

## AIR NEW ZEALAND VACATION GAP STUDY Equipment Fact Sheet

The methodology used throughout the Vacation Gap field study relied on a variety of equipment designed to scientifically measure the psychological and physiological effects of vacations. The following is a brief description of the key technologies used and their primary function.

### Ambulatory Physiological Monitor (APM)



During preboarding at the airport, the team hooked each of the 10 participants up to the portable ambulatory physiological monitor or APM. With science fiction-esque sensors on the travelers' scalp, face, chin and chest, the APM measures brain activity, eye movements, muscle activity and heart rate. By analyzing the data retrieved through the APM, the team was able to gain an objective measure of relaxation, stress and sleep quality.

### Wrist Actigraph (Actiwatch 64)



The wrist actigraph (Actiwatch 64) is a watch-like device that monitored and measured travelers' movement and physical activity on a 24-hr basis beginning two days before their New Zealand vacation through two days after their return. It provides an accurate objective measure of sleep quantity and quality.

### Electronic Handheld Device (PDA)



The Alertness Solutions team outfitted a standard electronic handheld device (PDA) with features enabling passengers to test their performance as well as keep records in a daily diary. For performance measurement, participants completed a five minute test on the handheld three times a day (once upon awakening, in the middle of the day and once before bedtime) every day starting two days before leaving for New Zealand and ending two days after their return. In the daily diary, which spanned this same block of time, travelers were required to answer questions about their levels of enjoyment, mood, stress and perceived health.