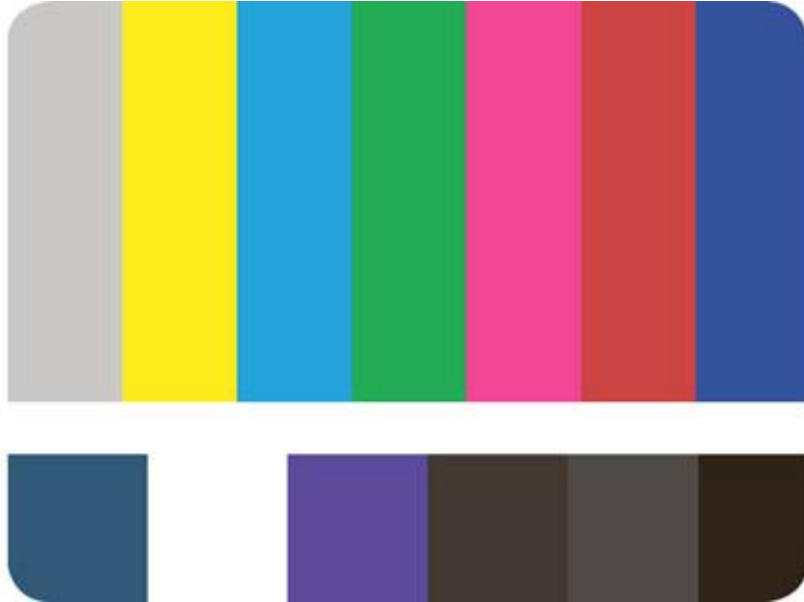


## Personal Tech

BASICS

### This Is Not a Test: Calibrate Your HDTV



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BUYING an HDTV usually starts with research. You then may make a decision based on what it looks like in the store.

Take the set home and the picture may look slightly different. Some colors are brighter than others, and the contrast between dark and light colors is heightened.

Now you need to calibrate the TV. Photographers and graphic artists have been doing color calibrations for years on their monitors in order to ensure that colors on screen accurately match what will appear in print or on a Web site. But now, with more consumers owning high-definition TVs — where every pixel pops off the screen — calibration becomes more important than with the old cathode-ray tube TV.

The easiest way to do it is to ask the electronics store to adjust it for you. It may also be one of the most expensive options. Geek Squad, the service arm of [Best Buy](#), charges about \$300 for the in-home service. But other people may find satisfactory results either with software included on some DVDs or by buying a special disc that takes the viewer through calibration steps.

The manufacturers tweak red, green and blue settings a bit to make the colors pop. They intensify blue, causing red and green to overcompensate in the image. Some people may like that look. But it creates an HDTV that is not only too bright, but won't give an accurate color representation of the leopard leaping from tree to tree on the National Geographic HD channel. You can also improve the image quality on your HDTV by reducing the amount of light that creeps into the room. That doesn't necessarily mean you need to spring for "room darkening" drapes, which are far more expensive than a Geek Squad visit.

Ultrasuede curtains, for instance, keep daylight out and are fairly inexpensive. Another trick that movie theaters use: Paint the walls a dark color, like burgundy, so less light is reflected. Putting the TV at eye level and at a distance of about three times the screen's diagonal measurement can help you see a better picture.

The Geek Squad certainly puts on a show for its \$300. Upon arriving at a customer's home in Wilton, N.Y., Stephen Rhoades, a Best Buy technician who works out of the store in Crossgates Mall in Albany, N.Y., put on Shubee shoe covers — the company doesn't want to risk marring floors or carpets — and begins by analyzing the customer, not the TV.

"What are your hopes for this service?" and "What do you think of the quality of your current picture?" he asks. Mr. Rhoades, whose title is elite service specialist, tries to calibrate their expectations before he adjusts the TV.

The technician then attaches an "eye," a small circular camera like gadget that measures minute display changes, to the screen. The device, called the [ColorPro V Color Analyzer](#), measures the red, green and blue levels to see just how far off the HDTV's color settings are from an ideal level. From there, the technician uses Geek Squad's software on a notebook computer that is connected to the eye to adjust the levels.

The customer's TV was well out of whack. Mr. Rhoades said the TV, a 46-inch [Sony](#) Bravia, was overcompensating with blue and was making green and red work harder to create the picture. The result was an HDTV that wasn't reproducing an accurate image and was using up almost 50 percent more energy than usual.

Upon completion, the difference was noticeable. Instead of an extremely bright image, the display showed every worldly imperfection in precise detail.

The Geek Squad said that other calibration methods address only about one-fifth of the factors necessary for a good picture. But according to Gregg Loewen, president of Lion Audio Video Consultants, which does color calibrations, people may get by just fine with a do-it-yourself method.

“Calibrating a display and using instrumentation does visibly make an improvement and is better than a test disc,” he said. “But I don’t think that instrumentation is five times better than a DVD disc. In fact, a test DVD, when used properly, provides the best bang for the buck.”

To calibrate your HDTV on your own, you might look for the THX Optimizer, which is found in the setup menus of a number of DVDs, including “The Incredibles” and “Toy Story.” THX Optimizer movies come with a pair of cardboard Optimizer glasses with blue lenses to help you adjust color and tint settings.

You can also buy the glasses from THX’s Web site ([www.thx.com](http://www.thx.com)) for \$2. THX-certified DVDs can be found at many retailers for about \$20.

The Optimizer takes the viewer through a series of tests to set contrast and color. For example, eight white boxes that range from pure white to gray are used to set black and white levels. If you can see all eight boxes just fine, you’re in luck and can move on. If not, you should reduce your contrast settings until you can.

To configure color and tint, you don the THX Optimizer glasses and try to balance the brightness of individual letters displayed on screen. When the blue C-L-R of COLOR are the same brightness as the two white O’s, it’s calibrated. The same is done with cyan and magenta in the word TINT.

Although the THX Optimizer is a fine calibration tool, it adjusts the HDTV for ideal viewing only in the room with the TV; if you move the TV, you may need to recalibrate.

A number of companies sell similar calibration software on DVD, most of which you can find in an electronics store. Monster sells the HDTV Calibration Wizard for about \$30. Digital Video Essentials’ High Definition costs about \$35. The Avia II does more of the same for \$40.

You could also try to do what the professionals do, though that entails investing in some equipment that will be used infrequently. Datacolor sells a \$229 calibration device called the SpyderTV. The color-monitoring device connects to your screen with the help of suction cups and

transmits information from your screen to your computer through a U.S.B. cable to tell you how to adjust the contrast, brightness and color levels.

A professional using this kind of tool can get an even better picture by tweaking a hidden service menu in the TV set that must be unlocked by a combination of codes or remote button presses. (It varies from one manufacturer to another)

The service menu gives the technician — or the TV owner if you can uncover the codes — greater control over settings, like individual red, green and blue changes. The codes are not secret. You can find them by typing the name of the manufacturer and the words “service menu” into a [Google](#) search. But be warned: fiddling with the service menu without a diagnostic tool like SpyderTV is risky.

It could make that leopard on the nature program change its spots.