iPhone Battery Replacement Guide

Using No Weld Batteries To Remove Battery Message

Overview

When replacing an iPhone battery on models from the iPhone XS onwards, if a non-genuine battery is used a warning message is displayed on the handset - unless you take the battery management board (BMS) from the original battery and spot weld it onto the after-market battery.
This solution allows you to remove the non-genuine battery warning without the need for welding.

No Weld Battery

The battery used in this process is a special design which includes an additional connector which the old BMS board plugs into.

iPhone 12 Mini Battery with additional connector highlighted

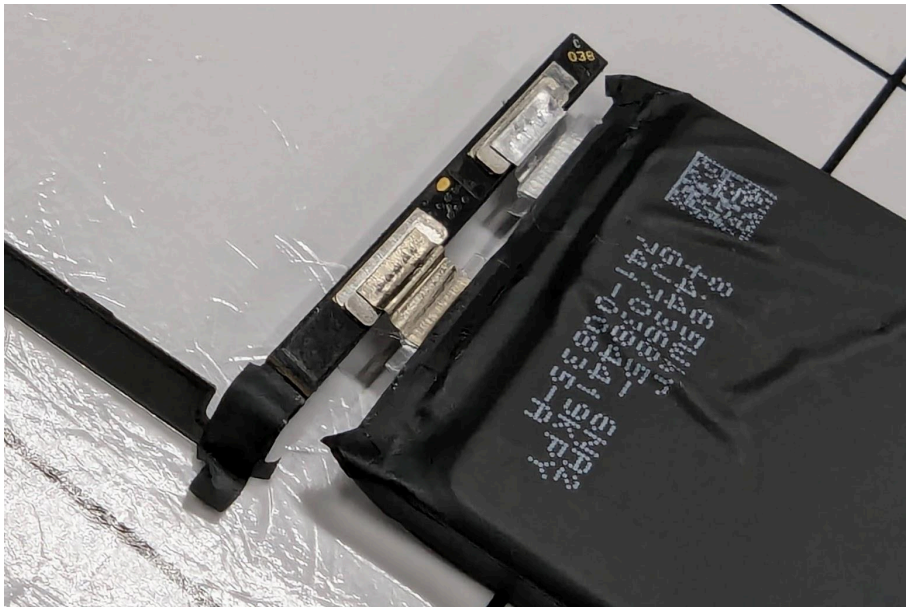
Important: From iOS 17.4 onwards, Apple have made changes to the device firmware which make it more difficult to reset the battery health to 100% following a battery change. An **additional step** is required to achieve the 100% reading - **this will involve wiping all customer data from the device.**
Please see the "iOS 17.4 Onwards - Battery Health Reset" section of this guide..

Process

1. Remove the old battery from the handset
   Follow the usual procedure, taking care not to pierce or damage the battery.

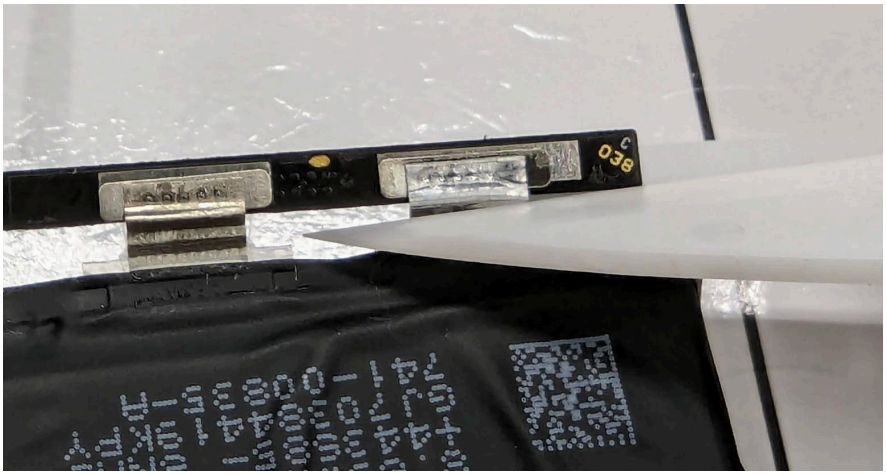
2. Remove the tape covering the BMS board on the old battery.
   Make sure that you **do not use any metal tools** when removing the tape - there is a risk that you could accidentally short the contacts on the battery once they are exposed.

Carefully fold back the BMS board in order to expose the terminals.



