TV settings

Easy Fixes for Common TV Problems If your television suffers from a distorted picture, weird colors, or the dreaded “soap opera effect,” these simple fixes can help improve your picture. By Will Greenwald

If you haven't dived into your TV's menu system, you might be dealing with annoying quirks you didn't even know you could fix. The default settings on many TVs don't always offer the best picture, especially when you consider that each video source (cable box, media streamer, Blu-ray player, game system) likely has its own ideal settings that apply. Here are easy fixes to four common picture problems.

Squashed, Stretched, or Cropped Picture Have you ever watched TV and thought that the picture looked a little off? Maybe the people look squashed, or maybe parts of the picture look like they're disappearing past the edge of the screen. This is a common problem with many TVs, and it's one you can easily fix.

Picture size is a setting that has many different names on different TVs, but they all do the same thing: Affect how the video signal the TV receives is displayed geometrically on the screen. Ideally, the picture is mapped pixel-to-pixel on the TV, but that isn't always the case. Sometimes the aspect ratio is off, forcing the picture to be stretched or cropped. Other times the TV trims the edge of the picture to fit broadcast formats. When this happens, you need to fix the picture size.

The Picture Size setting can be also referred to as Zoom, Wide, Aspect Ratio, or even simply just Picture. Check your TV's settings menu for any item that sounds like one of those terms. If you aren't sure if it's the right selection, check what options are available, and look for Zoom, Stretch, Wide, or 16:9. Those options indicate you're looking at the right setting. They also mean you're looking at the wrong options to get the best picture on your TV.

Stretch

Direct

For any modern game system, media hub, cable box, or computer that outputs at 1080p (1,920 by 1,080) or 4K (3,840 by 2,160), you want your TV to display the signal pixel-for-pixel if it's an option. In the Picture Size menu, select Direct or Just-Fit. This will tell your TV to show off any video it gets from your connected device as it receives it, without stretching or cropping anything. This simple option can fix any weird distortion you see when you're watching TV.

If the pixel-for-pixel mode doesn't help (especially if you use an older, pre-HD video source connected through composite or component inputs), try the 16:9 and 4:3 settings. Older game systems and DVD players output at a 4:3 aspect ratio, and they look better pillarboxed on modern TVs with black bars on either side to keep that ratio.

If you connect a computer or some other devices to your TV, you might experience another problem: overzealous overscan. Before digital TV was broadcast, TV signals transmitted more of the picture than was intended to be shown on the TV. This extra frame of picture is known as overscan, and TVs are designed to trim it off. Some TVs still cut off overscan, and when they connect a video source they don't quite know how to handle, that's what they do. We've seen this often on Samsung TVs when connecting PCs to them. If changing the picture size leaves you with a picture that appears to be cut off at the edges, you're dealing with overscan. Look through your TV's menu system for a separate option called Overscan. It will likely be near the Picture Size option in the menu, but it could appear

anywhere (including the Advanced Settings). Set Overscan to Off or Disable and you'll finally see the full picture.

Soap Opera Effect The “soap opera effect” is a common picture grievance that occurs when movement on the screen looks unnatural. It's often caused by the TV simulating 60 or more frames per second (fps) when the source video doesn't provide it. Most movies and shows are displayed at 24 or 30 frames per second. 24fps is the standard frame rate for film, while 30fps is the standard frame rate for produced television.

Many TVs have a refresh rate of 120Hz, or can display up to 120 frames per second. They also often offer image processing features that can make movement appear smoother to match that frame rate, or even simulate higher frame rates.

These features are effective at making a 24 or 30fps video look very smooth. The problem is they make the video look too smooth. It appears unnatural and jarring, resulting in the soap opera effect. They can be nice when you're watching sports or playing video games, but for most movies and TV shows, they just make everything appear weird, like you're standing behind the camera and seeing exactly what it sees.

The solution is simple: Turn off motion smoothing. That's it. Just because a TV has a 120Hz refresh rate doesn't mean you need to use it. Disabling motion smoothing features will stop the soap opera effect. Movies will look like movies and TV shows will look like TV shows again.

Putting your TV in the Theater or Cinema mode might turn off those features automatically, but if it doesn't you'll need to disable them manually. Read our guide to turning off motion smoothing to find out where the setting is buried in the menu systems of current LG, Samsung, Amazon Fire TV, Android TV, and Roku TV televisions.

Inconsistent Brightness (Or a Dim Picture) Have you ever noticed the picture on your TV looking brighter or dimmer depending on the time of day? That's likely due to a power-saving feature that's the bane of cinephiles everywhere: the light sensor. Many TVs have ambient light sensors that adjust the brightness of the picture on the fly, based on whether the room it's in is bright or dark. It sounds handy on paper, but it means you can't ensure consistent control of the TV's brightness yourself.

Ambient Light Sensor

You can keep direct control over your TV's brightness by turning off the ambient light sensor. This setting can be hidden in several different areas of your TV's menu system, depending on the interface. For Android TVs, it's a setting found in the Backlight menu of the Picture settings. On LG TVs with webOS, it's in the Energy Saving menu. Disabling any setting that says Ambient Light or Intelligent Sensor will turn off the feature. You might also have to switch picture modes to make sure it stays off—and steer clear of any Automatic Power Saving (APS) picture mode, since it will also automatically adjust your TV's brightness and often err on the side of dimmer.

For more precise control, you can also disable any energy-saving features on your TV. These don't necessarily use light sensors, but they do tweak the TV's backlight to save electricity. Look for any Power Saving, Energy Saving, or Eco setting and set it to Low or Off. Then you can adjust the TV's backlight manually to suit your tastes. Of course, this will result in your TV using more power unless you prefer looking at a dim picture; depending on the the type of the panel, and the picture mode, a 65-inch TV can consumer anywhere from 80 to 300 watts under normal viewing conditions.

Inaccurate Colors If you've watched TV and thought the picture looks a little weirdly blue or green, or that skin tones appear unnaturally yellow, your TV's color settings might be off. A full calibration can

get the best possible colors out of your TV, but this is a complicated, expensive process that most users won't want to go through. Fortunately, there are several simple settings you can cycle through to get pretty accurate colors out of the box.

Video signals are based around the D65 white point, a standard value that sets white to a color temperature of 6,504 Kelvin. Without getting into the extensive math behind it, this is what white should look like under average midday light. The default picture modes of TVs tend to set white to appear slightly bluer than it should. This setting is known white balance, and it's available on nearly every TV. Most picture modes, like Normal, Standard, and Vivid, set the white balance intentionally cool. This makes the picture pop out more, but it isn't natural.

Color Temperature

In our testing, simply setting a TV's white balance to the warmest available setting produces the most accurate colors you can get without a full calibration. You just need to know how to find that setting. In your TV's menu system, under picture options, look for a value called White Balance or Color Temperature. This setting should give you a few different options like Cool, Normal, and Warm. Choosing Warm will likely give your TV the most accurate colors you can expect out of the box.

If you see more than one Warm setting, or if there's no Warm setting, you'll have to choose the option that makes the picture look the least blue-green and the most red-pink. Don't worry; these presets won't horribly skew the colors, and even if the pinkness of the picture looks odd at first, it's actually the most accurate of the options.

Near these settings you'll likely find advanced submenus that invite you to calibrate the color or tune the white balance. Stay away from these menus, or any option that invites you to change numbers. These are settings are for calibrators to work with, and it's very easy to completely warp your TV's color accuracy if you don't know what you're doing. If this happens, you'll need to restore your TV's default settings and start again.

Remember, even if you have a brand new TV, it may not be configured properly for the best possible picture, so it's worth scrolling through the settings menu to check things out.