

Installation and user guide for Sony Mobile Battery test.

Description

New version 1.19.0 **Sony Mobile Battery test** application is prepared for **Xperia Sola** (MT27i), **Xperia P** (LT22i), **Xperia Go** (ST27i ,ST27a), **Xperia Acro S** (LT26w), **Xperia S** (LT26i), **Xperia SL** (LT26ii), **Xperia Ion** (LT28at,LT28h,LT28i), **Xperia TX** (LT29i), **Xperia GX** (SO-04D), **Xperia T** (LT30p), **Xperia TL** (LT30a,LT30at), **Xperia V** (LT25c,LT25i), **Xperia VL** (SOL21), **Xperia AX** (SO-01E), **Xperia Z** (C6602,C6603,C6606,C6616, L36h,SO-02E), **Xperia ZL** (C6502, C6503, C6506, L35h), **Xperia Tablet Z** (SGP311, SGP312, SGP321, SGP341, SGP351, SO-03E) , **Xperia SP** (C5302, C5303, C5306, M35c, M35h) , **Xperia Z Ultra** (C6802, C6806, C6833, C6843, SGP412, SOL24 ,XL39h) , **Xperia C** (C2304, C2305, S39h), **Xperia Z1** (C6902, C6903, C6906, C6916, C6943, L39, SO-01F, SOL23), **Xperia Z1f** (SO-02F) , **Xperia Z1 Compact**(D5502, M51w) , **Xperia T2 Ultra** (D5322, XM50h, XM50t) , **Xperia Z2** (D6502, D6503, D6543,L50w) and **Xperia Tablet Z1** (SGP511, SGP512, SGP521, SGP541, SGP551) only. More products will follow.

This test is designed to identify a faulty battery or a hardware issue in the phone or with the charger. The guide will describe different procedures depending on the battery level when the battery test is initiated.

The following equipment is needed to do the installation and perform the test:

- Computer with Bluetooth device or Computer and EC480 cable to transfer the application to the phone
- An **EP800** charger and **EC480** cable is regarded as reference equipment when trouble shooting the charger system if the users charger/cable has been returned together with the phone and battery
- SD card to install the application if no internally memory is available.(other models)

Revision	Description	Date
1	First release	12-05-20
2	Products added. Installation new Android SW (ICS) added.	12-08-31
3	Name change to Sony Mobile Battery test .Products added.	12-09-14
4	Products added.	12-11-10
5	Products added	13-02-04

6	Products added	13.02.17
7	Xperia Tablet Z (SO-03E) added	13.03.06
8	Xperia Tablet Z (SGP311, SGP312, SGP321, SGP341, SGP351) added Xperia Z (C6606) added	13.03.27
9	Xperia SP (c5302, C5303, C5306, M35c, M35h) added	13.04.13
10	Xperia Z (C6616) and Xperia Z Ultra (C6802, XL39h) added	13.07.23
11	Xperia C (C2305, S39h) added	13.07.29
12	Xperia Z Ultra (C6806,C6833) added Xperia Z1 (C6902, C6903, C6906, SO-01F, SOL23) added	13.09.06
13	Xperia Z1 (C6943) and Xperia Z Ultra (C6843) added	13.11.03
14	Xperia Z1 (L39) and Xperia Z1f (SO-02F) added	13.11.03
15	1.4 updated. Allow USB debugging in new Android version 4.3. L39u and C6916 added	13.12.25
16	Xperia Z Ultra (SGP412, SOL24) added Xperia C (C2304) added	14.01.15
17	Xperia Z1 Compact (D5503) added.	14.01.24
18	Xperia T2 Ultra (D5322, XM50h) and Xperia Z1 Compact (M51h) added	14.03.09
19	Xperia T2 Ultra (XM50t), Xperia Z2 (D6502, D6503, D6543, L50w) and Xperia Tablet Z1 (SGP511, SGP512, SGP521, SGP541, SGP551) added	14.03.19

Content

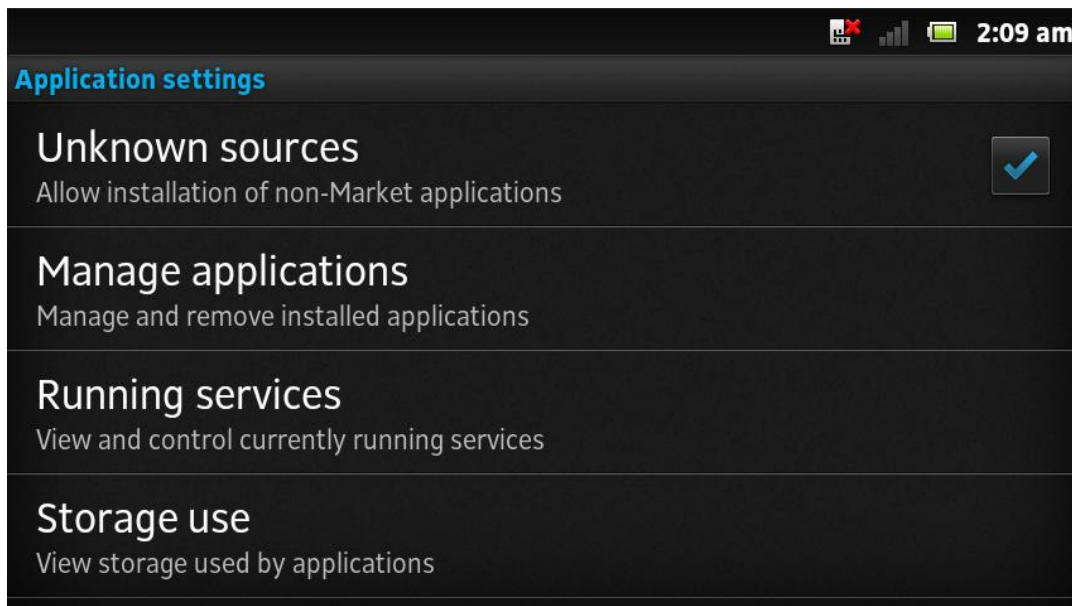
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1. Installation

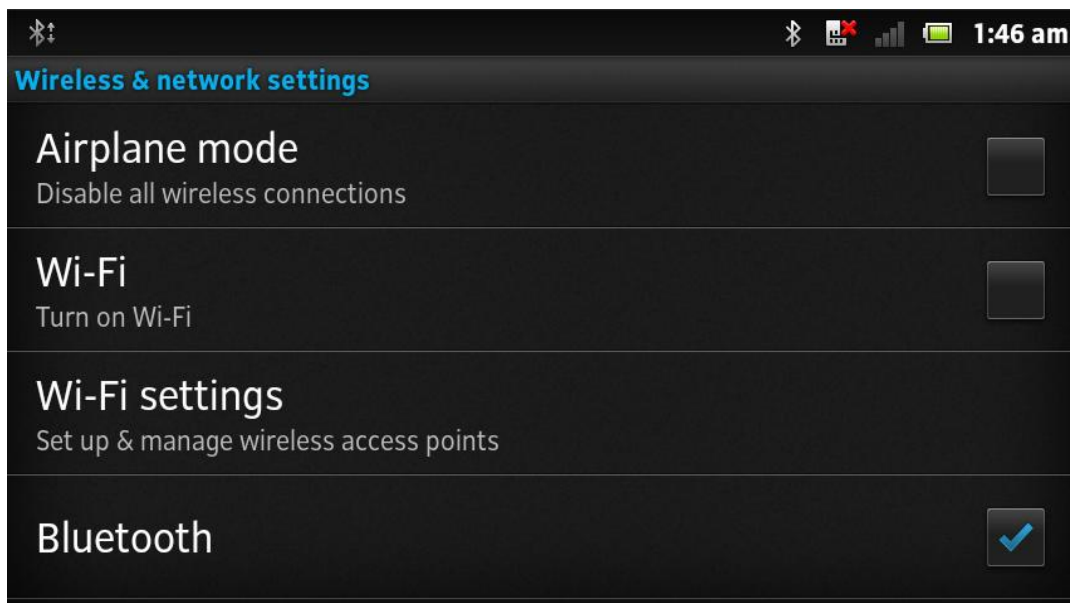
1.1 Bluetooth method old Android SW (Gingerbread).

Insert a SD card if no internally storage is available and start the phone. Go to Settings/Applications /Unknown sources.

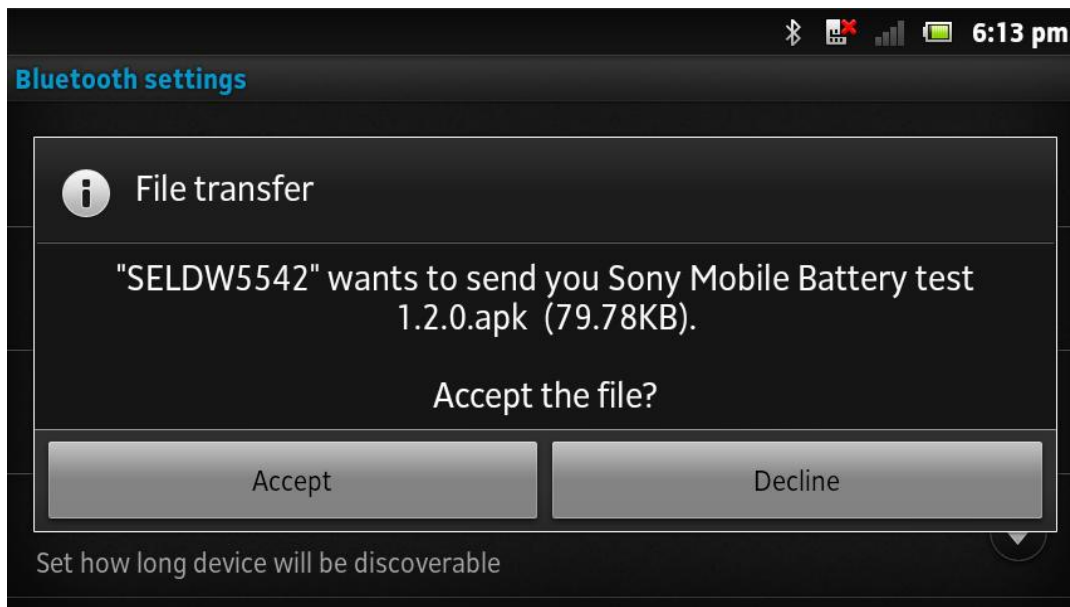
Allow installation of non-Market applications.



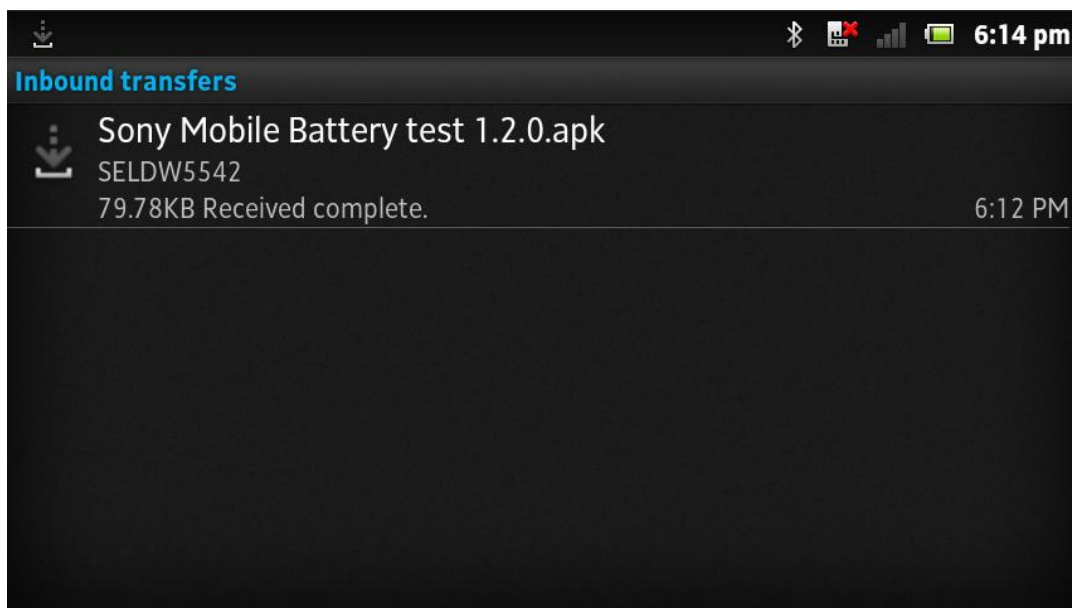
Go to Settings /Wireless & networks/ Bluetooth settings. Turn on Bluetooth. Turn on “Discoverable”.



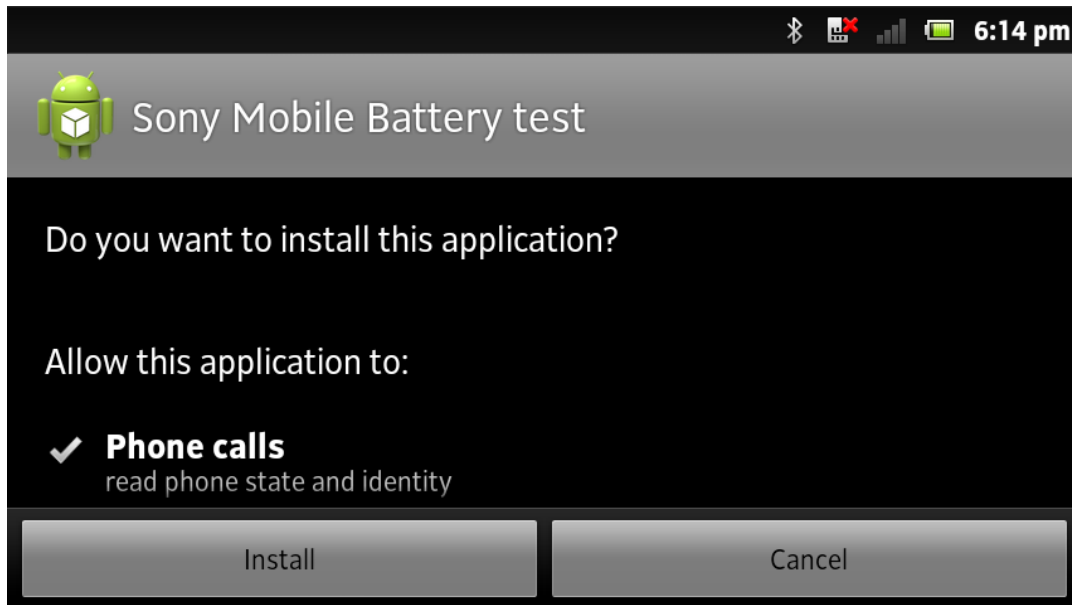
Pair the phone with the computer and send the **Sony Mobile Battery test.apk** file to the phone. Accept the file on the phone.