3. Take a pair of **ceramic** scissors - you **must not use metal tools** as there is a risk of short circuiting the battery and potentially causing fire/explosion/injury.

Carefully snip through the metal strips which attach the old battery to the BMS board/flex.

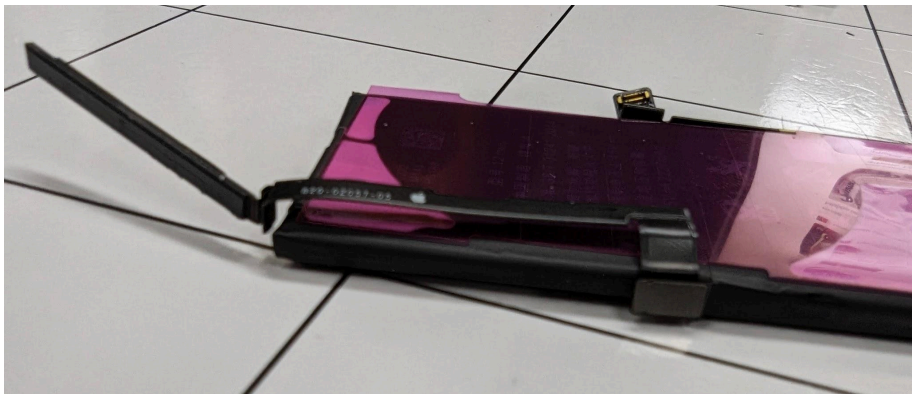


The BMS board/flex should now be free from the old battery.

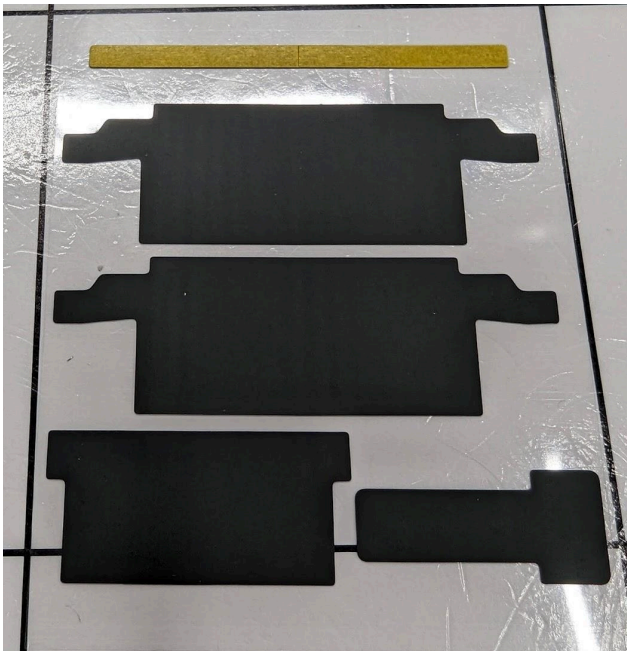
There may be some sharp pieces of metal still attached to the contacts. Try to remove these as much as possible using the ceramic scissors.

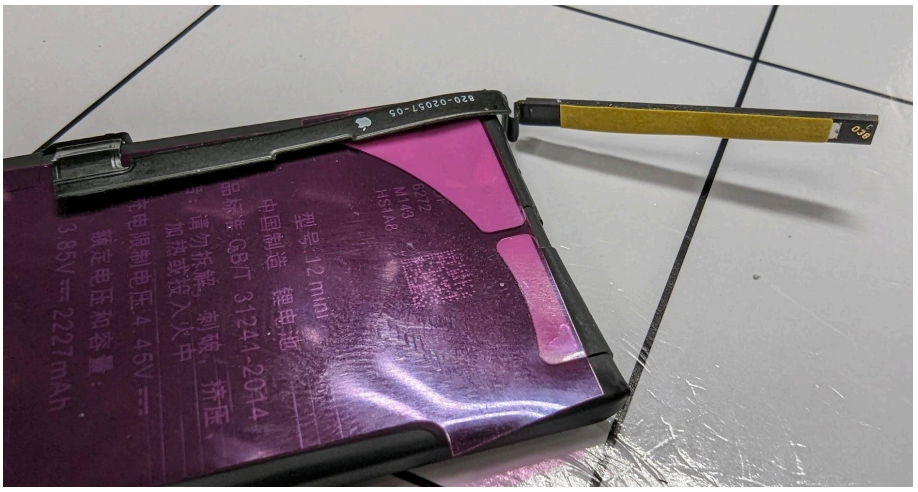
4. You can now plug the BMS board and flex into the new battery. You will see that the new battery has two connectors, one is to connect to the phone motherboard in the usual way, the other is for connecting to the flex which you removed from the old battery. Look at the new battery to familiarise yourself with which connector is which. You will also need to work out which way round the flex attaches to the battery. The connector can be plugged in either way, but will only work if it is connected correctly. A list of example videos is provided at the bottom of this guide.

