

Datacolor Spyder TV

Getting optimum picture quality from your TV



When you go to an electronic mart, you would see endless rows of Plasmas, LCDs, Projection and CRT TVs. The layout is supposed to help consumers decide on which one to suit his or her taste. Some would have a greenish or reddish tinge, some will be very bright and some may be very dull looking. Which one would you choose? Inadvertently, your eyes will be drawn towards one that seems to have brighter and stronger saturated colours.

Once you bring the TV home, you begin to realize your new TV can be tiring to your eyes. The colours that were once brilliant and saturated now seem exaggerated. You have simply fallen into the trap set by TV manufacturers - to get your attention long enough to open your wallet. What happens after is, well, not quite as important, is it?

Different manufacturers using different standards for measurement and will give different results. More than often, the 'correct' setting is different from 'commercial' setting. The latter is designed to grab your attention. As such all manufacturers began tweaking their TV's settings to give the look that will appeal to buyers. That is 'correct' as far as they are concern.

That is not correct as far as accuracy is concern. What's so important about correct settings for a TV? For one, any TV can only deliver a limited spectrum of light, it is important to calibrate the TV to optimize this spectrum. The darkest scene is as important as the brightest scene. You want the picture to yield information in the darkest scene, otherwise its as good as guessing what is really happening on TV. The brightest scene must also produce detail and not blend all things white together. The colour temperature must be correct, too warm and the colour spectrum shifts towards a yellowish tinge, too much of any colour will upset the overall balance of colours. The contrast must be set right - otherwise the picture will look flat without a sense of dimensionality and depth.

Pros: Easy to use software, detailed report graph to help analyse the results

Cons: A bit expensive for every home to have one

Performance



Value



PRICE \$477

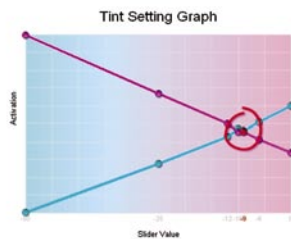
No two TVs are alike, for that matter it is not about brands or models either. A TV will undergo changes as it aged. There is no sense in comparing a brand new TV set vs one that has been running for a year or two. The questions are - how do we know what's right and how can we get the best possible performance from our TVs?



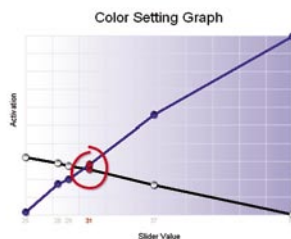
Brightness
 Previous Setting: 50
 Optimized Setting: 34
 Solution found in 8 readings
 Operation took 4 Minutes 27 Seconds



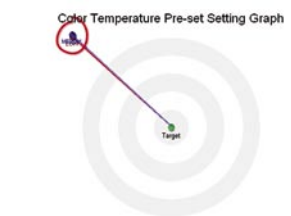
Contrast
 Previous Setting: 50
 Optimized Setting: 57
 Solution found in 1 readings
 Operation took 3 Minutes 13 Seconds



Tint
 Previous Setting: 0
 Optimized Setting: -9
 Solution found in 14 readings
 Operation took 5 Minutes 5 Seconds



Color
 Previous Setting: 50
 Optimized Setting: 31
 Solution found in 12 readings
 Operation took 3 Minutes 42 Seconds



Color Temp. Pre-set
 Previous Setting: MEDIUM
 Optimized Setting: LOW
 Operation took 24 Seconds

To depend on the naked eye is a hit or a miss affair, plus no two persons see and can interpret what they see in the same way. Hence to have consistent results, we need professional tools. The Datacolor SpyderTV is one such product.

SpyderTV will set the best possible operating parameter from

any TV. The process is designed for ease of use; even a complete novice will be able to set up any TV in about half an hour. It only makes use of all existing TV's user adjustable settings such as brightness, contrasts, colour, temperature and tint. All you need is a PC or notebook and a DVD player. The rest are supplied in the SpyderTV kit - an attachment colorimeter, the software CD to load into your PC and the DVD with instructions and the test patterns.

To start off, you would need to load the software, during this period, you can turn on the TV and DVD player to allow them to warm up (20 minutes is recommended). The supplied DVD is loaded into your DVD player and output to your TV via the best possible means - Component Video, S-Video then Composite Video in the order of preference. The DVD will run through the process to give users visual instructions instead of having to read a manual. Once the software is loaded, the colorimeter is attached directly to the center of the TV via a small suction cup. The software in the PC is booted and you can set all the TVs settings to default before you start the process.

The first step is to enter the calibration settings, eg contrasts is from 0 (min) - 50 (median) - 100 (maximum). Once that is done, the calibration begins in earnest. It starts with adjustments to the contrast level. It uses both white and black colours on your TV to set the optimal level. Following the instructions on the PC, you take 'snapshots' of the screen to determine the levels. You will need to work the process back and forth - just follow the instructions on the PC so that it will narrow down to the 'correct' settings. You can then view the graphs provided at the end of each settings to see the 'curve'.

Brightness is next to be adjusted in the similar manner, followed by colour and tint. As my CRT TV does not have colour temperature settings, you can remove this equation from the set up process. My TV has been calibrated by eye; I find the default settings too rich in colour saturation and the contrast levels too excessive. I had the settings as follows: Contrast 46 (fr 0 to 100), Brightness 50 (fr 0 to 100), Colour 43 (fr 0 to 100) and Tint 0 (-50 to 50). This looks pretty decent to my eye, but obviously SpyderTV has some other ideas...

It turned out after calibration with the Spyder, contrast level were increased to 57, brightness and colours reduced to 34 and 31 respectively and tint reduced to -9. The black luminance were 0.068 cd/m2 and white luminance were 241.763 cd/m2. What does this mean? In a layman's way of describing the dynamic range of the brightness spectrum for my CRT TV is between these two luminance settings. Different types of TV will have different dynamic spectrum.

The end result is mixed. The picture looks duller and less 'punchy', however on dark scenes, the details were less washed out compared to before. The bright highlights had better control without the resultant 'burnout'. While the results are technically better, the picture quality is somewhat less appealing. Then it dawned to me, my CRT TV is THE limiting factor, the SpyderTV just calibrates each and every TV for the best possible balance that the TV is capable of!

If this is certainly the case, then shouldn't all TVs be properly calibrated BEFORE a comparison is made? The basis of comparison for TVs in electronic stores merely highlights the different settings preferred by the manufacturer to give them the edge over its competitors but not the inherent image accuracy and quality.

In conclusion, the SpyderTV is a great tool for calibration of any display device (with the exception of a projector.) It is recommended by Datacolor to redo the calibration every 6 months to ensure the TV is maintained at its peak performance. While it may not be necessary for every home to have a SpyderTV system, it would make a great tool for any TV technician worth his salt to provide this service for a small fee.