



**Panoram**  
*of the*  
**Oakland Camera Club**  
*Member of the*  
**Photographic Society of America**  
*and*  
**Northern California Councils of Camera Clubs**



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**Open Space**

Congratulations to Ed Oswalt, our new Club Historian, and to Jack Muzatko, our new Field Trip Coordinator!

Remember, club dues are due. Contact Oleg at [olegv@ix.netcom.com](mailto:olegv@ix.netcom.com) with any questions.

**The State of Stereo Club Projection**

*by Mat Bergman*

It's clear from the malfunctions we've suffered at recent meetings that the Oakland Camera Club is overdue for a 3-D projector upgrade. Unlike the long lifespan of our reliable old Realist slide projector, consumer electronics like our digital projectors have a practical lifespan of just five years (give or take).

The Oakland Camera Club was an early adopter of digital stereo projection thanks to club projectionist John Ballou, and manufacturers have since improved the components we use in our projection rig. But passive 3-D projection is still a niche industry. That got me thinking: How do other stereo camera clubs project their images and videos?

I leveraged a list of national stereo clubs I compiled for the National Stereoscopic Association ([www.stereoworld.org/3d-organizations/3d-clubs/](http://www.stereoworld.org/3d-organizations/3d-clubs/)), and pestered Oakland Camera Club members who own personal 3-D projection systems, to research the state of 3-D projection in 2014 and make an informed recommendation to the club.

**Oakland Camera Club's Projection Requirements**

We've learned from experience that any system we adopt should meet these requirements:

- Ease of setup. We're making John work way too hard at our meetings. Projectors with digital instead of analog VGA inputs will greatly simplify the configuration of the projectors' resolutions.
- HD resolution. Full HD (1920x1080, on a 3840x1080 side-by-side canvas) is becoming a standard resolution in many international competitions, including this year's Oakland International. It's likely to remain a standard for years.
- Video. Our 3-D video clinics are popular, but we've had to bring in outside projection systems to show them. Our new projectors should be capable of projecting 3-D video at 30 frames per second, in at least 720p (1280x720) resolution.
- A passive system, of course, to accommodate crowds by providing cheap cardboard polarized glasses. Plenty of active-system 3-D home theater projectors are available, but they rely on costly electronic shutter glasses.
- Best image quality. Our current projectors have never accurately reproduced color (most of us crank up our entries' saturation to compensate). We're the Bay Area's advocates for stereography, and the Oakland Camera Club should have the best 3-D projection in town.

**Stereo Club Projection Trends**

Of the twenty 3-D organizations I contacted for this article, seven responded in time for this report.

All but one of the respondents use a dual-projector setup similar to the Oakland Camera Club. Like us, many use a display adapter (like the Matrox DualHead2Go) with a laptop that extends the screen across the projectors. In place of a laptop and display adapter, the LA 3-D Club and Atlanta Stereographic Association recommend a portable "cube" desktop computer with

"real" (as best described by Bill Moll) nVidia dual video outputs (\$2,000 - \$3,000). We're not the only club who's suffered frustration with display adapters.

Some smaller clubs that get together monthly or quarterly rely on 3D HDTVs in private homes, where it can remain undisturbed between meetings.

The one respondent that doesn't use a dual-projector setup, the Rocky Mountain Stereo Photography Club, stuck with their Realist projector. Sadly, they are disbanding due to a lack of resources to move to digital projection.

### Suggestions for the Oakland Camera Club

#### **Suggestion 1: Dual projectors**



In spite of our recent glitches, there are real advantages in a dual projector setup. Dual projectors build on our existing knowledge and are the most common passive 3-D projection technique for clubs, for better or worse! Replacing our projectors may require new polarizing filter holders and a stand if the projectors' dimensions are much larger than our current rig. My cost estimates assume that we can re-use our polarizing filters along with our silver screen.

#### **Projectors**

Regardless of the make and model of projector, digital inputs, either HDMI or DVI, must be available. These newer digital connections will automatically set the correct display resolution for the projectors. Home theater projectors promise to display truer colors than our current projectors, which are optimized for office presentations. High lumens are important since

polarizing filters reduce the light that reaches the screen. Brands recommended by responders include Epson, Optoma, Sony, and ViewSonic.

Note that some projectors are marketed as "HD compatible," but just scale HD images down to a lower native resolution, often as low as 640x480.

#### **Display Adapter**



The display adapter is the widget between the laptop and the projectors. Our existing VGA display adapter struggles to set the proper resolution for each projector. An updated digital model that's more compatible with John's Windows 8 laptop will ease this step.

Introduced in 1987, VGA is an analog computer standard that's now the lowest common denominator in display support. As an analog standard, it requires the projectors' resolutions to be set manually.

Outputting to HDMI or DVI for both projectors instead of VGA will automate setting the projectors' resolutions. The display adapter provided by club member Roger Mulkey for last November's video clinic used VGA to HDMI cables, and seamlessly configured the correct resolution settings.

The most recommended display adapter is the Matrox DualHead2Go Digital Edition (<http://bit.ly/1d06iY8>), which is full HD capable and provides two DVI outputs. Matrox also offers a model with Apple's new DisplayPort adapter, but DisplayPort-compatible projectors are still pricey.