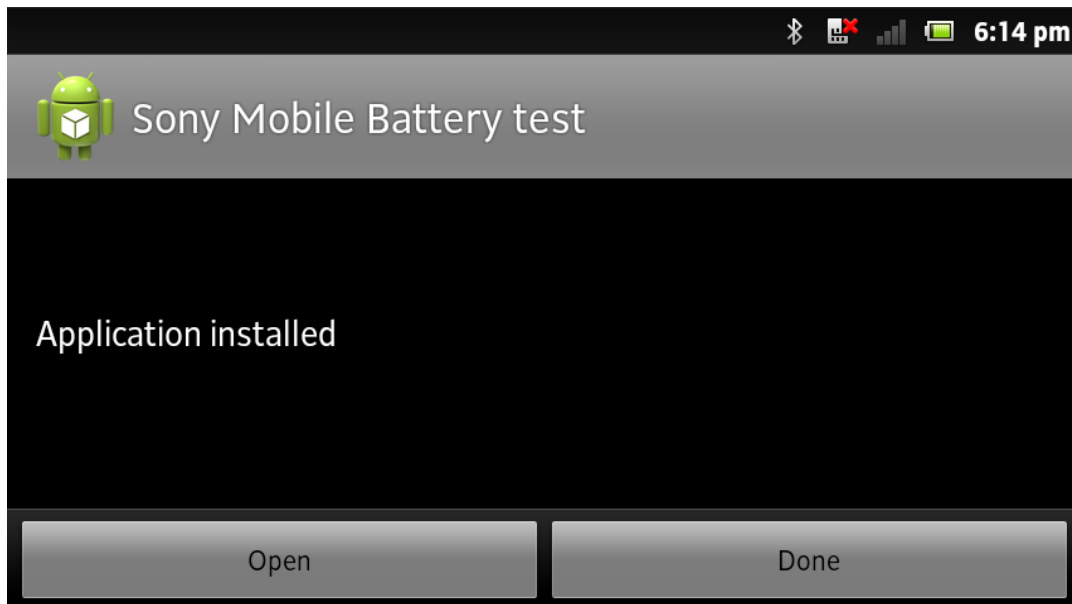
Press Sony Mobile Battery test



Press Install.

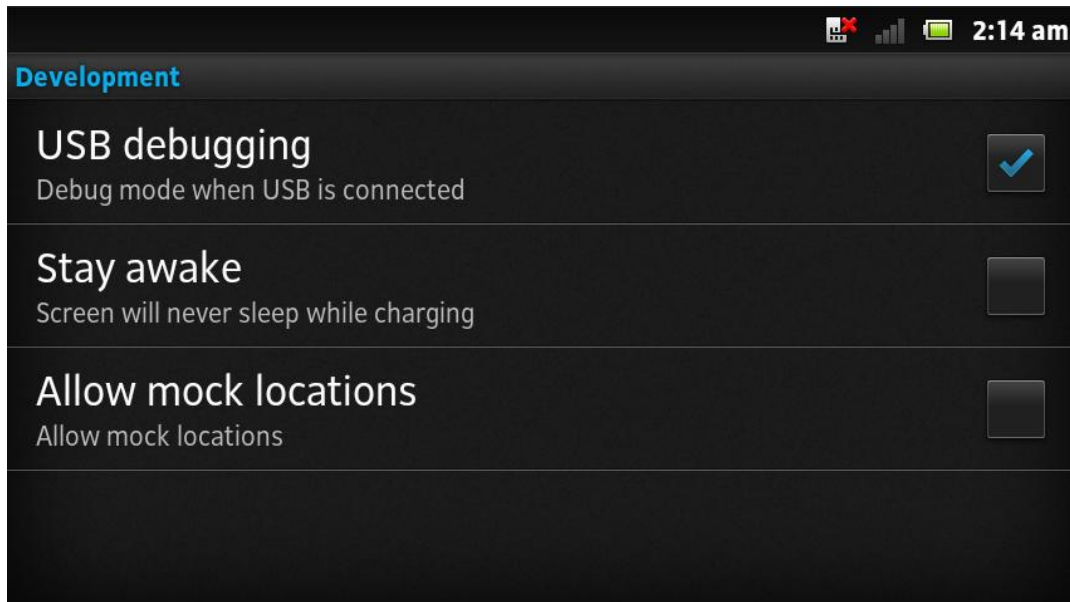


Press "Open" to run the test or press "Done" to finish the installation.

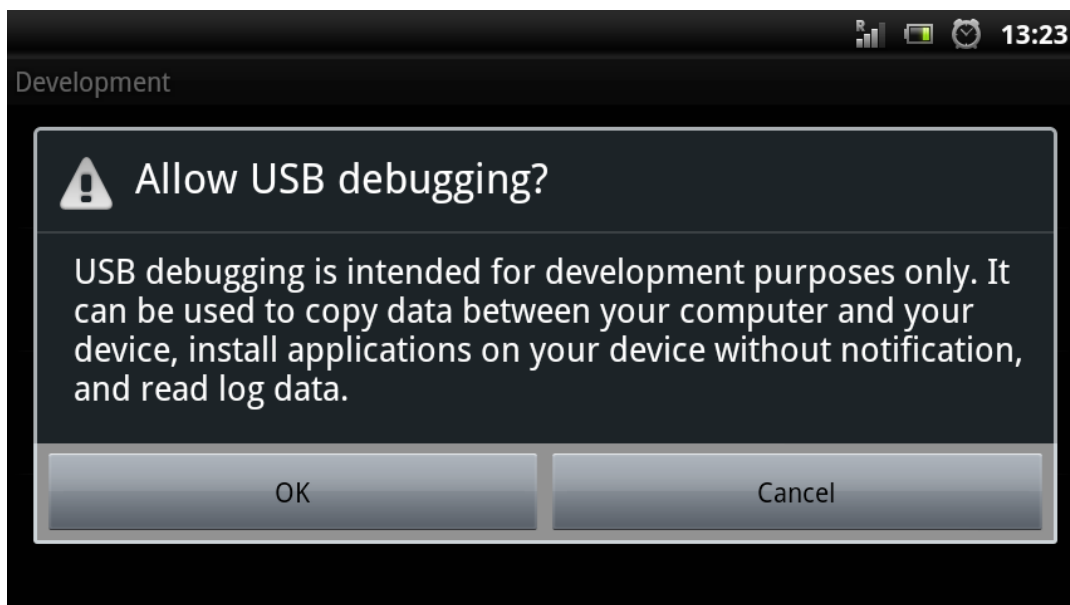


1.2 Cable method old Android SW (Gingerbread).

Go to Settings/Applications/Development, enable debug mode when USB is connected.



Allow USB debugging. Follow Installation Guide for ADB driver.



When phone is connected and the driver is installed run the "Apk USB install.bat" to install the app on the phone.



The following will appear when the app is succesfully installed.

```
C:\WINDOWS\system32\cmd.exe

C:\Documents and Settings\23049357\backup\Desktop\Battery app rev3>"C:\Documents and Settings\23049357\backup\Desktop\Battery app rev3"\adb\adb wait-for-devices

C:\Documents and Settings\23049357\backup\Desktop\Battery app rev3>"C:\Documents and Settings\23049357\backup\Desktop\Battery app rev3"\adb\adb install "Sony Mobile Battery test 1.2.0.apk"
1276 KB/s (81693 bytes in 0.062s)
pkg: /data/local/tmp/Sony Mobile Battery test 1.2.0.apk
Success

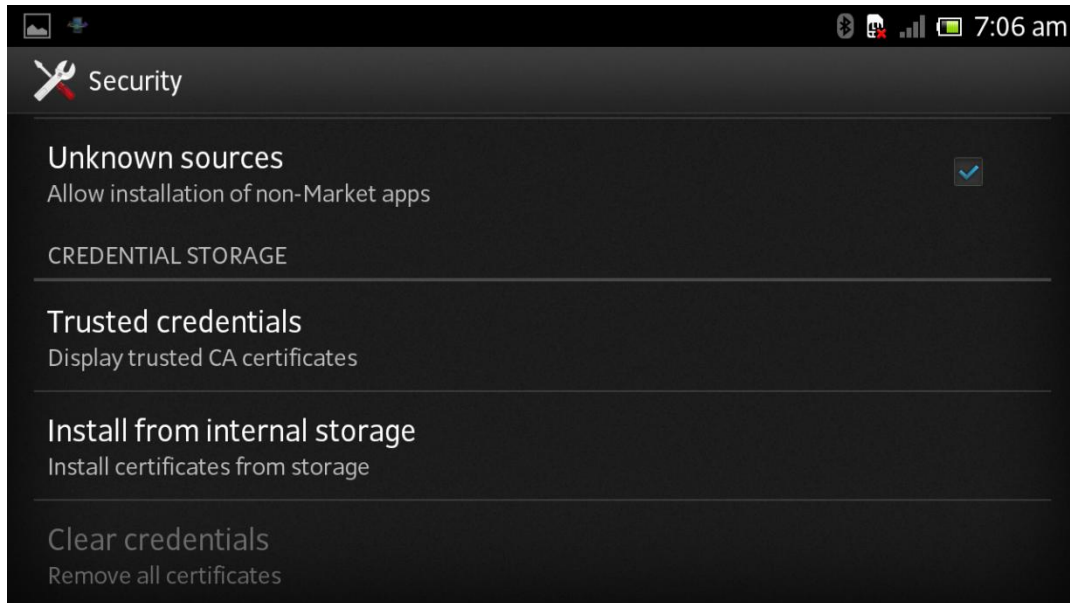
C:\Documents and Settings\23049357\backup\Desktop\Battery app rev3>pause
Press any key to continue . . . _
```

After success installation remember to disable USB debugging in phone.

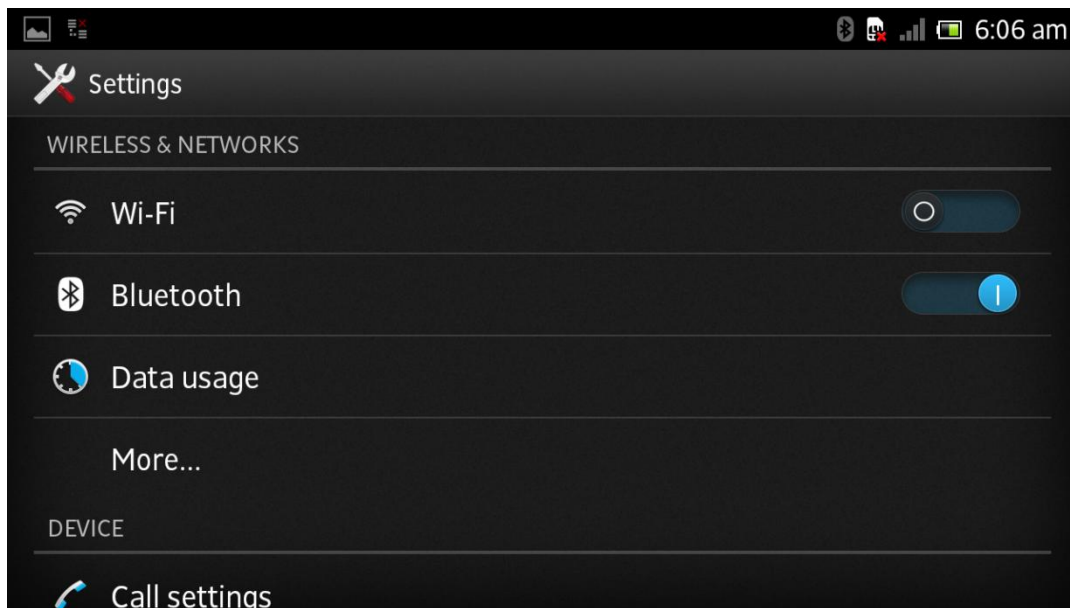
1.3 Bluetooth method new Android SW (Ice Cream Sandwich or Jelly Bean).

Insert a SD card if no internally storage is available and start the phone. Go to Settings/Personal/Security/Unknown sources.

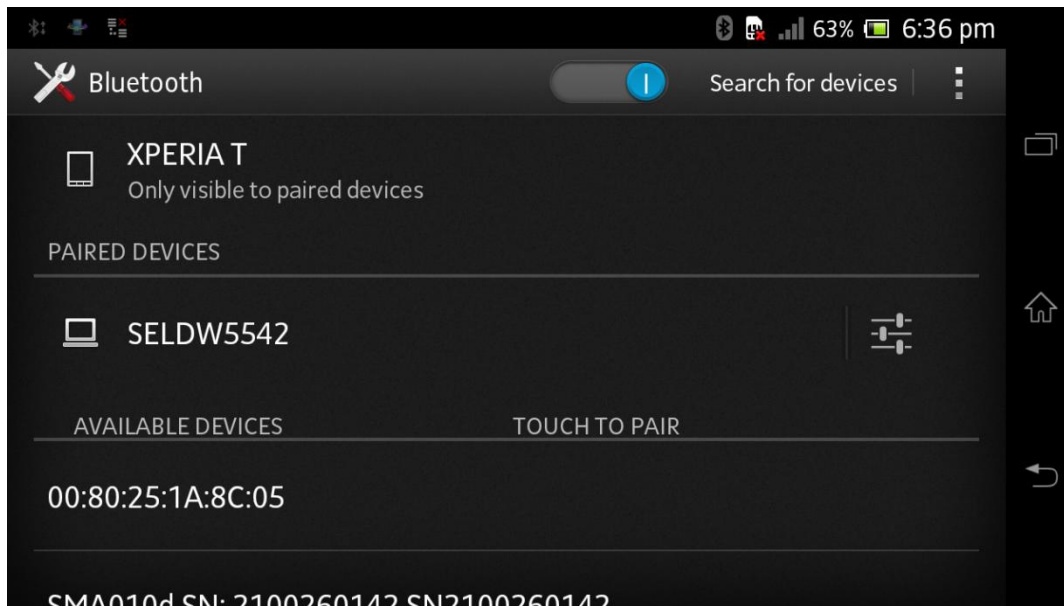
Allow installation of non-Market apps.



