw.org/films for grant details. Projectors are like televisions, they play any signal you send their way.

In terms of software for computers, you can go as basic as using a media player or PowerPoint to play videos or slideshows. VLC media player is a free open source software that can play various file types. But if you want to manipulate your video in real time (adjust contrast, slide transitions, etc), we recommend using a VJ software like modul8 for Mac or Resolume for Windows computers. Both can be downloaded from various sites to best fit your budget.

Power Sources (Mobile)

The most reliable source of electricity would be running an extension cord to an outlet. Since this is often not possible or convenient, below are options for mobile on-the-go power you can use anywhere for any situation.

Option 1: Generators (Gasoline-Powered)

For the most versatility and having the most options available, no matter how large or small your projection project may be, we would recommend a 2,000 watt generator. You will be able to run 2 projectors with a sound setup with more than enough power (check applicable laws in your area for your local noise ordinances).

Chinese made models can be bought for as low as $200. However, these generators do not generate a clean sin wave ac current, so we would highly recommend putting a very good circuit breaking power strip between the generator and projection/sound equipment. A midrange generator provides adequate clean power and is portable enough, although it is a little louder and weighs about 60 lbs made by Lifan. If you can get your hands on a Honda s2000, its the quietest and most portable generator that will be the best option. However, these generators are very expensive and will run you more than $600 used.

Option 2: Battery/Inverter

For this option, you will need a power inverter, battery, charger, and a folding shopping cart. As for the generator, to have the most versatility, it is best to get a 2000 or 1500 watt inverter. The 1500 watt inverter will be plenty, as the price jumps significantly between the 1500 watt and 2000 watt, and will give you the versatility you need for much cheaper. The cobra inverters are nice, and can be found for around $90. (http://www.amazon.com/Cobra-CPI-1575-Power-Inverter/dp/B00126IDDC/ref=sr_1_1?s=automotive&ie=UTF8&qid=1313285122&sr=1-1)

Regular car batteries don't work as well because they discharge power too quickly. That is why we would recommend a deep cycle marine battery or golf cart batteries, which can be found for about $100 new. A good place to find used batteries would be Craig's List for as low as $20 or $30, as shipping will be quite expensive, since the batteries weigh between 50-60 lbs. A Die Hard Marine Deep Cycle Battery group size 27m works well although the larger the group size, the more time you will get between charges.

For the Battery Charger, we recommend using the Schumacher Automatic Charger, which can be found for about $30 new on Amazon.com. (http://www.amazon.com/Schumacher-XC6-SpeedCharge-Battery-Charger/dp/B004EIBX00)

Option 3: Combined Battery Inverter Emergency Car Device

This option is good if you need something lightweight and portable for quick projections, as they will power a 3,000 lumen projector for about 30 minutes. These can usually be found in your local car arts store for around $100. This is an all in one option that has an inverter and battery built in. So, for quick projection actions these are very nice.

A light sensitive camcorder and still camera to record your projections are strongly recommended to increase your reach. It's important that the images/video and reports of are readily available to media and online (including but not limited to your website, blog, and social networking sites, such as YouTube, Vimeo, Facebook, etc).

Cameras:

For cameras, we recommend any of the cannon hv20s, which are a few years old, but can be found on eBay for around $200 or so. These have a 24 frame per second mode, which is very light sensitive and shoot in 1080p, which is one of the highest resolutions available now.

These cameras film to dv tae, which adds additional expense, but the tapes can be reused. A firewire port and cable are required for your computer to digitize the footage, so a netbook will not be sufficient to digitize and produce your footage. The price of these cameras make it one of the best deals for the quality of images it shoots, especially for recording your projection actions.

Something to consider is that they are made out of cheap plastic and might break easily. As of this writing, 1080 hard drive and SD card cameras are still more than $500 used, so we do have any good options to recommend that are cost effective, not even on the secondary market.

The other option is to use a YouTube type camera. We found Flip Mino HD to be very light sensitive and can be bought second hand for around $80. They work very well with netbooks, therefore they are a very good choice for documentation of your action.

A good resource on quality of cameras is the website: http://camcorderinfo.com. They run detailed low light performance tests on cameras that they review.

Part 2 → Preparing Projection Material

- **Preparing Video**
- **Creating Slideshow**
- **Real Time VJ Editing**

For now, we recommend using video footage already put together, such as Mercy for Animals' *Farm to Fridge* 4 minute video. This is very effective and attention-getting for the plight of farmed animals.

Your can download it on YouTube at: http://youtu.be/THIODWTqx5E

For an all inclusive video about a vegan lifestyle, right now we would recommend downloading L.O.V,E,'s Living Veganism video, which offers a philosophical journey for the viewer to see animals as individuals and not as commodities. This journey takes people through the way humans view and treat non-human animals for our food, fashion, entertainment and forced labor.

This video can be downloaded here http://loveallbeings.org/living-veganism

Things to Note:

When projecting in outdoors you are not projecting in complete darkness, so the images will get somewhat washed out depending on how much light is on the street and surrounding area.

For working around this, adjusting the "contrast" on your images/video might be necessary, either beforehand or if you are using VJ software during the projection action.

If you are not able to use VJ software to do real time adjustments, it is best to scout out where you are projecting in advance and creating initial high contrast images/video that fit the needs of your location to hold your projection action.

Although you can do some contrast corrections with your projector and media layers such as VLC, Windows Media Player or QuickTime (make sure you get a serial number for the pro version to do this).

For VJ programs, you usually have to encode your images/videos into photo jpeg format, at 50-75% quality, never 100 % because files will be so large your computer usually cant keep up. You will not see the difference with 100% anyway.

Part 3 → Projector Placement and Trapezoidal Adjustments

Projectors send out a cone or box of light. The distance from the projector to the surface determines how large the box gets. Hence, if you are projecting an angle, some arc of the box will have a shorter distance of the projector than other parts, and you will end up with trapezoidal images.

You can correct this problem in VJ software or using adjustments on the projector itself.

However, most projectors, especially cheap ones only fix this problem for vertical offsets. The projector Ask Proxima C450 series has horizontal adjustments as well.

We also recommend the Nec Lt280, 380 and up, which have them same feature of horizontal as well as vertical adjustments. We recommend these models and others like them because they allow you to project from an angle, as well as having lens shift, which is also important when doing fine tuning adjustments to your image on the go.

Also recommended: http://loveallbeings.org/living-veganism/mobile-vegan-video-projection-howto

Adapted from DARTT: http://www.dartt-online.org/events.html

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