

Lightning Audio Bug in newer iPhones

102116

Nature of the Bug:

This is an Apple iPhone bug which has already been logged with Apple. Currently it affects users of SKAA Diz transmitters (as well as users of many other products).

The bug occurs when outputting audio from the iPhone via the Lightning port (to dock speakers, USB speakers, external DAC headphone amplifiers, wireless audio transmitters, etc.).

The iPhone occasionally fails to send all of the audio data it should, to the plugged-in USB audio device. This causes (quasi) periodic clicks and dropouts in the audio and then the audio may stop, altogether. Unplugging your device (Diz or other) from the iPhone will temporarily cure the problem, but then the sequence of trouble will start, once again.

This bug affects 44.1 kHz audio output, only (nearly all music files are 44.1 kHz). It does NOT affect 48 kHz audio (nearly all videos are 48 kHz audio). So a good way to confirm if your phone has this bug is to listen to some music and then watch a video. If you hear audio problems when playing music, but not when playing video, your phone likely has this particular bug.

Devices Affected:

Some (not all) iPhone 6S and 6S Pluses have the bug, it depends on the manufacturer of the USB host chip used within the phone.

This bug does NOT appear in the iPhone 5 or 5S.

So far, we have NOT seen this bug show up in iPads or iPods.

We expect that some (not all) iPhone SEs are affected.

All iPhone 7 and 7 Pluses are affected.

Technical Notes:

We think it is likely that the iPhone 6S, 6S Plus and SE have been sold with 2 versions of the A-series processor chips. One of these chips carries the bug and one does not.

Samsung versions of the A-series chip does NOT have the bug.

TSMC versions of the A-series chip DOES have the bug.

The iPhone 6S, 6S Plus and SE launched with both the Samsung (bug free) and TSMC chips. Part way through their lives, a change was made to include the TSMC chip in all future iPhones. This means that the iPhone 7 and 7 Plus were manufactured with the TSCM chip, since day one.

After a series of USB errors are experienced, the external device typically gives up on the communication and shuts down its audio output, entirely. The user may have good audio for some period of time, then they may hear a series of static noise (or clicks / pops and dropouts), likely followed by complete silence.

This bug seems to not affect Apple's own Lightning headphones (including Ear Pods and Beats headphones). We believe this is because these devices do not use the normal USB connection provided at the Lightning jack, but instead use a dedicated USB connection (the Lightning connector supports 2 separate USB connections in one port).

Official Bug Report:

The official bug report has been submitted to Apple by Silicon Labs, a reputed chip manufacturer, who apparently was among the first to find the bug and subsequently log the bug with Apple.

Silicon Labs filed it under Bug report ticket number 26607934, made to Apple Developer Bug Reporting <devbugs@apple.com>.

When other parties attempt to report this bug, Apple notifies those parties that their report is a duplicate of the above report, already logged with Apple, by Silicon Labs.

What you can do:

Be assured, Apple has been notified and is working on the problem. However, as of iOS 10.0.2, the bug still exists. However, this is a major audio bug and we fully expect that Apple, given their quality-centric reputation, is working diligently to solve it for you.

If you cannot wait for Apple's fix, please contact us using the contact form on SKAA.com/TLC and we will promptly get back to you with some additional options.

Disclaimer:

This document is the best information we have been able to aggregate from dozens of sources on the Internet, plus our own investigation. It represents our best understanding of the bug as of this date. This information may not be perfect, but it certainly represents our best understanding of what is going on. As we learn more, we may amend this bulletin without notice to ensure you know what we know.