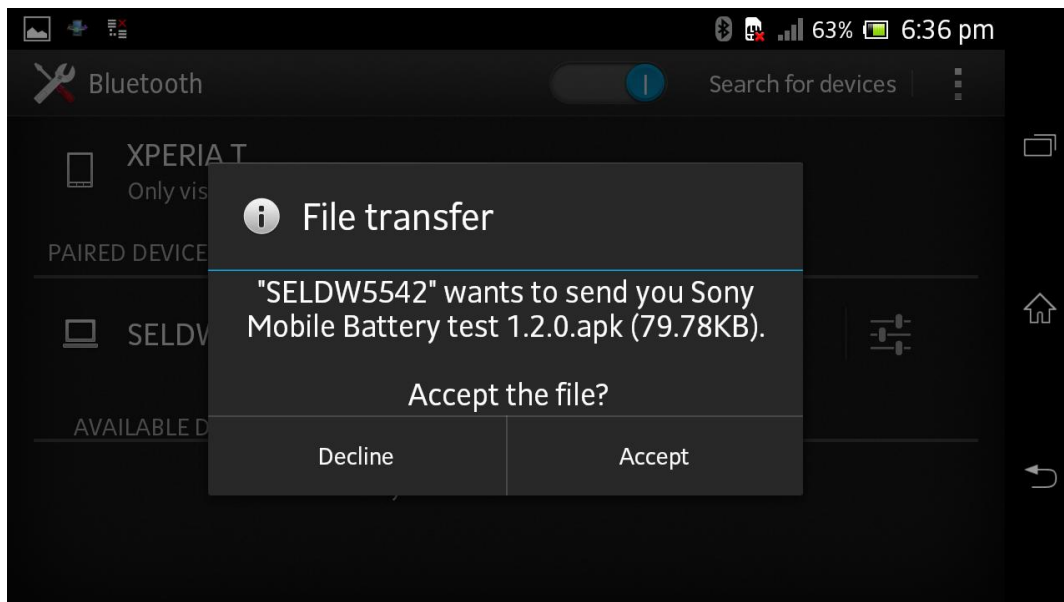
Go to Settings/Wireless & networks/ Bluetooth. Turn on Bluetooth.



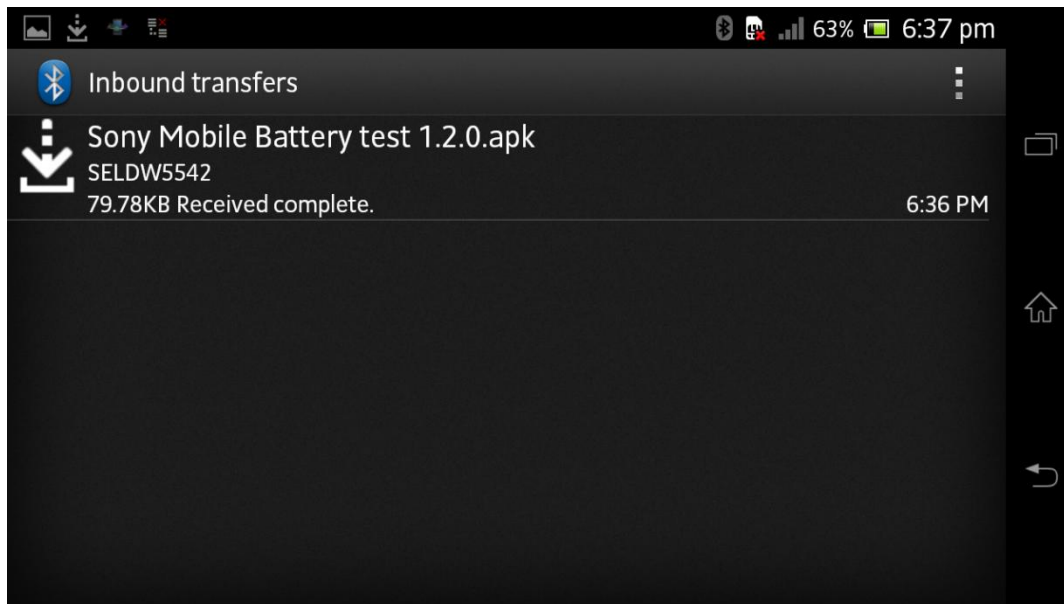
Turn on Visible to all nearby Bluetooth devices.



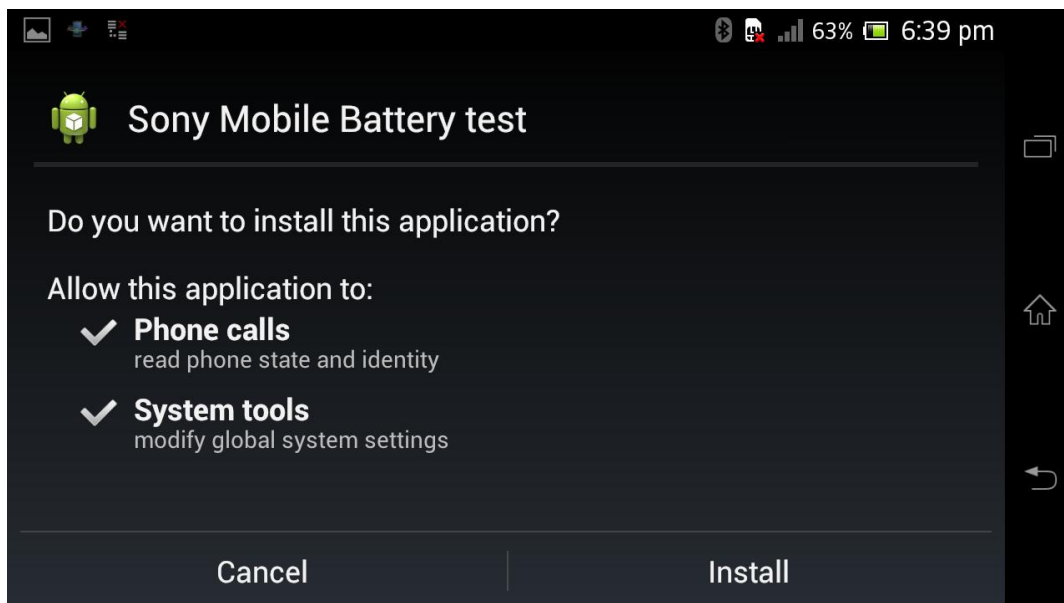
Pair the phone with the compute and send the **Sony Mobile Battery test.apk** file to the phone. Accept the file on the phone.



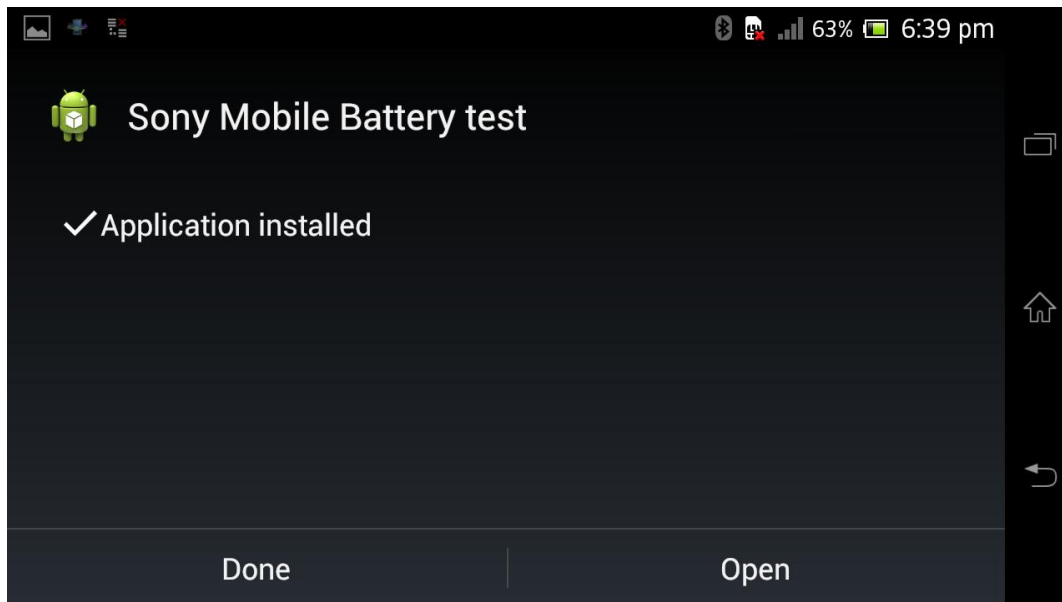
Press Sony Mobile Battery test



Press Install.

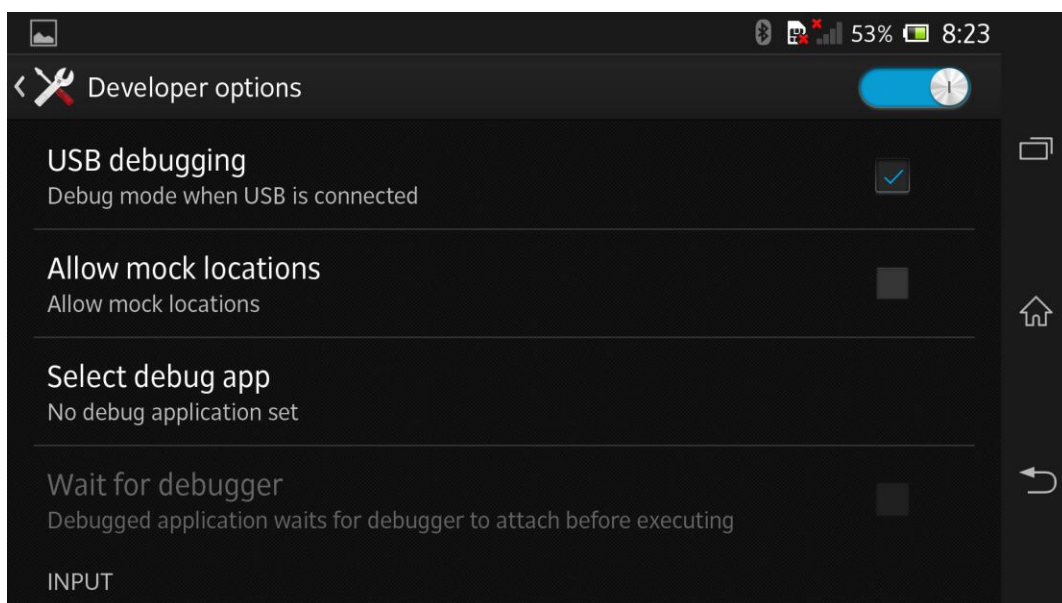


Press “Open” to run the test or press “Done” to finish installation.

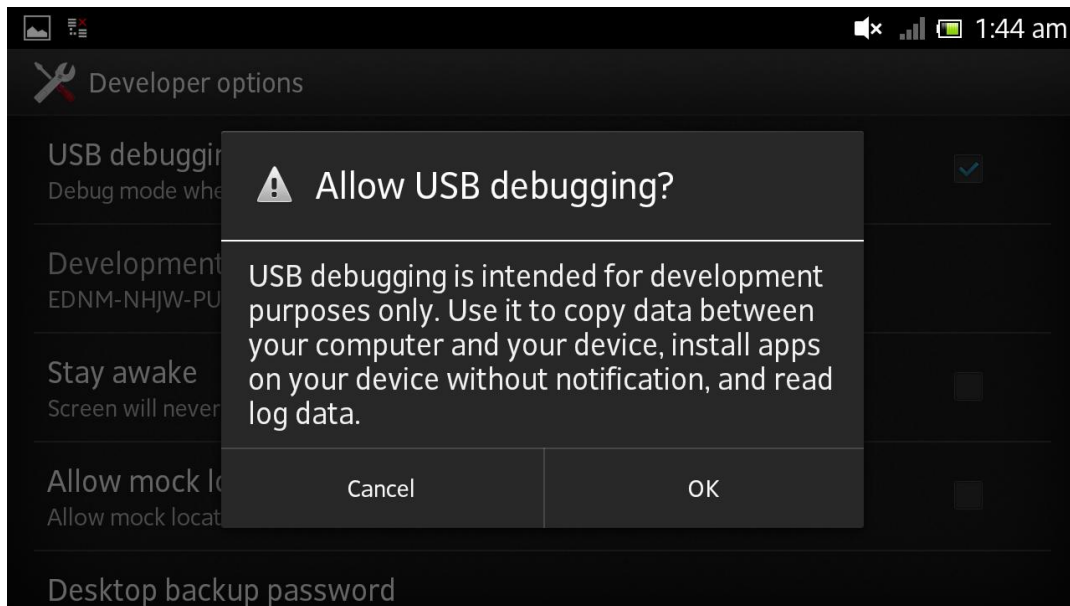


1.4 Cable method new Android SW (Ice Cream Sandwich or Jelly Bean).

Go to Settings/System/Developer options/ enable debug mode when USB is connected. If no developer options (SW 4.2.2) tap 7 times at Build number in Settings ->System->About phone.



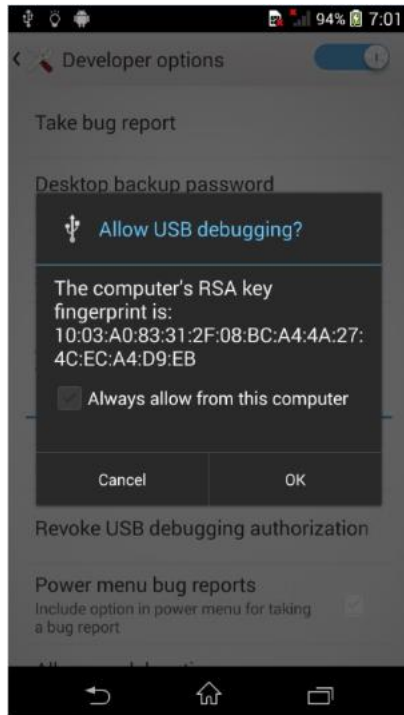
Allow USB debugging. Follow Installation Guide for ADB driver.



When phone is connected and the driver is installed run the “Apk USB install.bat” to install the app on the phone.



In Android version 4.3 please press ok to allow USB debugging .



