



The GT3X+ Monitor

The GT3X+ ambulatory monitor uses a 3-axis accelerometer and ActiGraph's proprietary digital filtering algorithms to measure the amount and frequency of human movement. The GT3X+ monitor, in conjunction with the ActiLife software application, delivers objective, accurate physical activity and sleep measurements including raw acceleration, activity counts and vector magnitude, energy expenditure, steps taken, physical activity intensity, body position, amount of sleep and ambient light. The compact and unobtrusive GT3X+ monitor can be worn 24 hours a day at the waist, wrist, ankle or thigh and is suitable for use with subjects of all ages and conditions. The GT3X+ is fully backward compatible with all previous ActiGraph monitoring device models.

GT3X+ Technology

The ActiGraph GT3X+ records time varying accelerations ranging in magnitude from +/- 6 g's. The accelerometer output is sampled by a twelve-bit (12) Analog to Digital Converter according to end user settings, which can range from 30 Hz to 100 Hz. This raw acceleration is then stored in non-volatile flash memory for future analysis.

Utilizing the ActiLife software application, the raw data collected by the GT3X+ can be reviewed directly or further processed through ActiGraph's digitally matched filter. This digital filter band-limits the accelerometer to the frequency range of 0.25 to 2.5 Hz, which has been carefully chosen to detect normal human motion and to reject changing accelerations outside the pass band. Each sample is then summed over a user specified interval of time called an 'epoch'.

GT3X+ Specifications

Dimensions

The GT3X+ monitor is compact and lightweight, measuring 4.6cm x 3.3cm x 1.5cm with a weight of 19 grams.

Recording Time

The GT3X+ records and stores over 40 days of raw data collected at a 30 Hertz sample rate. Increased sample rates will inversely affect recording time.

Battery Life

The GT3X+ contains a rechargeable Lithium Ion Polymer battery capable of providing power for up to 31 days between charges.

Water Resistance

The water resistant GT3X+ can withstand submersion at depths up to 1 meter for up to 30 minutes.

Communication

The GT3X+ communicates via high speed USB 2.0 connection, capable of downloading a single device in less than 45 seconds.

Ambient Light Sensor

The GT3X+ contains a photodiode based light sensor with a range of 350 to 800 nm (600 nm peak), providing valuable information about the subject's environment.

The GT3X+ is an FDA-cleared class II device.



ActiGraph is compliant with IEC standards for "Type BF Applied Part"



Part 15.107 (US) – Conducted Limits of Unintentional Radiators
Part 15.109 (US) – Radiated Emission Limits of Unintentional Radiators

ICES003 (Canada) – Interference Causing Equipment Standards (Digital Apparatus).



EN60601-1-Medical Device General Safety Requirements



All ActiGraph products are manufactured Lead Free and are RoHS Compliant



The GT3X+ is water resistant in accordance with IEC 60529 IPX7, or immersion in one (1) meter of water for up to 30 minutes.