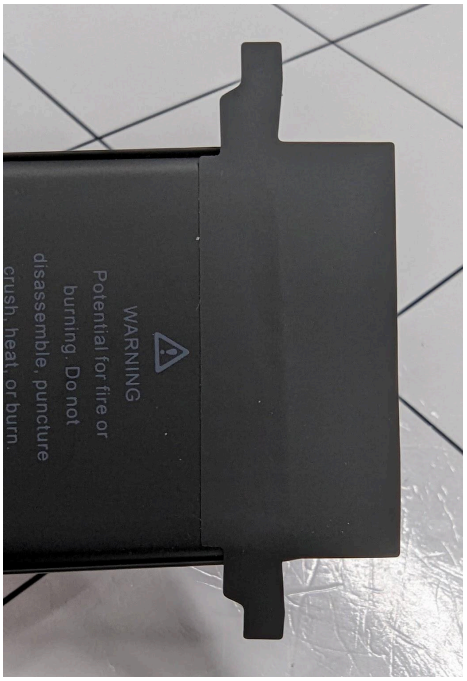
5. Plug the BMS board/flex into the new battery.



Fold and position the flex and BMS in the correct position.
Use the double-sided tape strip and stickers supplied with the new battery to secure the BMS board.

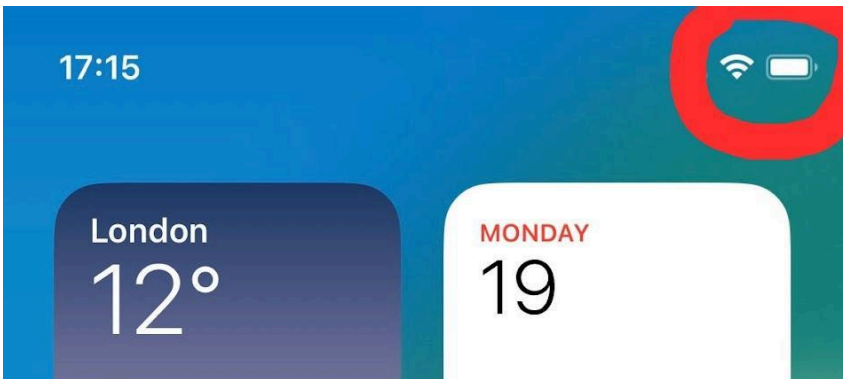


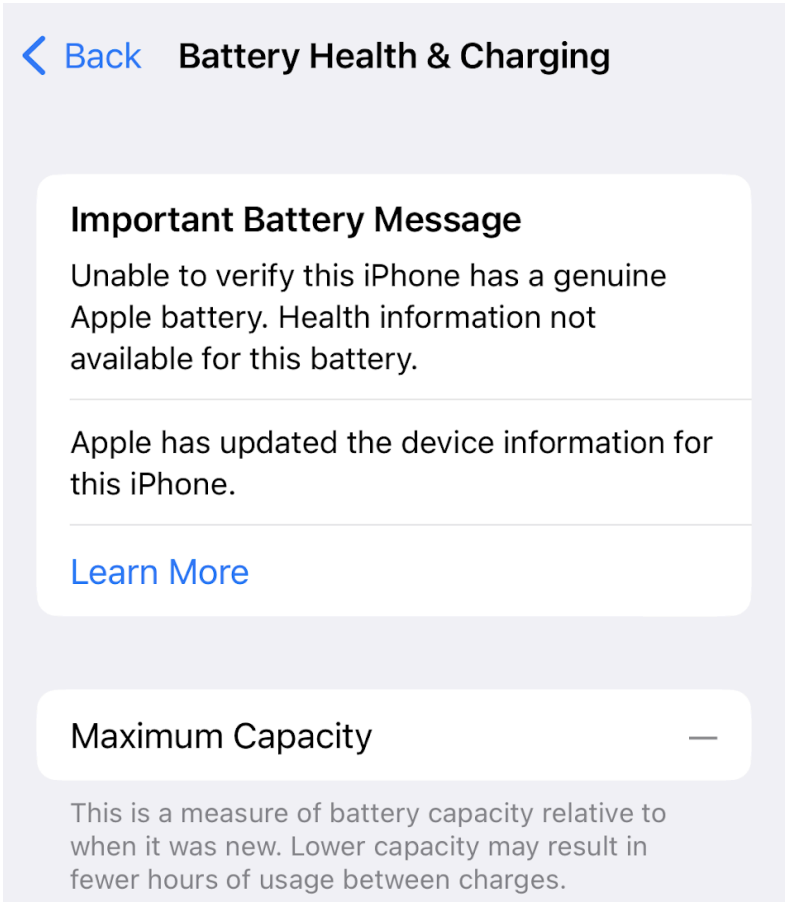

820-02057-05
8272
M143
HS1A8
型号:12 mini
中国制造 锂电池
品标准:GB/T 31241-2014
警告:请勿拆解,刺破,挤压,
加热或投入火中
电池限制电压:4.45V ⎓
额定电压和容量:
3.85V ⎓ 2227mAh


WARNING
Potential for fire or
burning. Do not
disassemble, puncture
crush, heat, or burn.

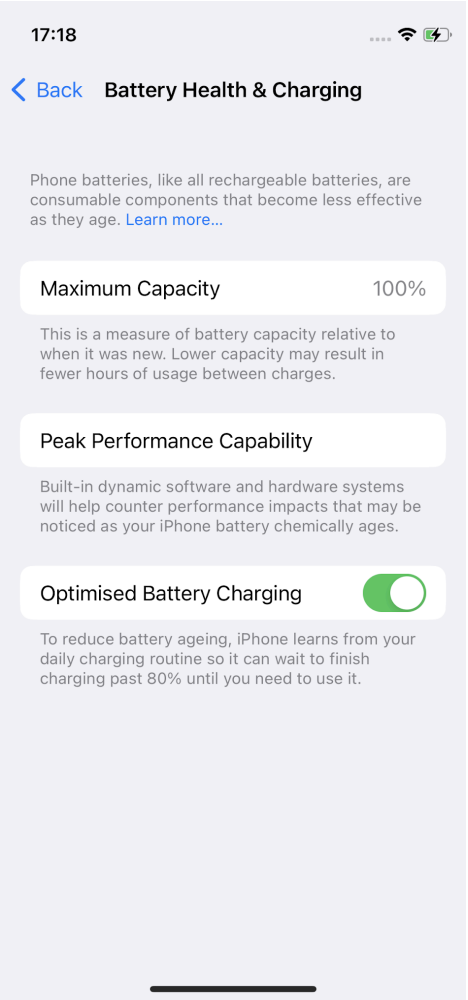
2057-05
8272
M143
HS1A8
型号:12 mini
制造 锂电池
GB/T 31241-2014
刺破,挤压,
加热或投入火中
限制电压:4.45V ⎓
额定电压和容量:
3.85V ⎓ 2227mAh

6. Plug the new battery into the handset and boot it up.
   On the first boot the battery charge should show as 100% and there will be a non-genuine battery message showing in the phone settings.





7. Turn the handset off and then back on again.
   Once it has rebooted, the battery charge level will have changed from 100% down to the actual level in the battery. The non-genuine battery warning may have now gone. If it's still present, reboot the phone again and repeat until it does disappear (in testing we have found that sometimes this takes one reboot, but sometimes takes four or more).