The following will appear when the app is succesfully installed.

```
C:\WINDOWS\system32\cmd.exe

C:\Documents and Settings\23049357\backup\Desktop\Battery app rev3>"C:\Documents and Settings\23049357\backup\Desktop\Battery app rev3"\adb\adb wait-for-devices

C:\Documents and Settings\23049357\backup\Desktop\Battery app rev3>"C:\Documents and Settings\23049357\backup\Desktop\Battery app rev3"\adb\adb install "Sony Mobile Battery test 1.2.0.apk"
1276 KB/s (81693 bytes in 0.062s)
 pkg: /data/local/tmp/Sony Mobile Battery test 1.2.0.apk
Success

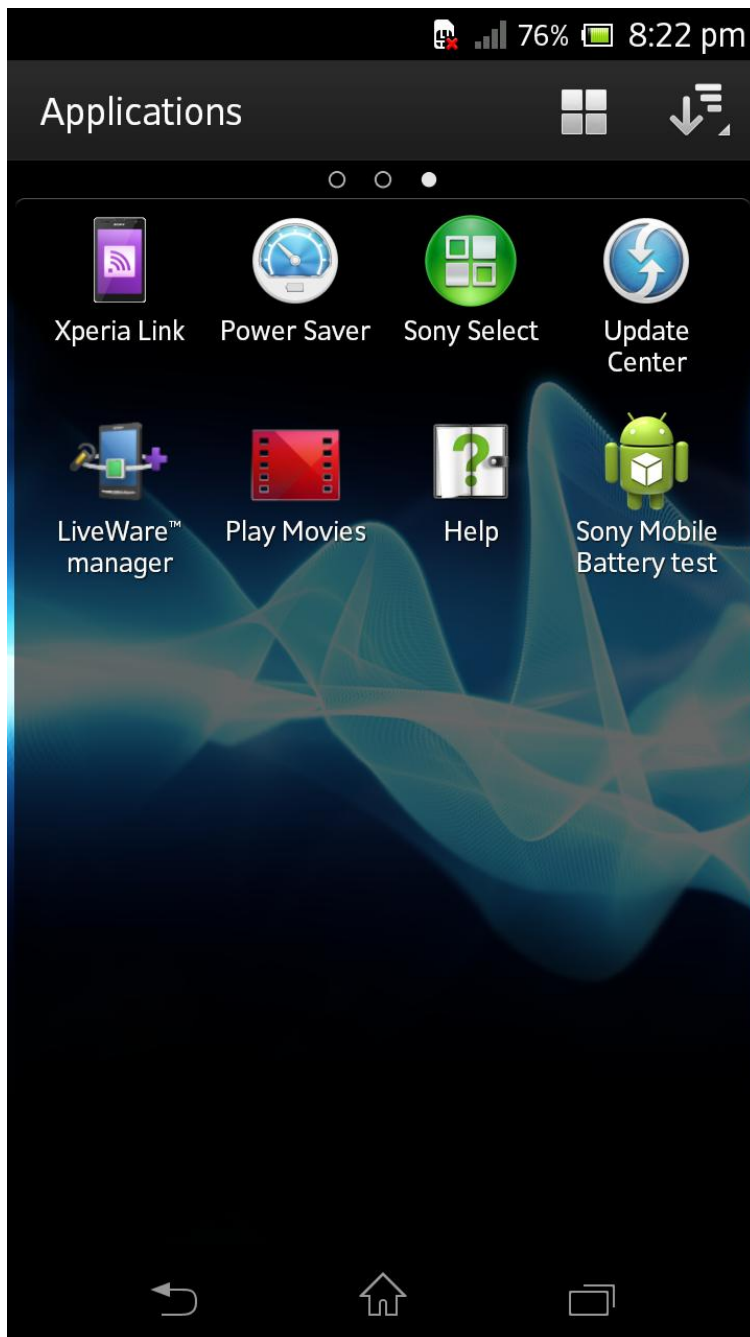
C:\Documents and Settings\23049357\backup\Desktop\Battery app rev3>pause
Press any key to continue . . . _
```

After success installation remember to disable USB debugging in phone.

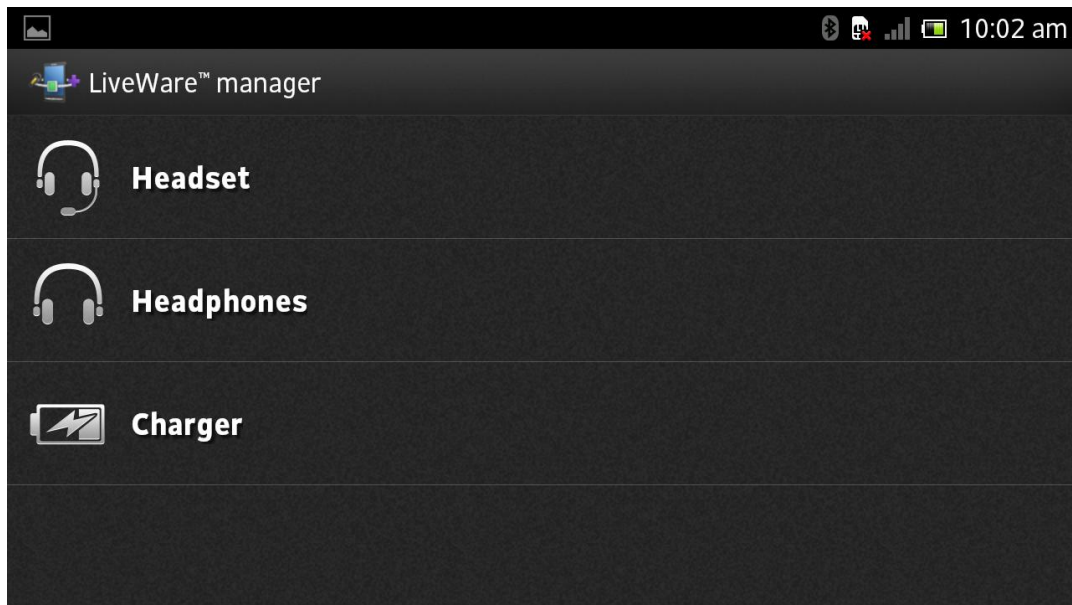
1.5 Before test.

Disable any programs that can popup when charger are inserted or removed.

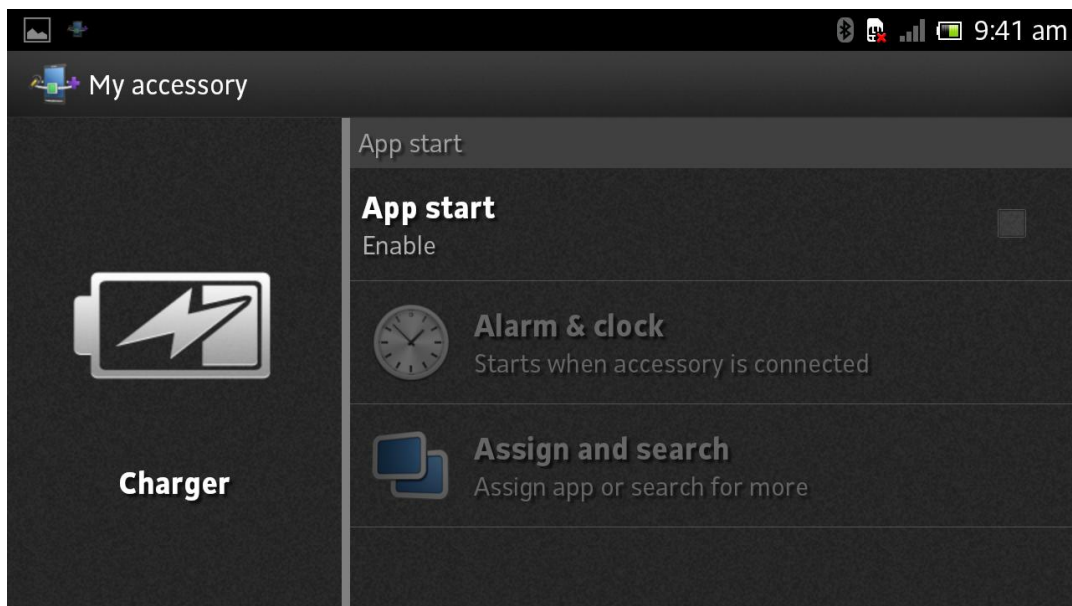
In Gingerbread press LiveWare manager icon to start the program.



Select Charger.

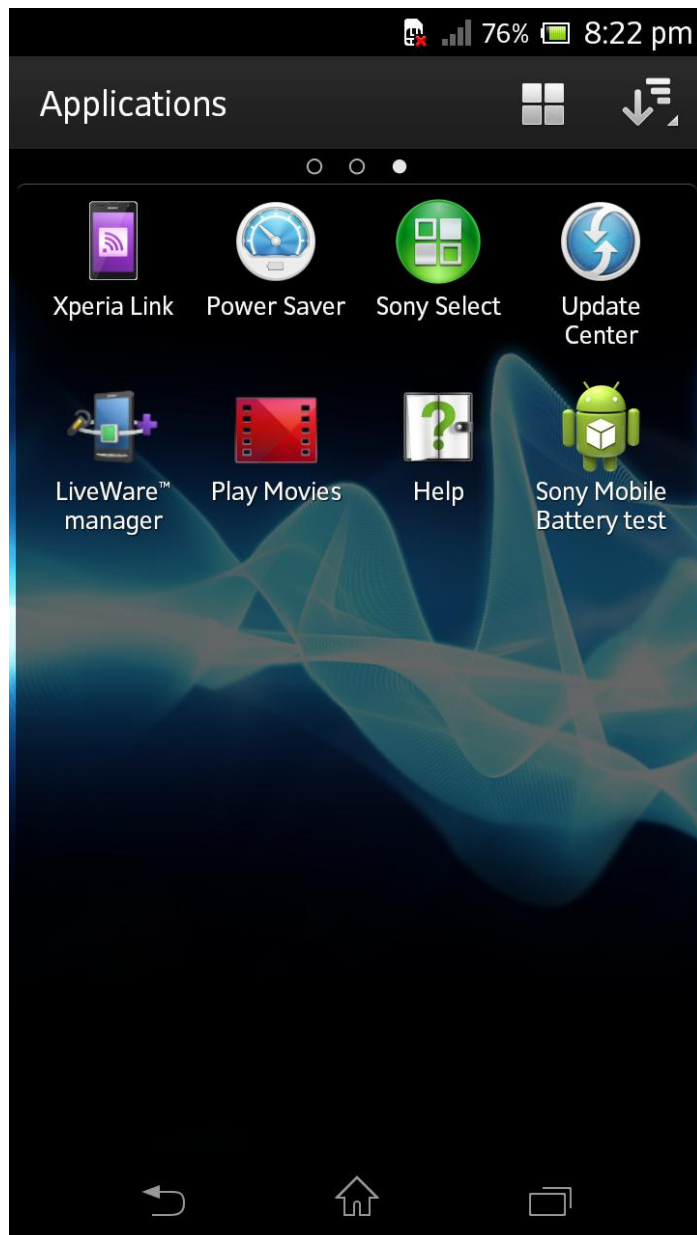


Checks that App start is disenable.



2. Start the application.

To start the application press Sony Mobile Battery test icon.

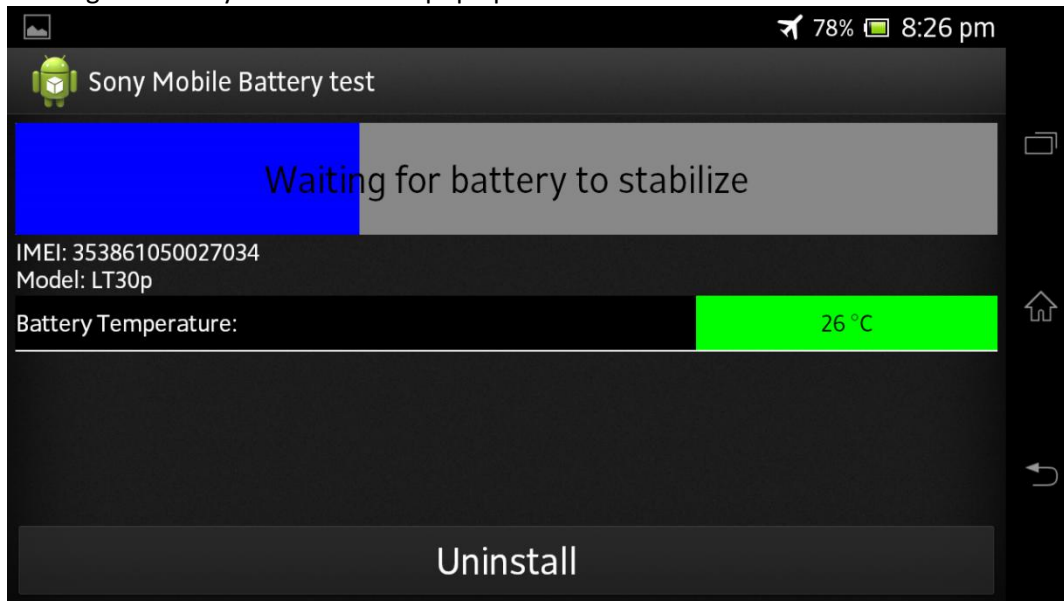


3. Battery Test (battery level between 3,680-4,000 V)

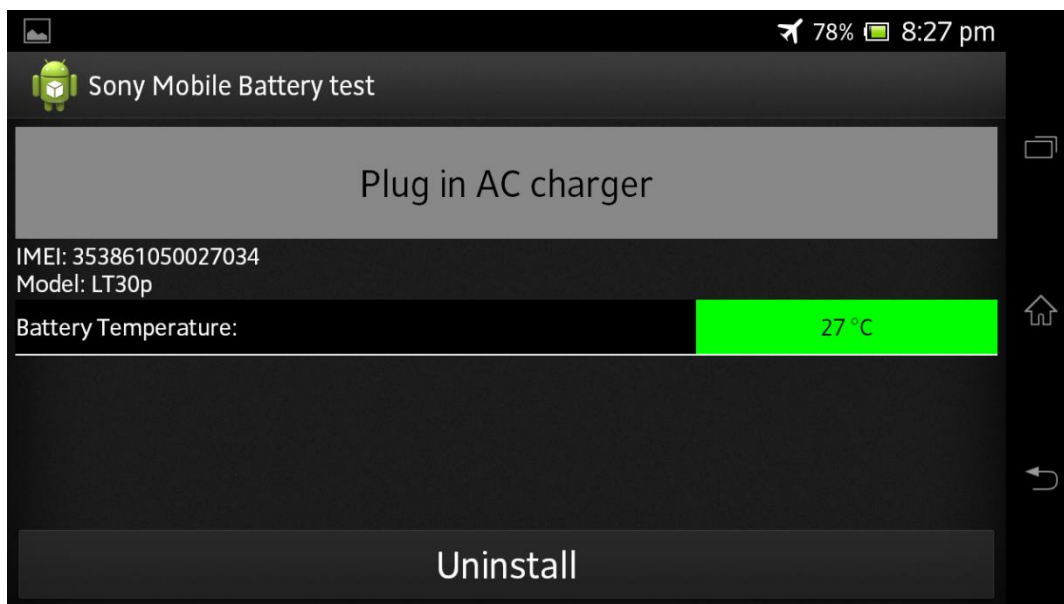
3.1 AC Charger Test

If battery level is between 3,680 - 4,000 Volt and battery temperature is between 15 - 40 C, the test will be performed according to below described procedure. Total testing time will be approximately 3 min 20sec.

