BATTERYXPRT 2014 FOR ANDROID: TIPS, TRICKS, AND KNOWN ISSUES

We designed BatteryXPRT 2014 for Android to be compatible with a wide variety of Android devices. Because there are so many Android devices on the market, it is inevitable that users may occasionally run into problems using the benchmark. In this document, we provide troubleshooting suggestions and issues we encountered during development testing.

If the Wi-Fi/Cellular test is not completing

1. Make sure to turn off automatic updates during the test, both at the system level and for individual apps.
2. Check for bandwidth conflicts. For example, streaming-intensive games or media accessing the same home router may cause network interruptions.

If the benchmark is not completing in general

1. Verify that the device is running Android version 4.2 or later.
2. Make sure that the screen will stay awake for at least 30 minutes.
3. Make sure that non-system essential apps are not running in the background.
4. Do not interrupt the test by starting other processes.
5. Do not interrupt the benchmark if the screen is dark for an extended amount of time during testing. This is normal.
6. Make sure that no more than four devices are running BatteryXPRT while connected to the same router. Running five or more devices can cause interruptions in network performance during the portions of the test that stream content.

For devices running Android 6.0 and above

Android 6.0 introduced a power-management feature called Doze, which works to conserve battery life during perceived idle times by restricting apps' access to routine tasks until a periodic maintenance window opens. (You can read more about the specific impacts of Doze here.) If the device under test is running Android 6.0 or a later version, please add BatteryXPRT as a protected app in the battery manager. If BatteryXPRT is not on this whitelist, it may not function normally during standby periods, and BatteryXPRT runs may not complete successfully.

Known issues

Issues related to settings

Certain settings may interfere with a successful BatteryXPRT test run. Below, we list these settings and, where applicable, steps you can take to fix the issues they raise. Note that some issues have simple fixes that work for most Android devices, while other issues require users to take different steps depending on their device.

- Android Doze mode, or other battery optimization features in custom UIs, may flag BatteryXPRT as being power-intensive and kill it during standby intervals. To fix this issue, you can whitelist the app by adding it as a protected app in the battery manager. For more, read our blog on how we solved this problem with the Huawei Mate 8.
- "Always-on" or Daydream display features designed to display widget info (e.g., time and temperature) and notifications during standby/sleep can interfere with BatteryXPRT during standby intervals.

- Custom UIs and bloatware apps may override screen timeout settings, resetting them from "Never" or "30 minutes" to a shorter default time.
- Security lock timers can override screen timeout settings for the display. You can adjust the security lock timers on your device to fix this issue.

Issues related to specific devices

- We recommend that you not attempt to test the following devices, which did not return from sleep during our test runs:
  - Xiaomi Mi3 phone with Tegra4
  - Kindle Fire HD 7-inch tablet
  - HP 8 Android tablet with Allwinner chip
- On the Lenovo K900 with an Atom Z2580 processor, BatteryXPRT does not exit standby mode, and test runs will not complete successfully. To fix this issue, perform the following steps to allow the device to exit standby when necessary:
  1. Go to Settings | Feature Settings.
  2. Select the System wake-up control option.
  3. Choose the BatteryXPRT and BatteryXPRT Tests apps.

ABOUT PRINCIPLED TECHNOLOGIES

Principled Technologies, Inc.
1007 Slater Road, Suite 300
Durham, NC, 27703
www.principledtechnologies.com

We provide industry-leading technology assessment and fact-based marketing services. We bring to every assignment extensive experience with and expertise in all aspects of technology testing and analysis, from researching new technologies, to developing new methodologies, to testing with existing and new tools.

When the assessment is complete, we know how to present the results to a broad range of target audiences. We provide our clients with the materials they need, from market-focused data to use in their own collateral to custom sales aids, such as test reports, performance assessments, and white papers. Every document reflects the results of our trusted independent analysis.

We provide customized services that focus on our clients' individual requirements. Whether the technology involves hardware, software, Web sites, or services, we offer the experience, expertise, and tools to help our clients assess how it will fare against its competition, its performance, its market readiness, and its quality and reliability.

Our founders, Mark L. Van Name and Bill Catchings, have worked together in technology assessment for over 20 years. As journalists, they published over a thousand articles on a wide array of technology subjects. They created and led the Ziff-Davis Benchmark Operation, which developed such industry-standard benchmarks as Ziff Davis Media's Winstone and WebBench. They founded and led eTesting Labs, and after the acquisition of that company by Lionbridge Technologies were the head and CTO of VeriTest.