8. Make the old battery safe for transport and recycling by covering the exposed contacts with electrical tape.

iOS 17.4 Onwards - Battery Health Reset

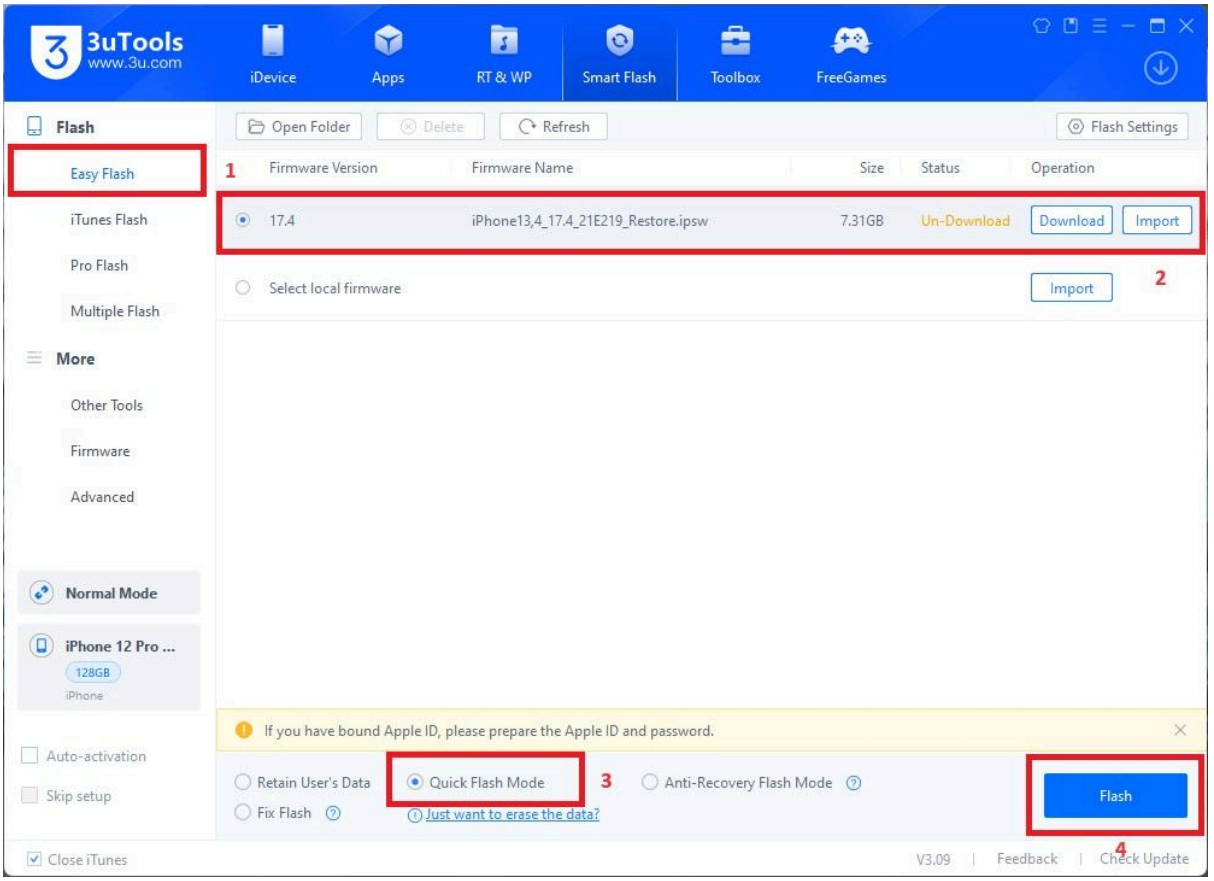
Warning - the following steps will involve wiping all customer data from the device! Make sure that the customer has backed up their data prior to performing the steps below.

From iOS 17.4 onwards, Apple have made changes to the device firmware which make it more difficult to reset the battery health to 100% following a battery change.

The following steps will allow you to reset the battery health back to 100% by flashing the device firmware via “3uTools”.

1. Download and install 3uTools to your PC - http://www.3u.com/
2. Launch 3uTools
3. Plug the iPhone into the PC and accept any “Trust” prompt shown on the phone.
4. Navigate to the “Smart Flash” option in 3uTools on your PC - this can be found at the top of the 3uTools window.

5. You should now see the window shown below:



You will now need to make some selections:

