4.4.2 Video Troubleshooting Facts

When troubleshooting video, keep in mind that the problem might be with the video card, the monitor, or the software settings. A good place to start when troubleshooting video is to adjust the monitor settings (e.g., brightness, contrast, color balance, etc.) and checking logs for multiple failed jobs to provide clues about which component is malfunctioning. Restarting the computer in Video Graphics Array (VGA) mode, a simplified startup mode that helps troubleshoot issues with the video card, is also helpful in many situations.

The following table lists several common video issues along with a possible solutions.

Issue	Solution
System does not boot	Computers require a functioning video card in order to boot. ▪ If the system does not boot and the monitor is blank, check the monitor's power and video connections. ▪ If the motherboard returns a POST error (either a code or a series of beeps), ensure the video card is seated properly and has the necessary power connections. If the motherboard still returns a POST error, the video card is bad and should be replaced.
Colors not correct Colors are not smooth	Incorrect colors are often caused by low color depth settings. ▪ A color palette is the current list of colors that can be shown on the screen. ▪ Color shift occurs when a new image must load a different palette than is currently used. ▪ To correct color shift, increase the color depth of the display.
Blurry images, strange color tints	This problem is often caused by a weak or corrupt signal from the video card. ▪ Make sure the monitor cable is securely fastened to the video card. ▪ Check for bent or missing pins.
Image missing, doesn't fill the screen, skewed, or cut off	Set the display resolution to the monitor's native resolution. If the display isn't visible at all, check the monitor's brightness settings to verify that the screen isn't dimmed.
Program or system lockup, system crashes, slow video performance	Software or system problems can be caused by incorrect video settings, especially for programs that have high video demands. To correct the problem: ▪ Update the video card drivers. ▪ Decrease the video acceleration settings. This decreases the amount of processing done by the video card.
Screen flickers or appears wavy, user	A flickering screen can be caused by too low of a refresh rate or a loose video cable. ▪ Make sure the video cable is properly connected. ▪ Set the refresh rate to the maximum allowed by the monitor.

reports headaches	▪ If you cannot increase the refresh rate, try decreasing the resolution size and see if higher refresh rates become available. Maximum refresh rate is determined by the monitor, the video card, and the video cable. To achieve higher refresh rates, one (or all) of these components may need to be upgraded.
Scrambled or distorted images, blank screen	These problems are typically caused by improper resolution settings or settings outside the scope of the monitor. ▪ Always set the resolution to the display's native resolution. ▪ If necessary, upgrade the monitor to allow for higher resolutions.
Image does not display on a second monitor	For problems with dual-monitor systems: ▪ Make sure the video card supports dual display. ▪ Verify that the operating system supports and is configured for dual displays. ▪ In display settings, extend the desktop onto the second monitor.
Slow performance when drawing screens	By default, Windows automatically adjusts visual effects based on system performance. You can manually modify the types of effects used to optimize how Windows looks and performs. ▪ In general, the more visual effects that are enabled, the more CPU and graphics processing is required. ▪ If the system has a slow processor, low memory, or not enough video memory, using visual effects can make the system respond slowly. ▪ Use the advanced system settings to edit performance settings for visual effects. 1. In File Explorer, right-click **This PC** and select **Properties**. 2. Select **Advanced system settings**. 3. On the Advanced tab under Performance, select **Settings**. ▪ Optimizing for appearance turns on all visual effects. Optimizing for performance turns off all effects. Effects can be enabled or disabled individually.
Stuck/dead pixels	A pixel that is stuck is in an always on state and displays white. A dead pixel is stuck in an off state and displays black. ▪ Stuck pixels can be fixed by playing special videos that display a series of colors. Sometimes the video needs to be played for several hours. ▪ Most of the time, dead pixels are caused by a malfunctioning pixel and cannot be fixed. If playing the video does not fix stuck or dead pixels, the only way to fix the problem is by replacing the monitor.
Image retention, screen burn-in	Image retention (IR) is caused by a static image being displayed for too long on a screen, creating a shadow of the image that is visible even when the display is off. This is typically a problem for plasma displays only. Most of the time, IR can be fixed by displaying bright white on the screen for an extended period of time. When the image cannot be fixed and is permanent on the screen, it is known as burn-in.

Video files do not play, audio plays but no video	Digital video can be saved in one of several file formats (called codecs). Before you can play a video file, your computer must have the corresponding codecs installed. Many video files use two codecs: one for video and one for audio. If the audio plays but the video does not, you know you have the correct audio codec but need the video codec installed.