

Lightning Audio Bug in Newer iPhones

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:

iPhone 6S and 6S Plus: Not every iPhone 6S or 6S Plus has the bug, it depends on the manufacturer of the A-series processor chip used within the phone.

iPhone SE: Not every iPhone SE has the bug, it depends on the manufacturer of the A-series processor chip used within the phone.

iPhone 7 and 7 Plus: The bug affects every iPhone 7 and 7 Plus.

Note: This bug does *not* occur within the iPhone 5 or 5S, nor has it been observed in iPads or iPods.

Technical Notes:

The iPhone 6S, 6S Plus and SE launched with two versions of each phone. One version was made with the Samsung A-series processor chip, while the other version was made with the TSMC A-series processor chip.

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

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

The iPhone 7 and 7 Plus launched with only one version of each phone. This version was made with the TSMC A-series processor chip. As a result, every iPhone 7 and 7 Plus has the bug.

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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 two 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. As of iOS 10.3.1, 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, you may take advantage of Eleven Engineering's Diz trade-in program. Send a short message to Eleven Engineering via the contact form at SKAA.com/TLC with 'Lightning Bug Rescue' in the subject line. Make sure to include the Tx version of the Diz transmitter in the body of the message (this may be found in the SKAA cmd app's info page —SKAA cmd is available on the iTunes App Store). Eleven will then respond with several options to get you back up and running again - immediately.

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.