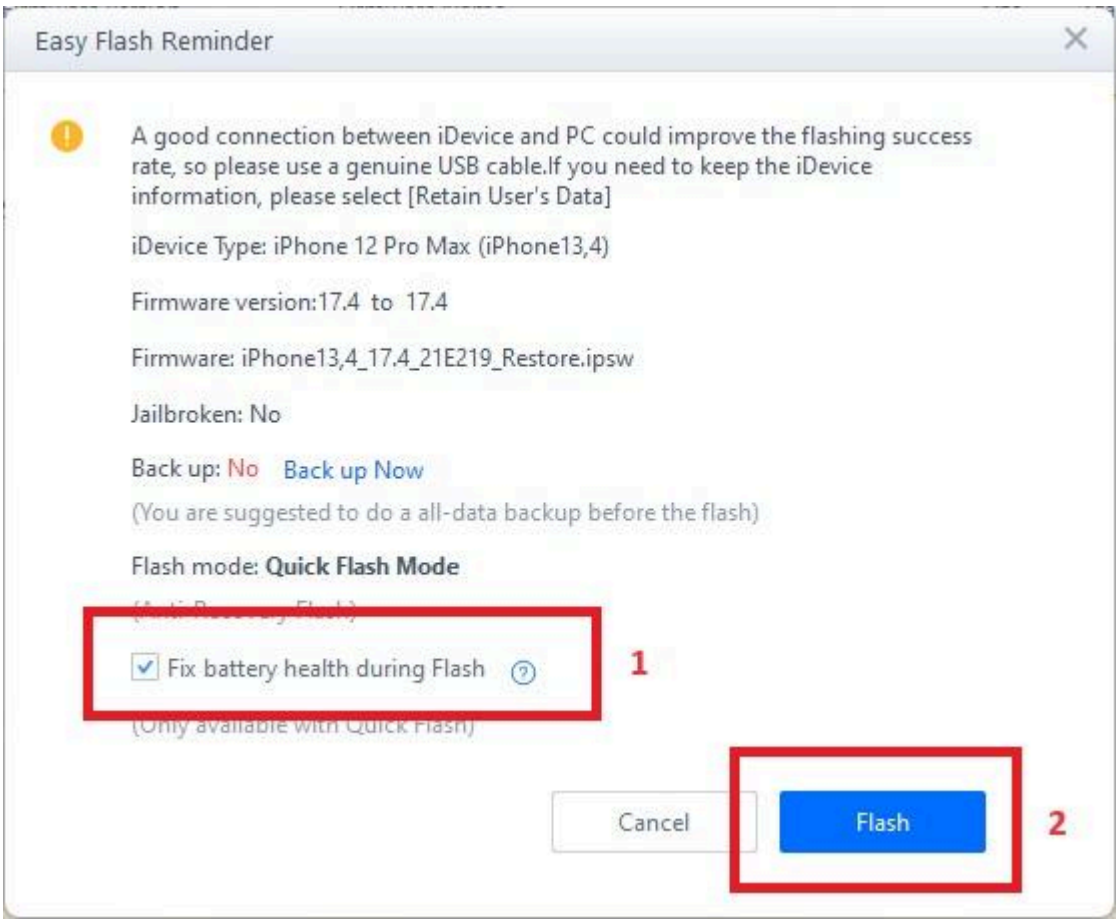
5.1. Make sure that “**Easy Flash**” is selected (1).

5.2. Download the latest version of iOS from the list (2) - avoid Beta and Release Candidate (RC) versions. This may take some time, depending on your connection speed. The file will verify after it has been downloaded. Wait for this process to complete before continuing.

