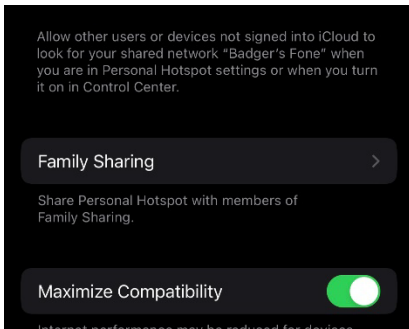# Connecting the TZTouch2/3 via iOS Hotspot devices with iOS 11 or higher
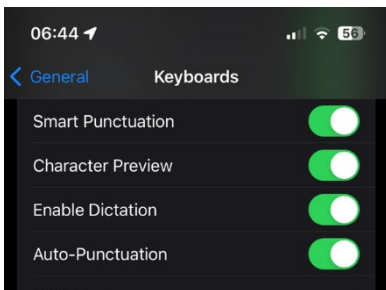
Maximize Compatibility

In an update to iOS 11, Apple made changes to the iOS software. They introduced the ability to create a 5Ghz Personal Hotspot. Due to rising popularity of 5Ghz in wireless technology they have now **defaulted** it to 5Ghz. While 5Ghz offers advantages, it offers much shorter range than the existing 2.4Ghz band. The NavNet MFDs use only 2.4Ghz ensuring the best range.

Using the default hotspot on these newer iOS products will result in the Wi-Fi be unlisted or blank on the MFD. To resolve this problem, the iOS user needs to turn ON the "Maximize Compatibility" under Settings > Personal Hotspot. Enabling "Maximize Compatibility" forces the iPhone to create a 2.4Ghz network suitable for the TZT system. The iOS hotspot SSID should now show up in the wireless list, however that doesn't necessarily mean the user is able to connect the MFD to the iOS access point just yet.
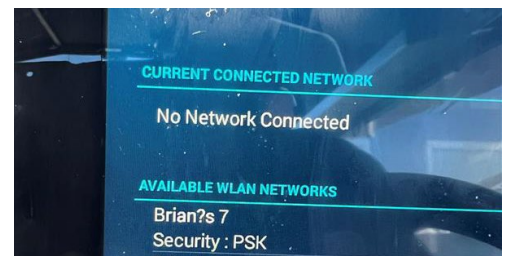
Smart Punctuation:

With the release of iOS 11, Apple also introduced "smart punctuation" which changes the standard ASCII apostrophe mark into a right-facing apostrophe mark (U+2019, or UTF-8 E2 8099).
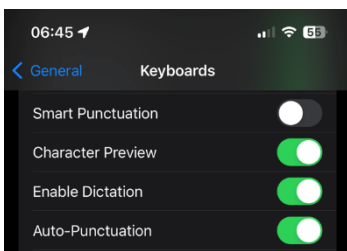

If for example your phone was named "Jim's Phone" prior to iOS 11, with the above step the iPhone would successfully allow the TZtouch to connect. However, if you either upgraded your phone, or received a new phone and nicknamed named it "Jim's Phone," rather than use the original ASCII apostrophe mark (e.g. the standard "0x27" character) iPhone uses the new right-facing apostrophe character. So, when the user is trying to connect their TZtouch to an iPhone (for weather or TimeZero), the TZtouch struggles to interpret the new UTF-8 E2 8099 character and will render it as a "?" or the default symbol for any unmapped ASCII characters. As an example, long-time Furuno customer Brian with a TZTouch3 and an iPhone. After turning on "Maximize Compatibility" he tried again to connect his TZtouch to his iPhone's Personal Hotspot, however the SSID shows: Brian?s 7:

"Brian?s 7" is not the correct SSID, so while his credentials are correct the SSID is wrong, so the handshake doesn't complete and the TZtouch is unable to connect.

Eventually Furuno should map this new ASCII character in future software patches. Until then, it's recommended the user should turn off "smart punctuation" in the iOS settings (Settings > General > Keyboard).

Turning off Smart Punctuation allows the user to input an apostrophe mark with the normal 0x27 ASCII character. It is recommended to remove the offending mark from the iPhone's SSID if possible. The SSID uses the hostname of phone. It is best to change the hostname of the phone and eliminate special characters. To change the hostname, the user needs to go into Settings > General > About > Name and delete the offending apostrophe.

Doing these steps will allow any TZtouch owner to reliably connect to their iOS Hotspot each time.