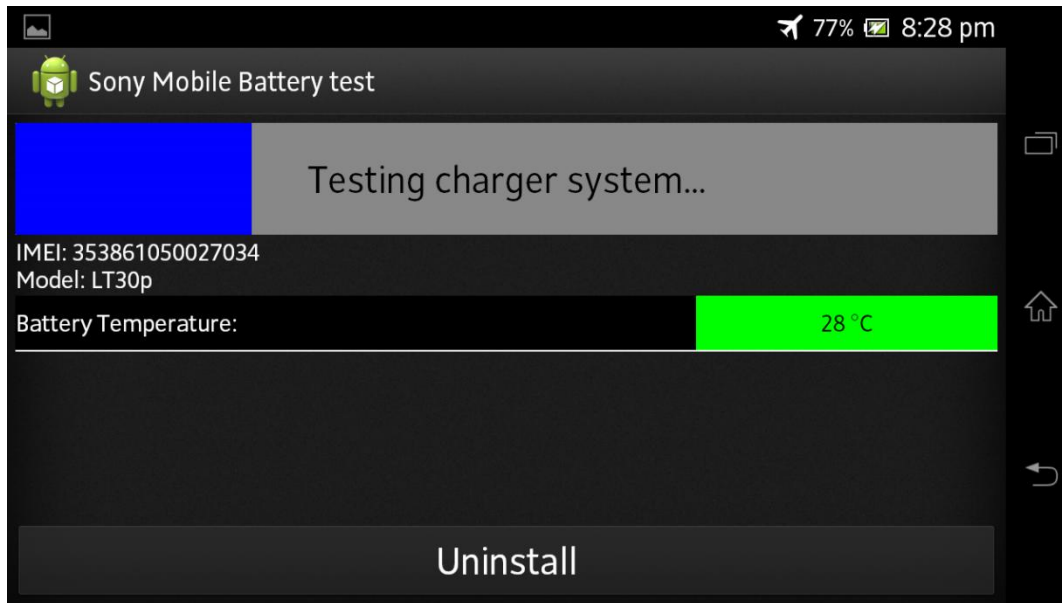
Waiting for battery to stabilize will pop up.



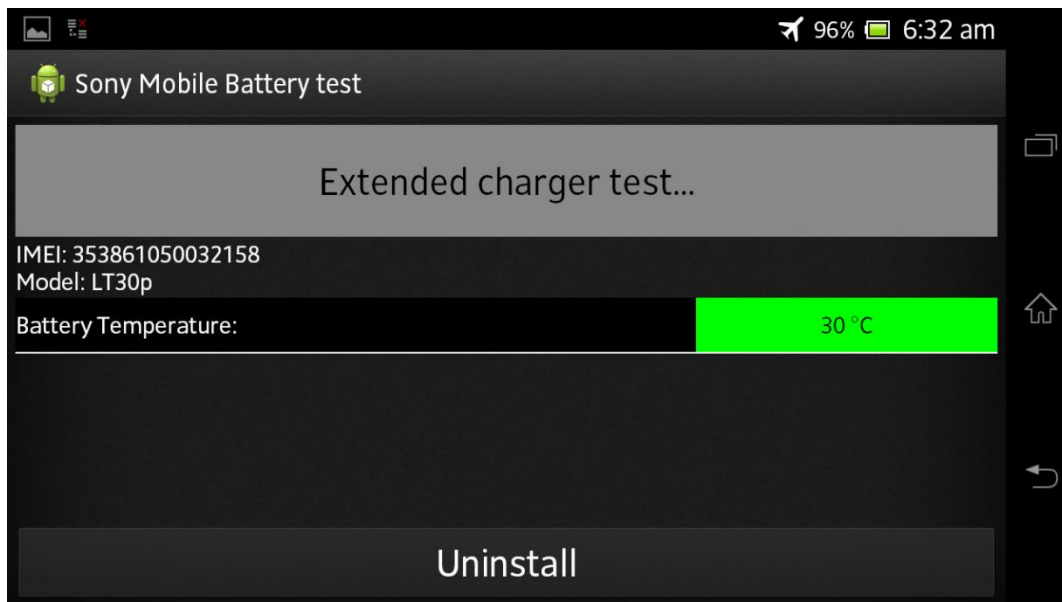
Insert AC charger, when "Plug in AC charger" pop up to test the charging system.



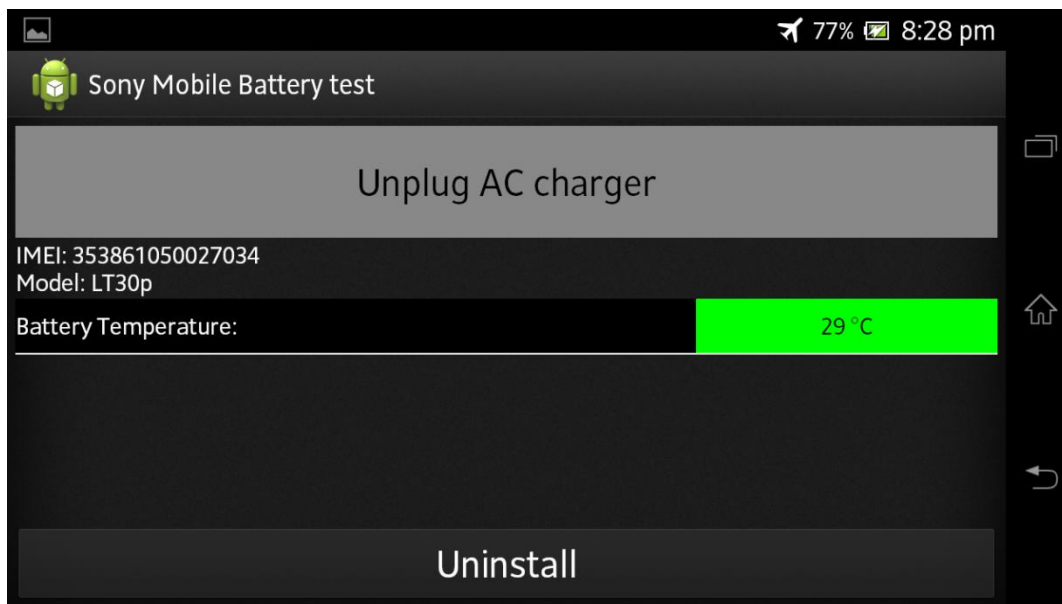
Wait: testing charger system.



Extended charger test can popup if charging test needs more data.

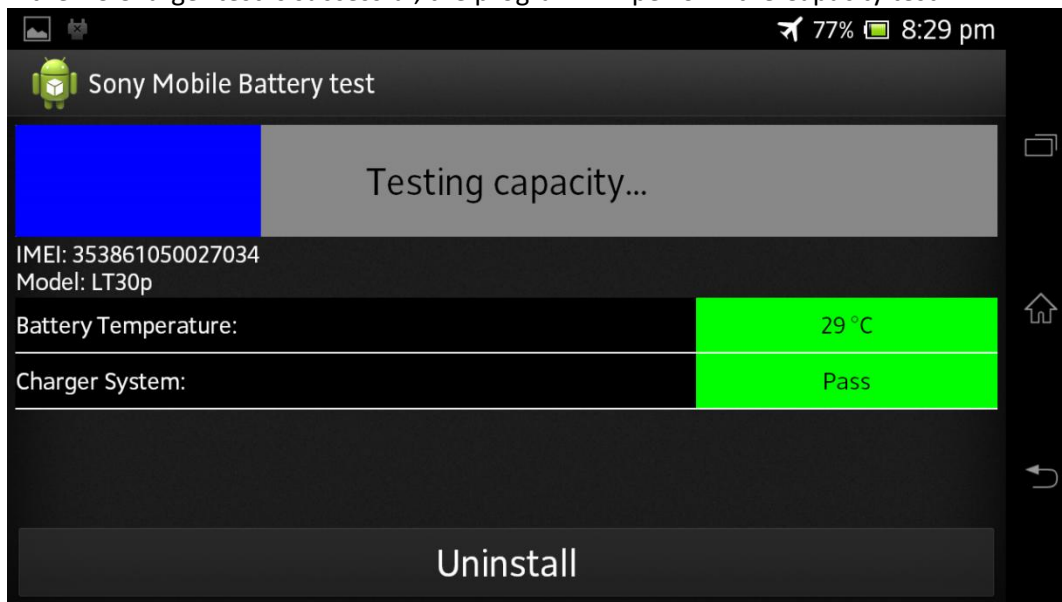


Unplug AC charger, when “Unplug AC charger” pops up.



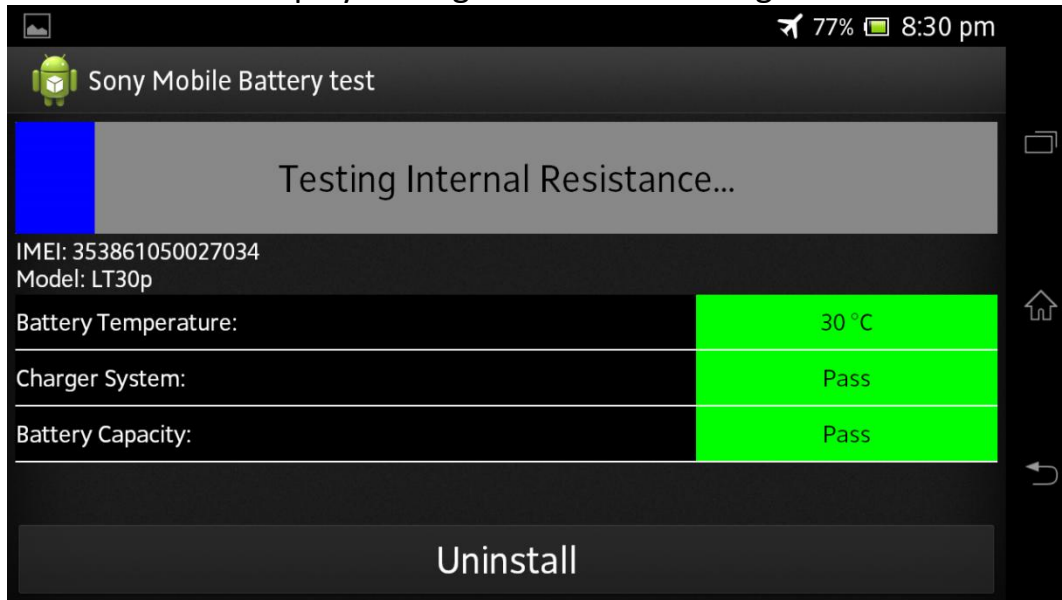
3.2 Capacity Test

If the AC Charger test is successful, the program will perform the Capacity test.



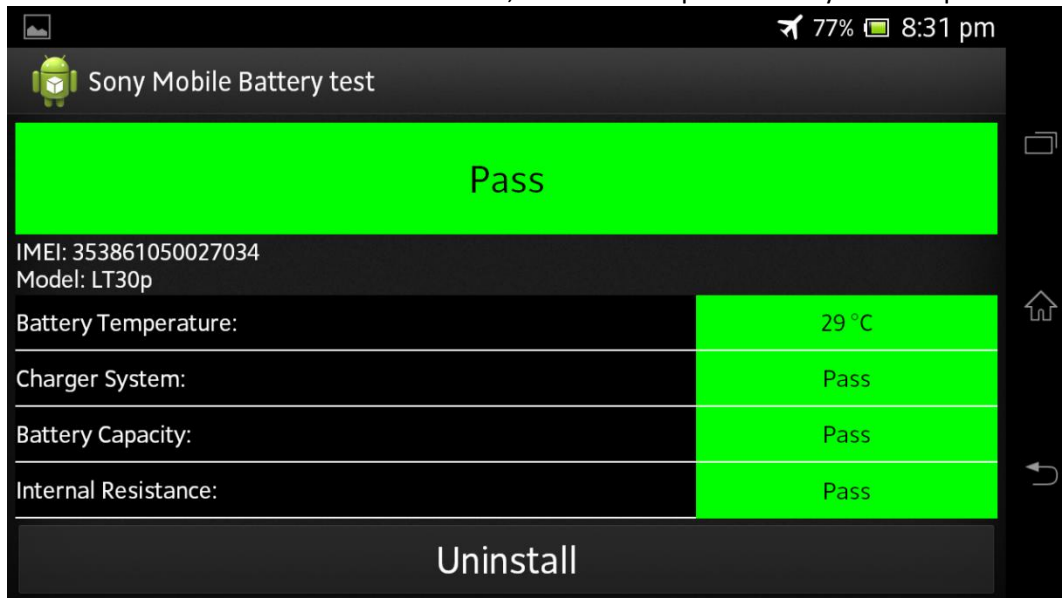
3.3 Internal Resistance Test

If the Capacity test is successful the program will perform the Internal Resistance test.
Please note the display backlight is lowered during this test!



