



## NASA PVT+ WARNINGS AND NOTICES

The NASA PVT+ application was developed for use in research studies. The application can be used on any iPhone, iPad or iPod Touch (produced by Apple Inc., Cupertino, CA). The application includes the Karolinska Sleepiness Scale (KSS), the Psychomotor Vigilance Task (PVT), sleep logs, demographic information and other subjective measures.

The PVT records touch response times. It must be completed in airplane mode, with no other applications running and no radios or antennas on (e.g., WiFi, Bluetooth turned off) in order to ensure accurate recording of touch responses. The device hardware and iOS both contribute to device and system latency (i.e., a delay between the user's touch and the time the response is recorded). Different hardware and operating system combinations contribute differently to latency. The system latencies for certain iPod Touch models in combination with certain iOS versions have been tested and analyzed in conjunction with the NASA PVT+ application by the Fatigue Countermeasures Laboratory (NASA Ames Research Center, Moffett Field, CA), and are included in the information section of the application. If NASA PVT+ is used in any of such combinations of hardware and iOS, the system latency should be subtracted from the raw PVT scores before analysis of the data. The users of NASA PVT+ are solely responsible for determining the latency of the devices and systems on which they are using this application. NASA disclaims all responsibility for damages or losses arising from the use of inaccurate data produced by NASA PVT+ due to system latency or other malfunction, or corruption of such data.

After data collection, the data is only stored locally on the device, and must be downloaded to a computer using a wired connection. There is no wireless transmission of data. None of the information collected with the application is shared with NASA. The application is not intended to diagnose any illness, disease or health issue. The NASA PVT+ is not meant to be used, nor should it be used, to test for fitness for duty or as a "GO/NO-GO" guide. Under no circumstances should the application be used while pilots, or other individuals in safety-sensitive occupations, are performing critical tasks especially if its use might interfere with the safe operation of the aircraft or is prohibited by law.