5.3. Choose “**Quick Flash Mode**” (3).

5.4. Click “**Flash**” (4).

6. Another window will now pop up:

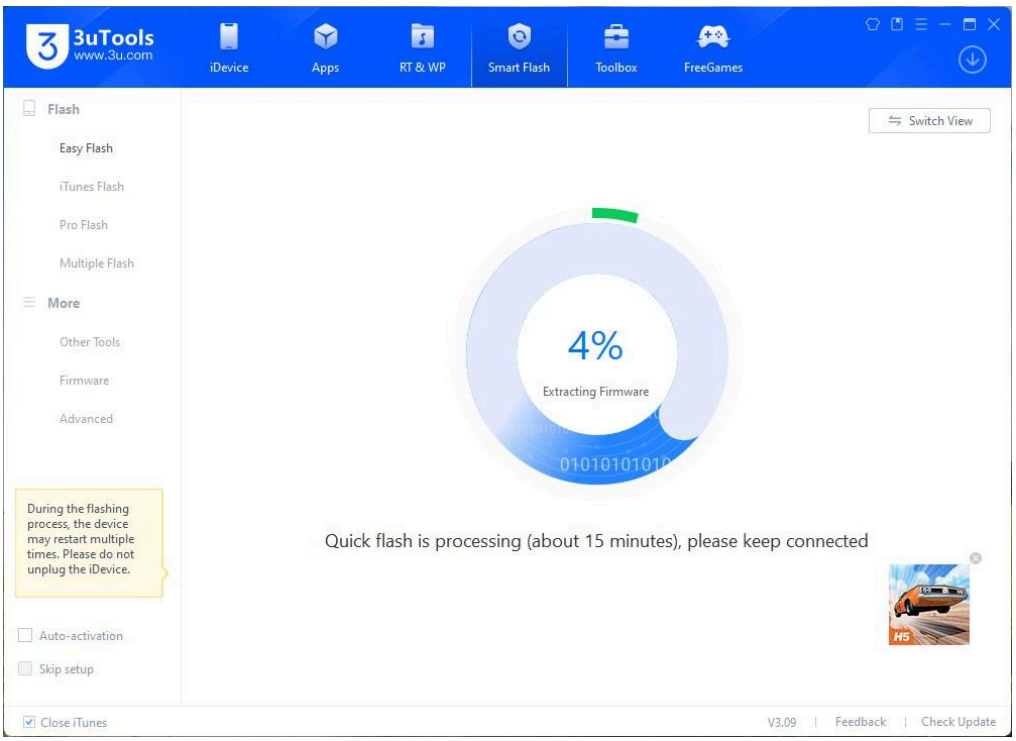


6.1. Tick the box marked “Fix battery health during Flash” (1).

This is the last chance to back-up data before the handset is wiped!
If you need to back-up, cancel now and save the data!

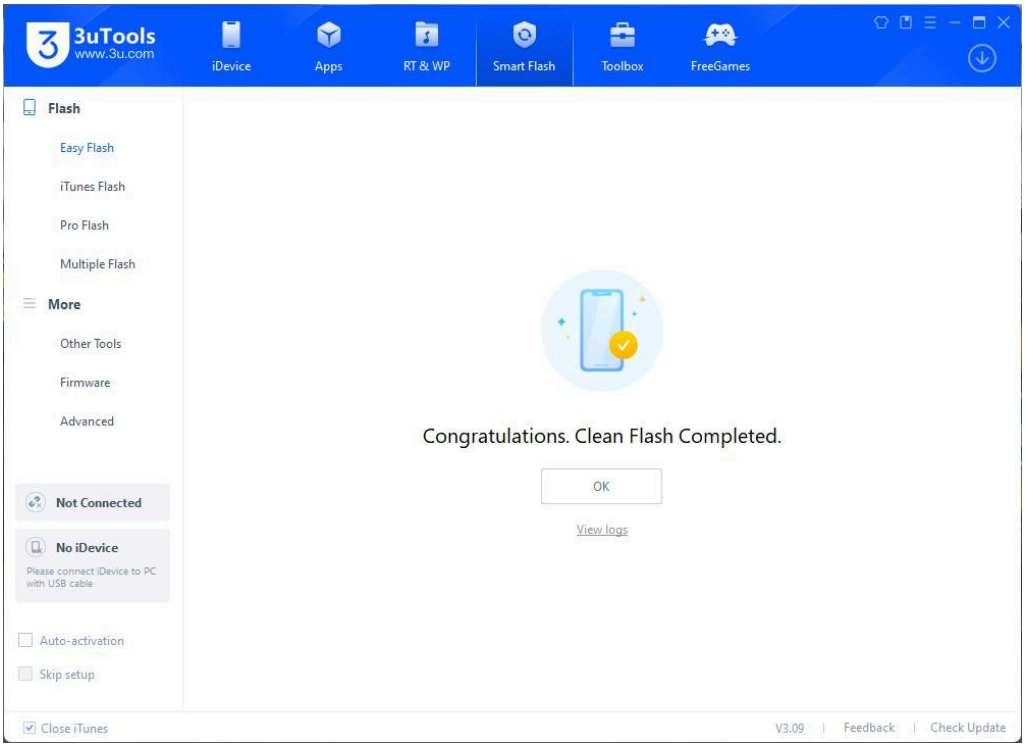
6.2. Click “Flash” (2).

7. The flashing procedure will now begin.



The flashing process will take approximately 15 to 20 minutes.

Once the flash is complete you will see the following confirmation message.



If you now go through the iPhone setup procedure and then go to the **Settings>Battery>Battery Health & Charging** menu option, the battery health

“Maximum Capacity” should now show 100%

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[iPhone 11 Pro Max]

[iPhone 12]
[iPhone 12 Mini]
[iPhone 12 Pro Max]

[iPhone 13]
[iPhone 13 Pro]
[iPhone 13 Pro Max]

iPhone 14
iPhone 14 Plus
iPhone 14 Pro (Title on video incorrect)
iPhone 14 Pro Max

Battery Health Fix Flash - for iOS 17.4 onwards