3.4 Test complete

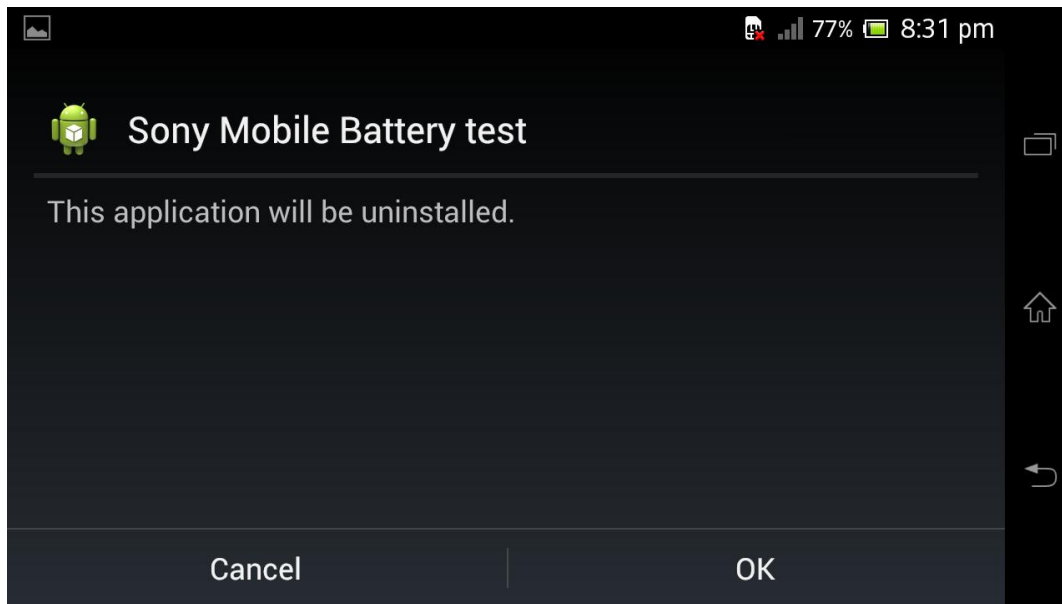
If the Internal Resistance test is successful, then the complete Battery test has passed.



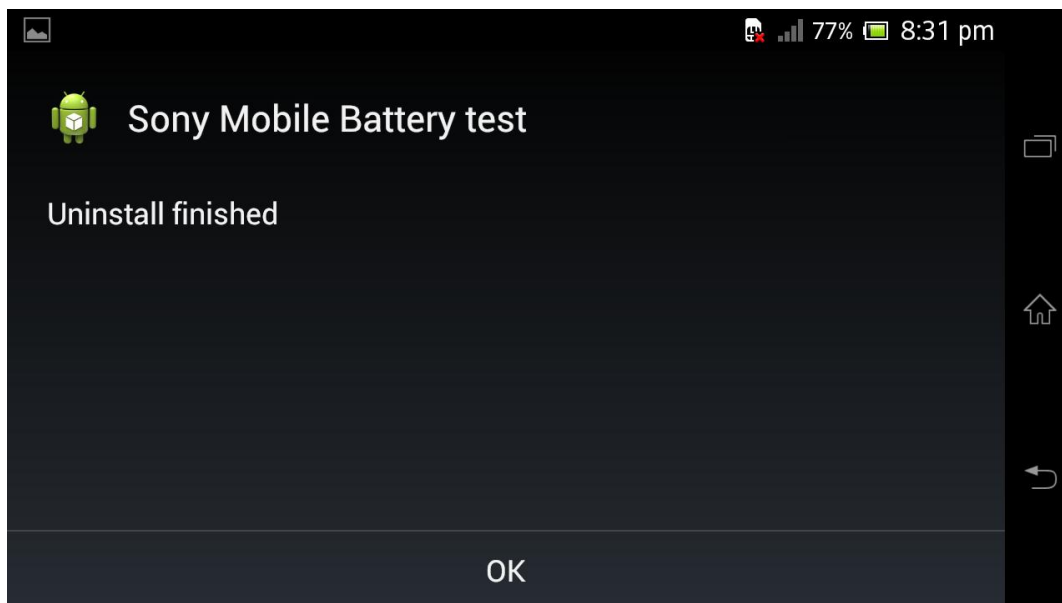
3.5 Uninstall

Tap **Uninstall** to uninstall the program before the phone leave the service Centre and is returned to the consumer.

Tap OK to continue uninstall.



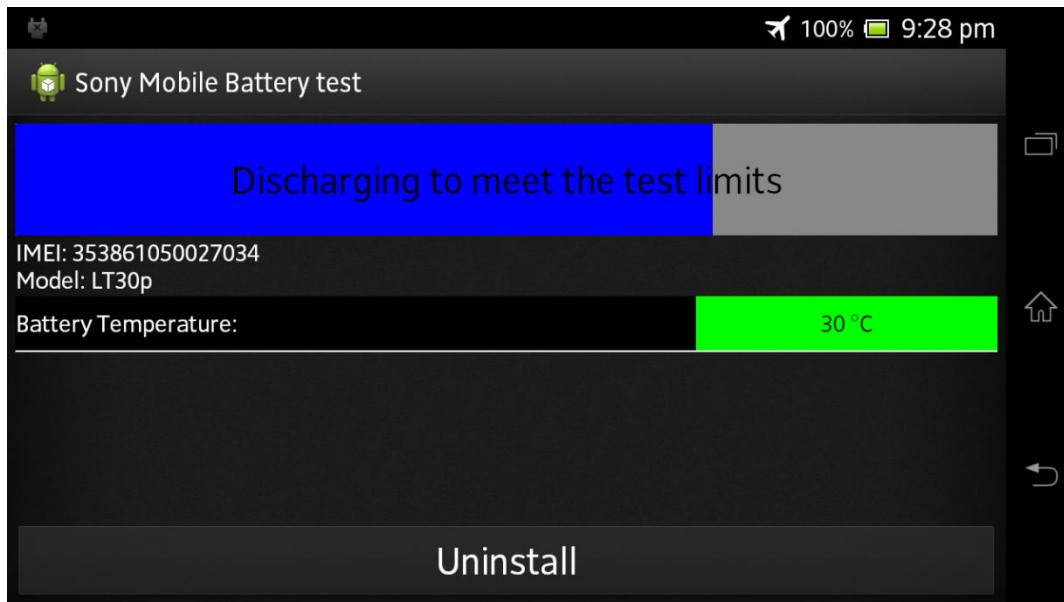
Tap OK to finish uninstall. Sony Mobile Battery test is now uninstalled. The phone is ready to leave the service Centre.



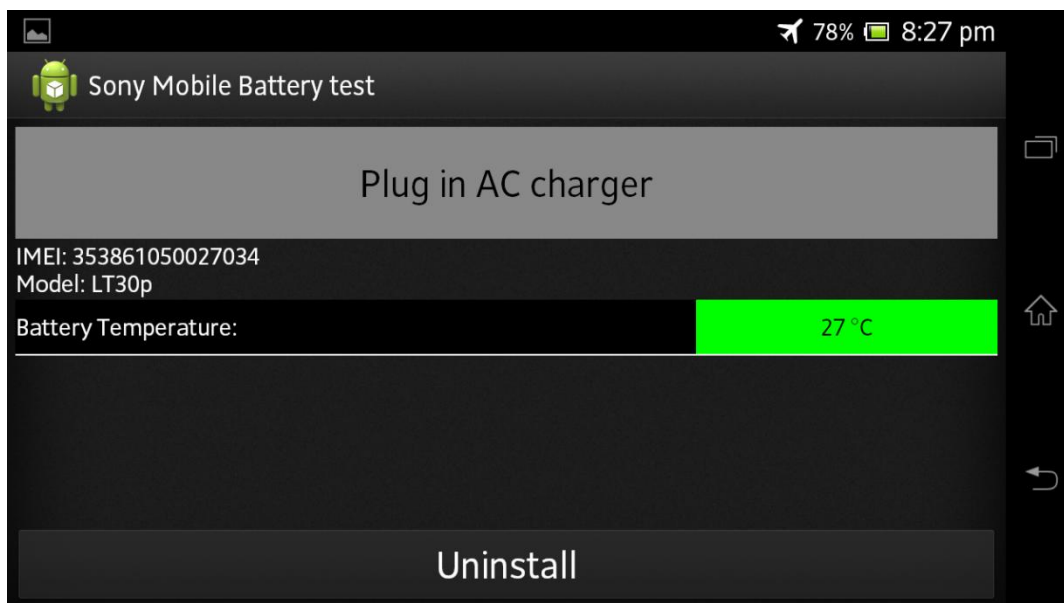
4. Battery Test (battery level above 4,000 V)

If battery level is high (more than 4,000 Volt) the below message will be displayed. Total testing time will then be extended.

The program will start discharging to meet the test limits. Wait until this step has finalized which can take approximately up to 15 min.



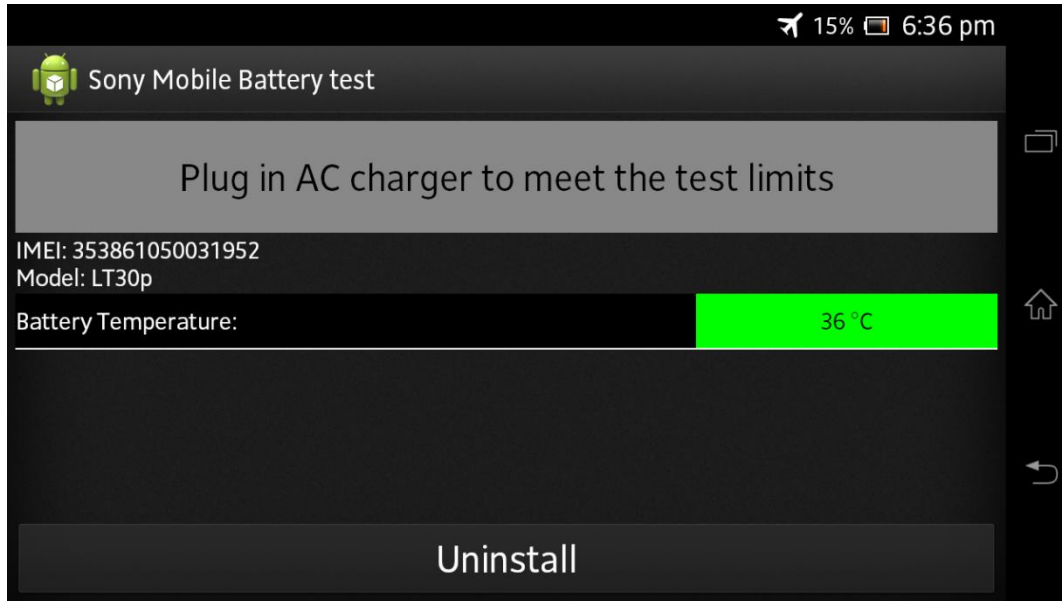
Insert AC charger, when “Plug in AC charger” pop up and follow the normal test procedure.



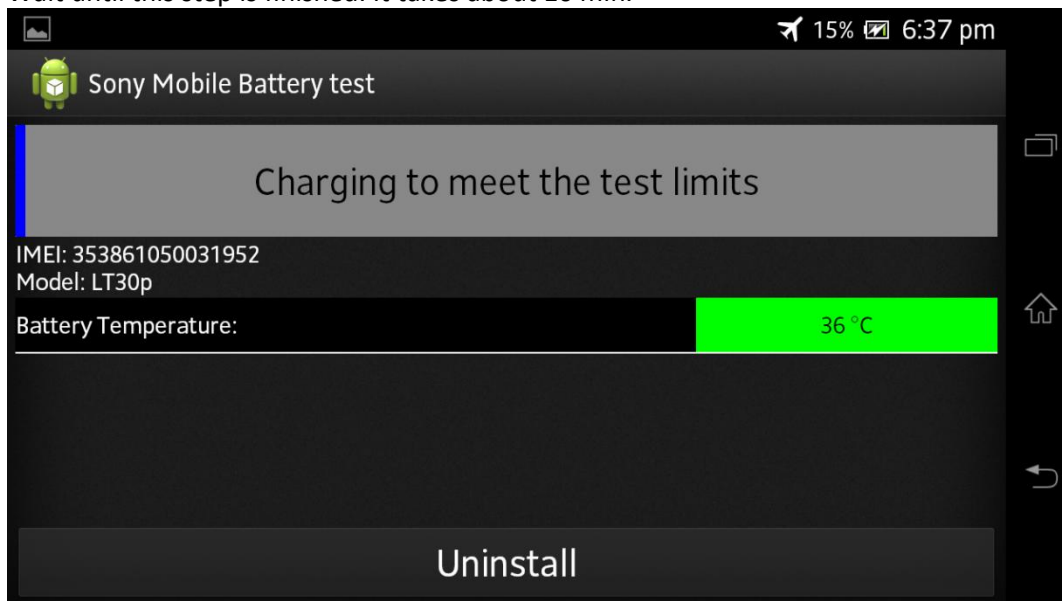
5. Battery Test (battery level below 3,680 V)

If battery level is low (below 3,680 Volt) the test will look like this. Total testing time will then be extended.

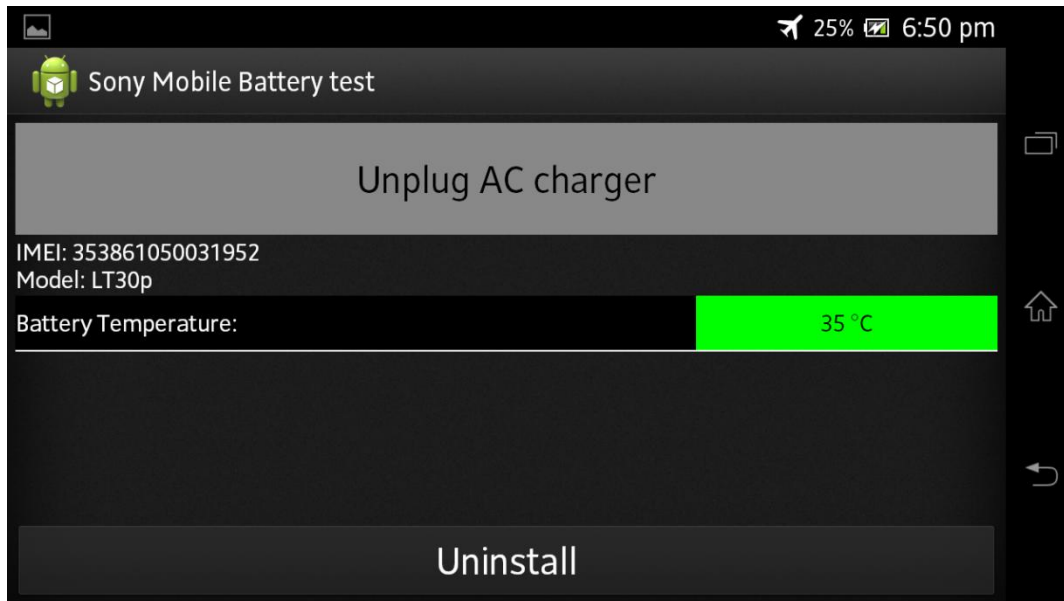
Insert AC charger if Plug in AC charger to meet the test limits pop up.