No display adapter is perfect, as consumer reviews and our own experience will attest. Even a Windows 8-friendly display adapter will have its quirks.

Estimated Cost

1080p home theater projector	\$2,000 (\$1,000 x2)
Matrox DualHead2Go Digital Edition (D2G-A2D-IF)	\$215
Cables	\$20 (\$10 x2)
<b>Total</b>	<b>\$2,235.00 + shipping/tax</b>

**Suggestion 2: Epson PowerLite W16SK 3D 3LCD Dual Projection System**

The dual-projector PowerLite W16SK (<http://bit.ly/LUGFNT>) is designed specifically for passive 3-D. The package features

polarized filters; an integrated stand to quickly and accurately connect the projectors; an impressive auto-keystone feature that calibrates left and right images to a fraction of an inch; and a remote that controls both projectors without plugging them into a computer. Oakland Camera Club member Roger Mulkey owns this projector and gave me an impressive demonstration.



The Epson PowerLite W16SK's key disadvantage is that it's not full HD: It's native resolution is a respectable 1280x800. The W16SK's polarizers are circular, so we'd need to replace our glasses. The W16SK is designed for classrooms and institutions, and its throw may be longer than our meeting space can accommodate. Roger is running a few tests and will get back to us with his thoughts about the practicality of the Epson PowerLite W16SK for the Oakland Camera Club.

Estimated Cost

Epson PowerLite W16SK 3D 3LCD Dual Projection System	\$1,899
50 circularly polarized cardboard 3-D glasses	\$119.95
<b>Total</b>	<b>\$2,018.95 + shipping/tax</b>

**About that 3D HDTV Idea...**

I introduced the idea of using a 3D HDTV in place of projectors last year. Displaying .MPO 3-D stills and .MP4 3-D videos is a snap on the LG line of 3D HDTVs, for example, and color fidelity and registration is excellent. The LG line of 3D HDTVs use cheap, passive glasses with circular polarizers, identical to RealD cinema glasses. I bought a 55" 3D HDTV this week. For its size it was remarkably light, but it's too unwieldy to move around. The packaging did not lend itself to reuse. I love the huge picture in my living room, but it's still not large enough for public events like the Oakland International Exhibition.

(continued)

**Passive All-In-One Projectors**



The Dayjoybuy LDGP200 Dual Lens RealD circular Polarized Passive 3D Projector (<http://bit.ly/1g7zriP>), a \$1,300, single-unit device sold in China, looks promising. Without feedback from other 3-D organizations and a lack of consumer reviews, however, this projector will remain a curiosity to the Oakland Camera Club. I'm against investing in any first-generation technology.

My Recommendation for the Oakland Camera Club

All-in-one projectors and 3D HDTVs are enticing, but a dual projector system, including two new Full HD digital projectors and a Matrox DualHead2Go Digital (or comparable) display adapter, offers the best image quality and greatest versatility. We may find that the market for passive 3-D projectors has grown in the next five years, and synchronized projectors may not be the best fit for all clubs. Our experience with synchronizing projectors makes this strategy a safe choice for the Oakland Camera Club.

Next Steps

Before the Oakland Camera Club invests any money in a new projection system, a Projection Researcher special office will be created for a member to research the projector make and model that best suits our needs, including compatibility with a stand and braces for polarizing filters. The Projection Researcher should also try the Epson PowerLite W16SK and see if the reduction in resolution is noticeable. Any volunteers?

**January Competition Winners**

**A Group**

- 1<sup>st</sup>- *Rincon Point Sunset Photographed*, Oleg Vorobyoff
- 2<sup>nd</sup>- *Silverton at Night*, Oleg Vorobyoff
- 3<sup>rd</sup>- *Glowing Coals*, Stephanie Ann Blythe
- 4<sup>th</sup>- *Tidepools at Rincon Point*, Oleg Vorobyoff
- HM- *XKT*, Stephanie Ann Blythe
- HM- *Old Barn*, Jack Muzatko



**B Group**

- 1<sup>st</sup>- *Egyptian Goose*, Ed Oswalt
- 2<sup>nd</sup>- *Solano Tunnel*, Ed Oswalt
- 3<sup>rd</sup>- *Filmore and Union*, Mat Bergman
- HM- *Tom W*, Roger Mulkey

**Card**

- 1<sup>st</sup>- *Bridge Cyclists*, Stephanie Ann Blythe
- 2<sup>nd</sup>- *Pink Phalaenopsis Orchid*, Roger Mulkey
- 3<sup>rd</sup>- *Watering the Ferns*, Ed Oswalt

- HM- *Las Trampas Flag*, Ed Oswalt
- HM- *Scaffolding Study*, Mat Bergman
- HM- *Elephant Ride*, John Ballou

## **Club Information**

The Club meets on the third Monday of each month unless noted otherwise. Our next meeting will be on **Monday February 17** at 7:30pm at the **ALBANY COMMUNITY CENTER** at 1249 Marin Avenue in Albany.

Members may submit up to four digital images in each category, and up to four cards. Digital entries must be emailed to John Ballou at [jballou@comcast.net](mailto:jballou@comcast.net) by Friday February 14<sup>th</sup>. The Special Competition will be "Pseudo"- switch the left and right eyes and see what happens!