HDPROGUIDE

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30 HOLIDAY GIFT IDEAS





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Editor's Note



On the Cover of this issue of HD Pro Guide Magazine are the **Blackmagic URSA** (Page 31), **Panasonic AK-HC3800** (Page 32), and **Phantom Flex4K** (Page 33). Take a look at HD Pro Guide Magazine's 30 Holiday Gift Ideas for Filmmakers, Videographers, and Crew. Gift buying for someone in the Broadcast/ Cinema/Television, Photography, or Digital Media industries (or, for yourself!) should be an inspiring and eye-opening experience. Giving a gift that is practical, useful and necessary for one's career is the way to go. This also serves as an informational reference for those of you who make purchasing decisions for your motion picture studios and television networks, post facilities, corporate production studios, universities, houses of worship and government.

You'll find great articles in the Departments: Color Grading / Post Production, Documentary, Television, Live Production, Audio, and Education. The Television Department features "Blackmagic Pocket Cinema Cameras and DaVinci Resolve Used on Esquire Network's 'Brew Dogs'" (Page 16). In the Live Production Department: "Chinese Rocker Wang Feng's Concert at Beijing's Bird Nest: *Produced Using Blackmagic Design*" (Page 17). In the Audio Department, we take a look at "Shotgun Microphones: *VP89 and VP82*", which includes an exclusive interview with Shure (Page 18). Great articles in this issue also include: "How to Build a Home Projection Color Suite" (Page 4), "4K DSLR Revolution is Here, Part 2" (Page 8), and "'Builder' Documentary: *Action-Sports Movie-Making*" (Page 12).

HD Pro Guide Magazine has launched a new Education Department both in the magazine and online at www.hdproguide.com. The Education Department highlights technology-driven articles specifically for professionals in education. You may be required to research, recommend, and/or purchase technologies and equipment for your University or School. This issue of HD Pro Guide Magazine includes technical articles and tech bytes that will assist you in your planning and research. Additionally, we provide informational articles and interviews for working professionals seeking Continuing Education and Training. HD Pro Guide Magazine talks with Stephen Lighthill, ASC and Tal Lazar about AFI Conservatory's Cinematography discipline (Page 21).

All the Best,
Jody Michelle Solis
Editor-in-Chief

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HOW TO BUILD A HOME PROJECTION COLOR SUITE

"A system capable of viewing images that can be calibrated to Rec. 709."

By Charles Haine

Building out a quality client level color suite seems expensive, and it often is, with pro-quality monitors such as the Dolby PRM-4220 running as much as $50,000. However, for many applications, it's possible to build a perfectly functional home color grading suite that is appropriate for a lot of projects for under $5,000 including the computer. With the following set up I have graded two feature films (including a film that went to SXSW), several shorts, and countless music videos and commercials in 2014 alone, all in my living room.

First off, it's important to understand the concept of "reference monitor." Have you ever slaved for weeks on a project, only to upload it to YouTube or make a DVD for festival submission, and when you review it, it looks wildly different than it did on your computer screen? This is because the two different imaging systems (your editing platform and the internet) aren't using the same set of standards for creating images. This solution to this project is called a "reference standard," which means that if you are working on a well calibrated monitor on your home system, it should look the same on any other reference monitor anywhere in the world.

The reference standard we use for HD video is called Rec. 709 and spells out a very specific set of color and brightness guidelines for what HD video is and how a monitor should be set up.

Most consumer manufacturers, unfortunately, don't worry too much about the Rec. 709 spec, since setting up their television to "reference" wouldn't make it stand out on the show floor. If you go to a TV retailer, and you notice that all the TV's on the floor look different even when showing the same footage, this is why: they are all designed to stand out from the pack with one feature or another, not to look precisely the same as each other. However, if you want a home system for film work, you want to be set up with a viewing system that gets as close to Rec. 709 as possible, so that you can be sure that the way you view the image is as close as possible to what you are going to see at other post houses, or when you deliver to broadcast.

There is another format out there, known as DCI-P3, which is a different color space and is used for digital cinema packages for theatrical release. You need a much more expensive system in order to master in P3, and for many indies it's simply not affordable. However, the DCP specification allows for the creation of a Rec. 709 DCP, so many independent films simply master in Rec. 709 for cinema release and I've done this many times, including on my own film, "Angel's Perch", with great results.

So, now we understand what we want (a system capable of viewing images that can be calibrated to Rec. 709), how do we do it?

The first thing you need is a computer capable of giving you a video output. Most computers are set-up to deliver graphics, which can be output through DVI, Thunderbolt, or even HDMI. However, it's important to know that that graphics signal isn't actually a "video" signal in the



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ProRes
CinemaDNG

Workflow/Compatibility

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broadcast sense. In order to get a "video" signal out that will then plug into a display and show you your true image, most computers need a converter.

I personally use a Retina Macbook Pro and a Blackmagic UltraStudioMiniMonitor. The Retina MBP was around $2000, and the Mini Monitor was $150 and plugs into the MacBook Pro via Thunderbolt, giving me bolt HDMI and SDI video outputs for popular programs such as Final Cut, Premiere, and Da Vinci Resolve.

While it's common to think of SDI as the "professional" connection and HDMI as the "consumer" connection, HDMI is actually capable of a very robust image path and professional quality monitoring. However, it has a short run: after 30 feet or so you need signal boosters to keep it going. SDI is designed for longer cable runs and a lot more cable flexibility (as in, actually bending it around curves) without signal loss.

Once you have a video signal, you need a monitor capable of meeting the Rec. 709 spec. The best option for flexibility (take it with you to set, work from home, etc.) would be something like the Flanders Scientific line of monitors, but they are often not big enough for client work where you can both comfortably see the image and be sure you are seeing the same thing, without the color cast you sometimes get from off-axis viewing.