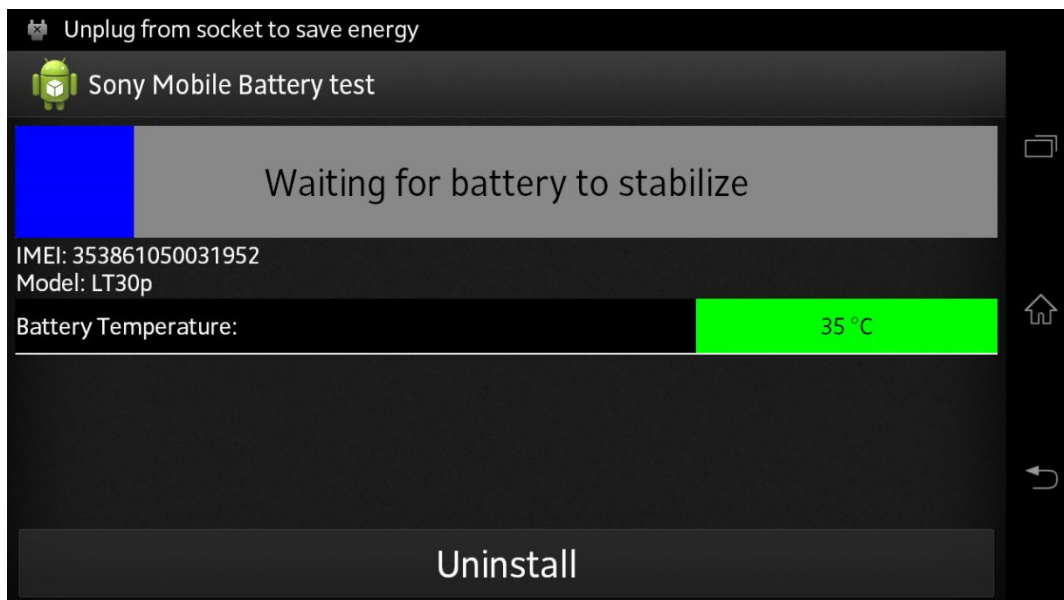
Wait until this step is finished. It takes about 10 min.



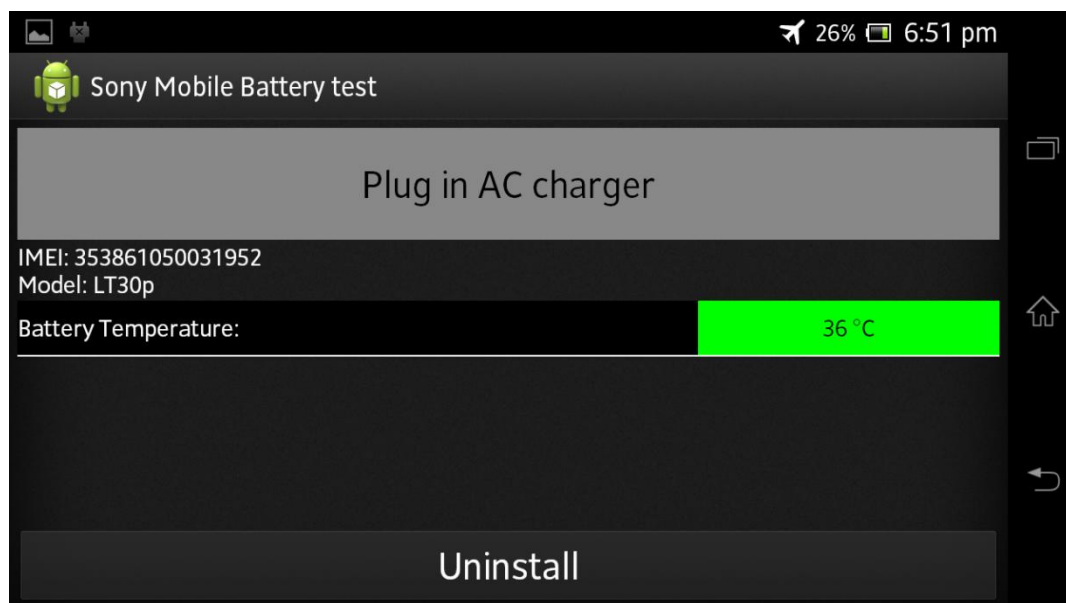
Unplug AC charger, when Unplug AC charger pops up.



Wait for the battery to stabilize.



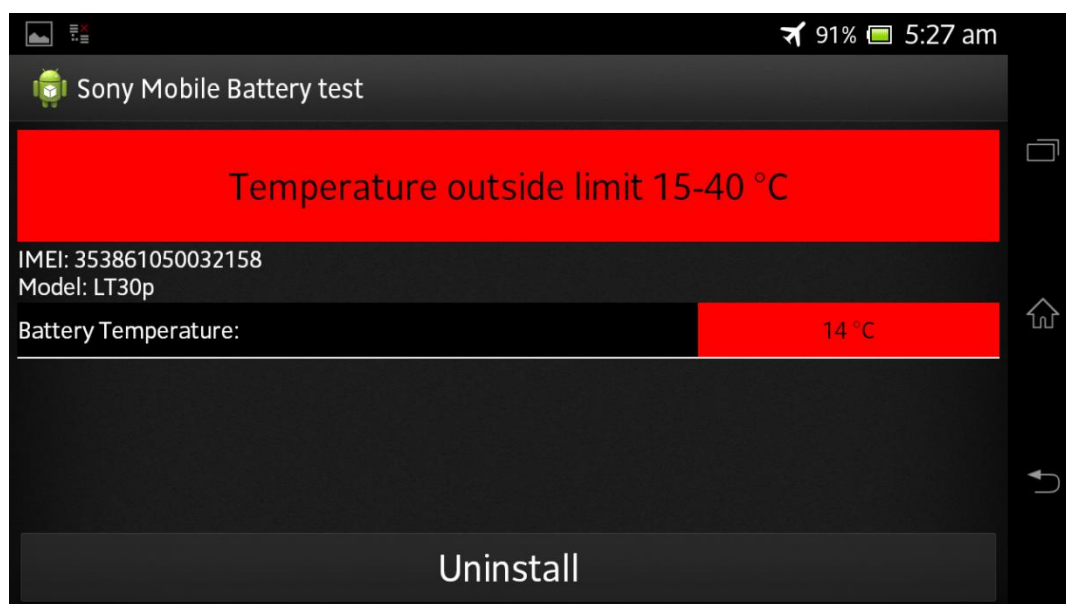
Insert AC charger, when “Plug in AC charger” pop up and follow the normal test procedure.



6. Error Messages

6.1 Temperature outside limit 15-40C

Temperature outside limit 15-40C will pop up if temperature is below 15C or higher than 40C when test starts. The program will then stop until temperature is in limit.

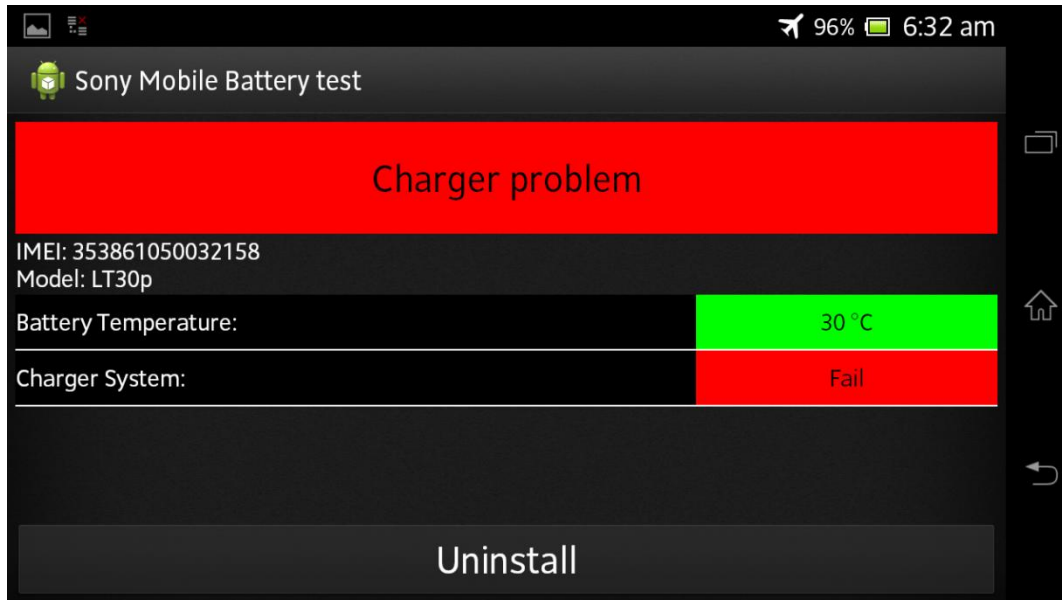


6.2 Charger problem

If the charger system test fails, then replace Charger or USB cable and retest (Please note, use EP800 charger and EC480 cable as reference).

If the charger system test still fails, then replace battery and retest.

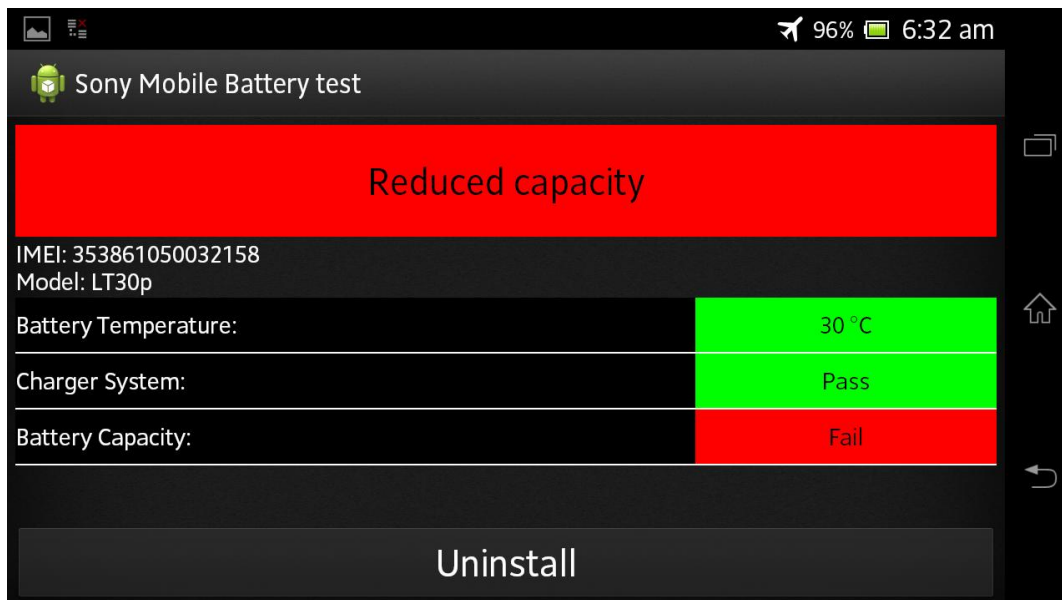
If the charger system test still fails the problem is in the phone unit follow locally instruction.



6.3 Reduced Capacity

If the battery capacity test fails, then replace battery and retest.

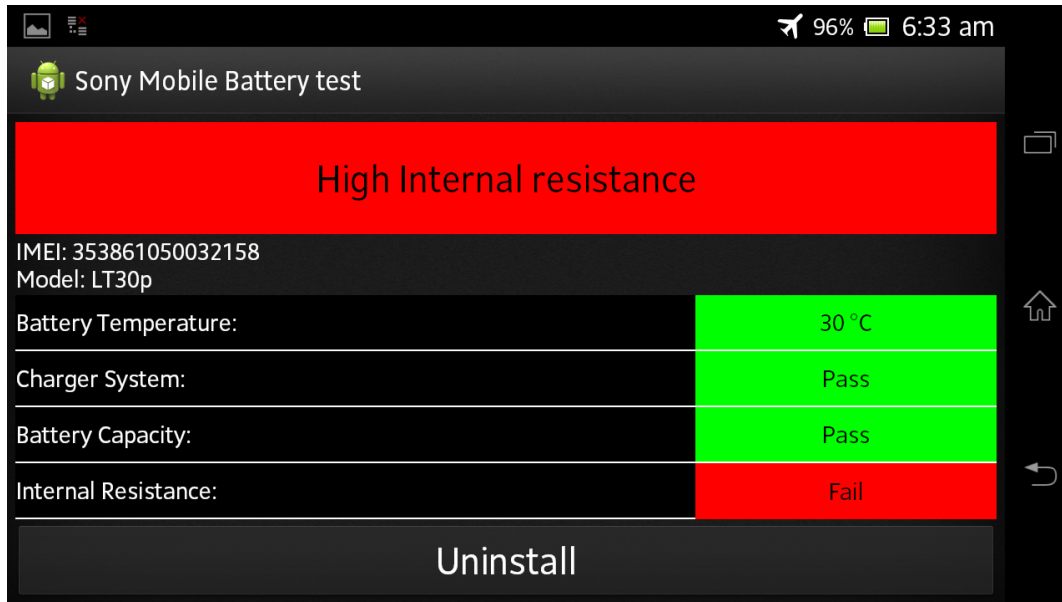
If the battery capacity test still fails the problem is in the phone unit follow locally instruction.



6.4 High Internal resistance

If the internal resistance test fails, then replace battery and retest.

If the internal resistance test still fails the problem is in the phone unit follow locally instruction.

