# Playback Quality and Buffering Issues

SHiNE™ videos are viewable in a variety of different qualities, ranging from 360p to 720p. In "Auto" mode, the video player switches between all available qualities to accommodate changes in the viewer's Internet, processing speed, and player size. However, if your connection speed varies during playback the video can buffer. It may require that you manually, via the Gear symbol, set the quality to a lower option vs. using the Auto mode. You can play with different quality speeds to match your internet connection speed. Often times this will resolve your issue.
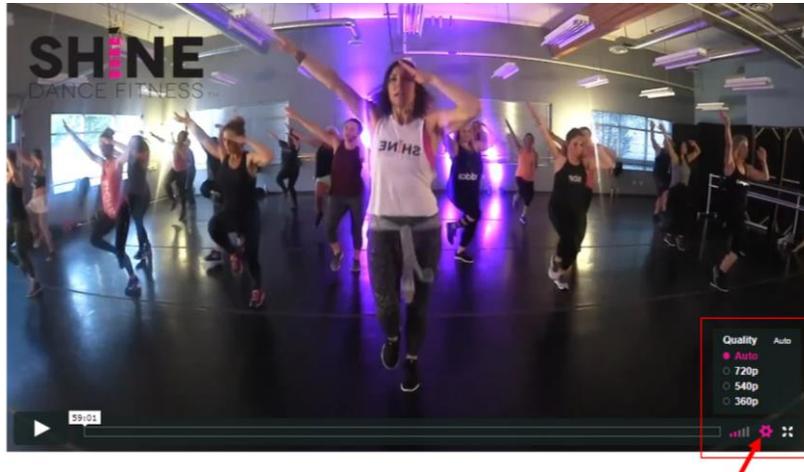
SHiNE Guidelines

1. It is best to have a hardwired internet connection to the device you are logging into SHiNE from. You can then wirelessly broadcast to your TV, using: Chromecast, the Roku app iWebTV, AppleTV, etc. Using WiFi may give unreliable results.
2. Use Google Chrome as your internet browser. This browser tends to have the least complications and is the most efficient. Regardless of the browser used, it is also good the clear the browser's Cache and Cookies from time to time, as other browsing may introduce conflicts or slowdowns in your browser.
3. Disable/Close other internet based application such as: Dropbox, iCloud, Spotify, etc. Anything that could be 'stealing' your bandwidth.
4. The quality of your playback experience is largely dependent on how your ISP (Internet Service Provider) or your mobile provider's connection to the video playback servers. Note: Overall internet speed can vary depending on many factors, including: time of day, other devices/ users utilizing your same connection, and the strength of the signal provided by your ISP. The following table shows the minimum speeds required for each playback quality:

Quality	Required Minimum Bandwidth
360p	1 Mbps
720p	3 Mbps
1080p	7 Mbps

Note: Class videos are all streamed from a large video hosting service and not directly by SHiNE.

Online Speed Tests

Speed tests can give you a general sense of the download speeds you're receiving from your Internet provider, but it's important to note that the servers used in the speed test are different from those used by other services. The actual speeds being received by your device may differ. We recommend using: https://testmy.net/download to get a general *estimate* of the speeds you're receiving from your Internet Provider. If you expect higher bandwidth than what's being reported, we recommend getting in touch with your Internet Provider for more information.

Dropped frames during playback

Dropped frames can occur if your machine/device's processing is unable to keep up with the video data that's being transferred. If your system cannot process a higher quality of video, frames of video may be skipped, which can cause audio to become out of sync as well. This tends to happen most when multiple programs are running while viewing video. Try closing unused applications or browser tabs and/or update your browser and graphics card.

Send debug results for analysis

Want to troubleshoot your playback performance deeper? The debug log helps provide critical information related to your playback experience, which helps us diagnose streaming issues. This log includes the CDN (content delivery network), your video id, your bandwidth to that CDN, the rate of dropped frames, browser/OS, and embed size.

To log your playback experience using our debug tool, please follow these instructions:

1. Open any video you're having trouble with.
2. Press play and watch the video.
3. Once the issue is occurring, press "d" on your keyboard to open the debug.
4. Click the blue "Copy Debug Key" button to obtain the unique ID associated with your playback session*.
5. Paste the entire ID into an email and send it our way for analysis. (Note: Only record/send when buffering is happening.)
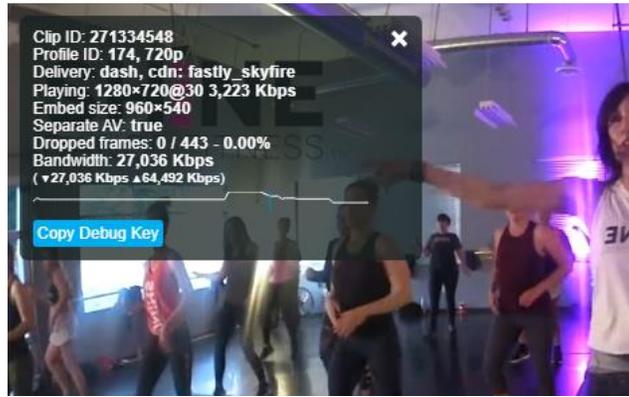
*If you aren't seeing the option to copy a debug key, please make sure that your browser is not sending a "do not track" request.

In addition to the debug panel log, we'll also need:

- A detailed description of the problem you're experiencing (e.g. buffering or dropped frames)
- Your results from this speed test (https://testmy.net/download)