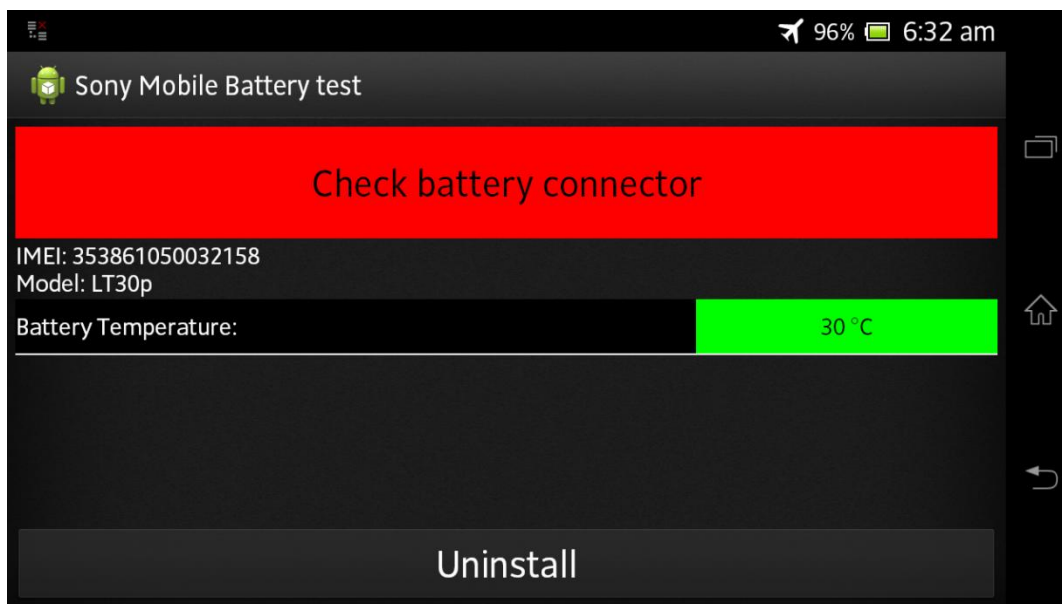


6.5 Check battery Connector

Check battery connector will pops up if phone don't identify the Bdata pin.

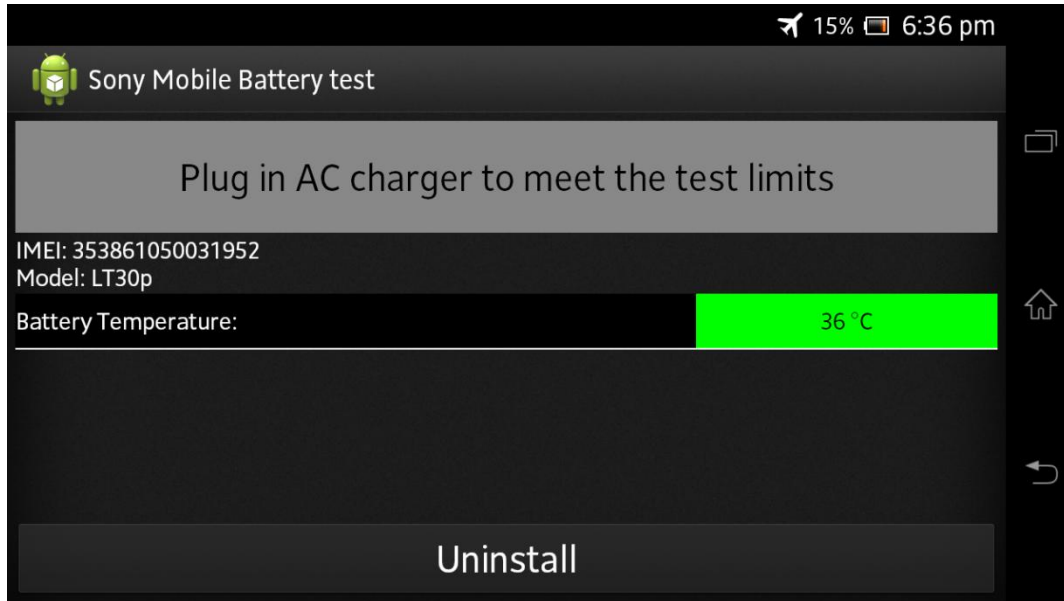
The program will then stop. Check battery connector then replace battery and retest.

If the Check battery connector test still fails the problem is in the phone unit follow locally instruction.



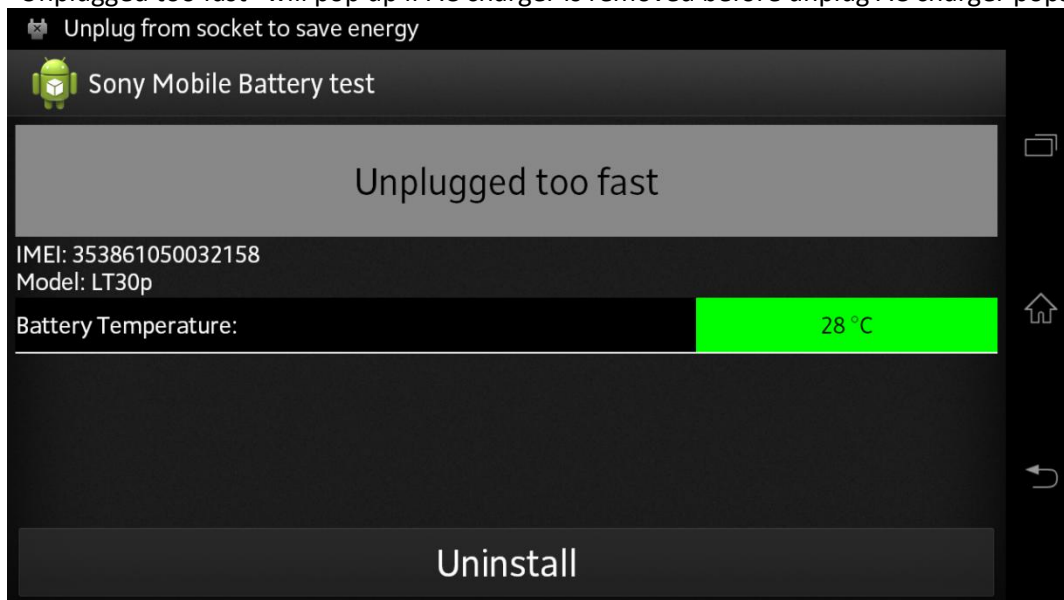
6.6 This battery need to be charged to a higher level.

If battery performance is not as expected extended charging can pop up to meet test limits. Insert AC charger again and wait for charging to finish and follow normaly test routines.

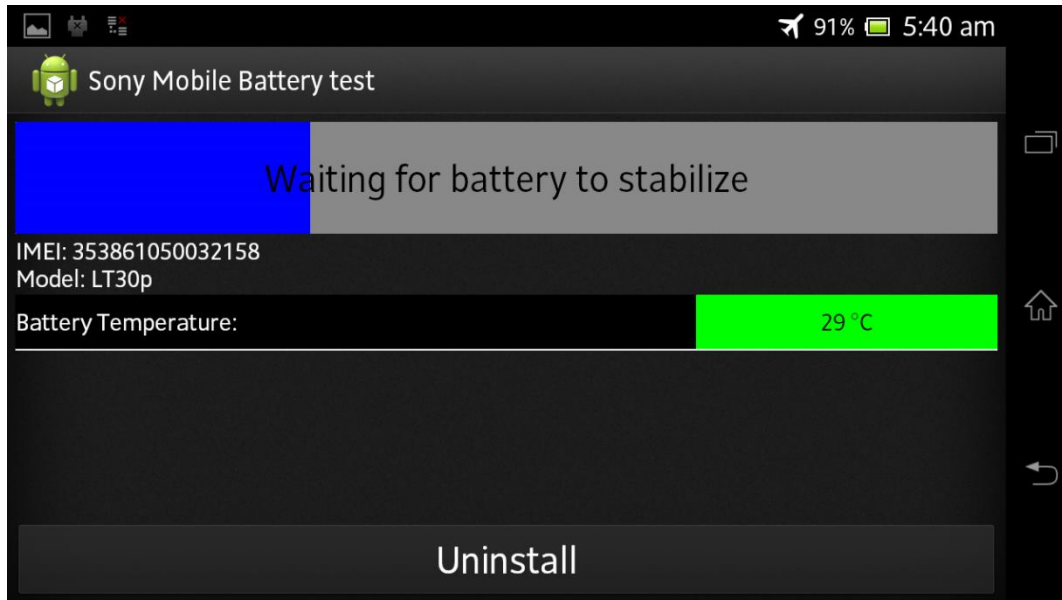


6.7 Unplugged too fast

"Unplugged too fast" will pop up if AC charger is removed before unplug AC charger pops up.

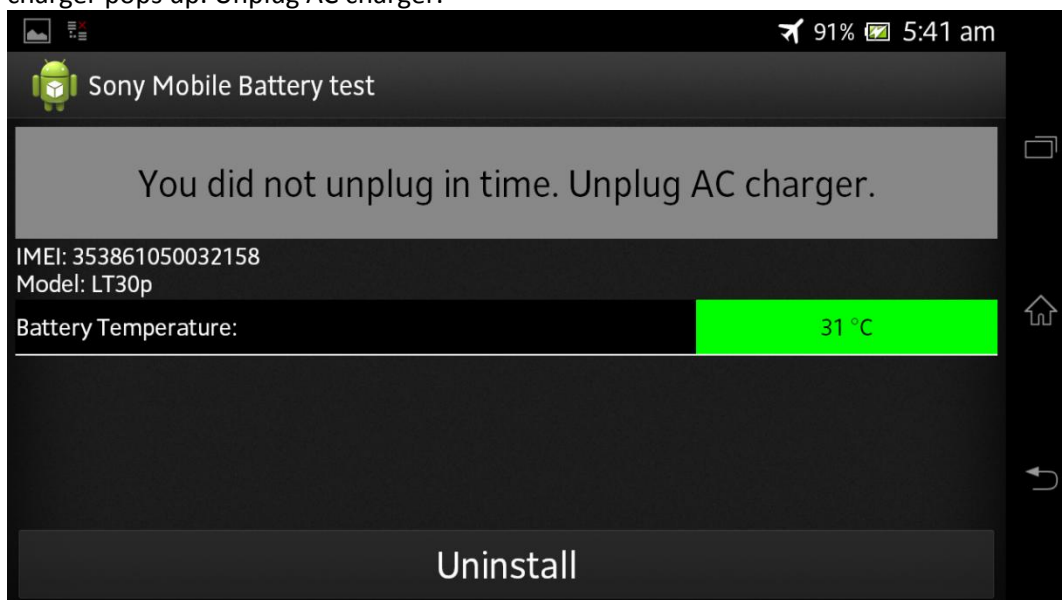


“Waiting for battery to stabilize” pops up, wait and follow normal test procedure

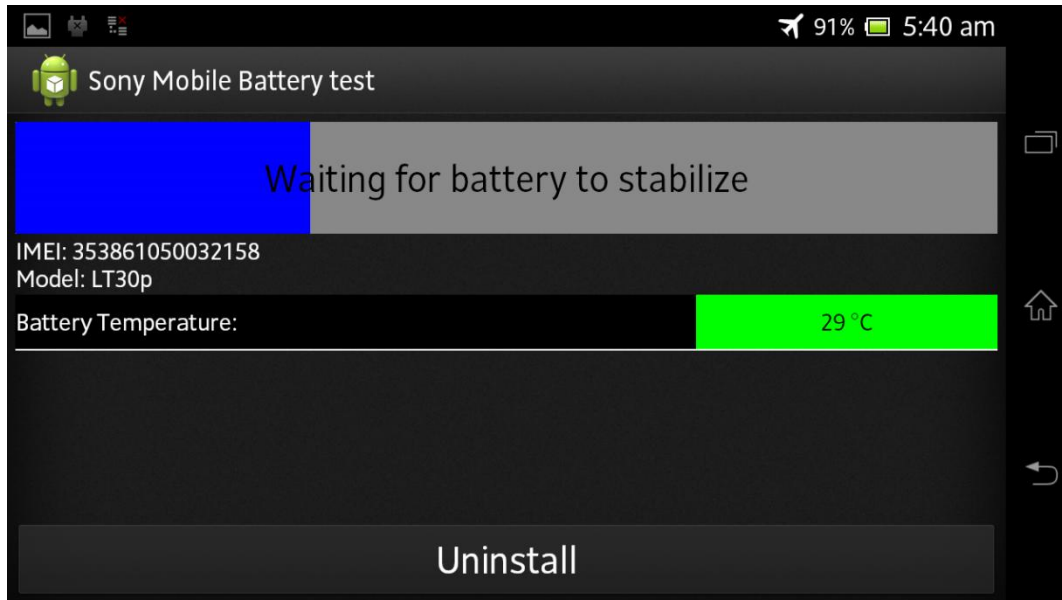


6.8 You did not unplug in time

You did not unplug in time will pop up if AC charger is removed more than 10 sec after unplug AC charger pops up. Unplug AC charger.

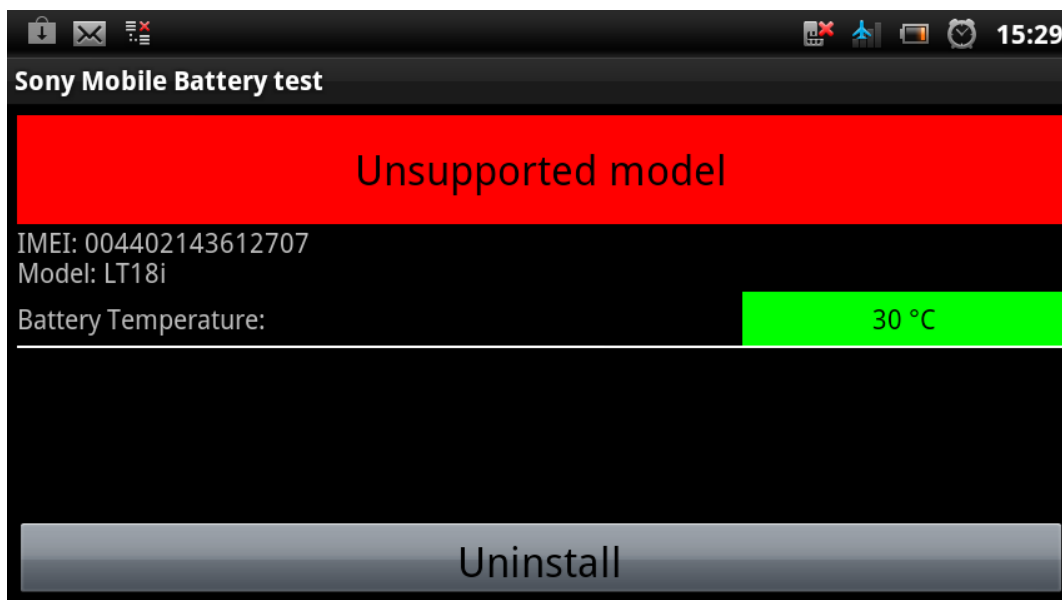


“Waiting for battery to stabilize” pops up, wait and follow normal test procedure



6.9 Unsupported Model

Unsupported model will pop up if a model profile is not added in the phone library.



6.10 Temperature has been outside the limits during the test

The temperature indicator will be red if the battery temperature has been outside the limits during the test. This test is not reliable and a retest is recommended.

