

**Orbit Research and American Printing House for the Blind Announce the World's First  
Affordable Refreshable Tactile Graphics Display**

***Revolutionary technology from Orbit Research enables a new paradigm in education and  
access to graphical information for the blind***

WILMINGTON, DE -- August 2, 2016 --

Orbit Research and the American Printing House for the Blind (APH) today announced the introduction of Graphiti™, the world's first affordable tactile graphics display.

Based on revolutionary Tactuator™ technology from Orbit Research, the Graphiti refreshable tactile graphics display represents a breakthrough in non-visual access to graphical information such as charts, drawings, flowcharts, floorplans, images and photographs, through an array of moving pins. The most unique feature of the technology is the ability to set each pin to different heights, which enables the display of topographical maps and other graphical elements such as grey shades and color represented as varying heights of pins that can be readily sensed by the user's fingers.

Connectable to computers, tablets, smartphones, or the Orion TI-84 Plus Talking Graphing Calculator via a USB-C port or Bluetooth, its open API allows developers to create apps to work with Graphiti. Additionally, an HDMI port allows connection to any device with a video display output, identifying the unit as a display monitor. This enables any device to connect seamlessly to Graphiti. The unit also includes a cursor pad for navigation, and an SD-card slot for loading files for reading and editing in a standalone mode.

Graphiti also features a touch interface to enable the user to "draw" on the display; tracing a shape with a fingertip raises the pins along the path traced. The touch interface allows traditional forms of touch commands such as scrolling, multi-touch gestures, etc. In addition, it enables novel uses such as "pushing" or "nudging" an object on the display to physically move it.

The proprietary technology is fundamentally scalable and enables development of refreshable graphic displays of any size, at a fraction of the cost of graphic displays in the market today. The first model has 2,400 pins in an array of 60 x 40 pins, and can be used in a portrait or landscape orientation. Each pin is independently addressable and can also be made to individually "blink" at configurable rates.

Building upon APH's vast experience in the development of educational products and Orbit Research's core technology and expertise in developing affordable accessible products, this unique product is the outcome of continuing collaborative efforts between the companies.

"We are tremendously excited about the opportunities Graphiti opens for the blind or visually impaired user. Our Orion family of talking scientific and graphing calculators enabled access to mainstream tools for STEM education for blind and visually impaired students. The recently announced Orbit Reader 20, enables access to low-cost braille and literacy. We believe Graphiti will do for graphics what the Orbit Reader 20 did for braille." said Dr. Gina Spagnoli, Orbit

Research's Founder. "The variable-height capability that our Tactuator technology enables will allow blind users to experience and interact with graphics like never before – live and in three dimensions. For the first time, a blind user will be able to create graphics in digital form, enter them into a computing device, review and edit them, and exchange such graphics with others." she added.

"This technology is breaking new ground for the education of the braille reading students and adults we serve. It gives us a glimpse into the future of what the graphical digital information age will look like. Up until now, we have only imagined. Graphiti proves that we can," said Dr. Craig Meador, APH President. "It will be an invaluable tool in the classroom because of its versatility. For the first time in history, a student who is blind can connect a tactile monitor to instruments, including microscopes, telescopes, or video cameras for real time depiction of dynamic content. For example, it will connect to the Orion TI-84 Plus Talking Graphing Calculator and students will be able to see the graph, immediately, on the tactile screen. Textbooks in math and science contain thousands of graphics. Graphiti provides a path toward delivering textbooks with graphics, electronically."

The product is expected to ship in late 2017 and further details can be found at [www.orbitresearch.com/graphiti](http://www.orbitresearch.com/graphiti).

#### **About Orbit Research:**

Orbit Research develops and manufactures innovative and affordable products that enable an independent lifestyle for people who are blind or visually impaired. Founded with the mission to fulfill the urgent need for affordable assistive technology products, the company has introduced breakthrough products like the Orbit Reader 20, Orion Talking Graphing and Scientific Calculators and the iBill Talking Banknote Identifier that define the state-of-the-art in features, functionality, convenience and cost. For more information, visit [www.orbitresearch.com](http://www.orbitresearch.com).

#### **About the American Printing House for the Blind:**

The American Printing House for the Blind, a 501(c) (3) non-profit organization, is the world's largest nonprofit company devoted solely to researching, developing, and manufacturing products for people who are blind or visually impaired. Founded in 1858, it is the oldest organization of its kind in the United States. Under the 1879 federal Act to Promote the Education of the Blind, APH is the official supplier of educational materials for visually impaired students in the U.S. who are working at less than college level.

APH produces textbooks and magazines in braille, large print, recorded, and digital formats and manufactures hundreds of educational, recreational, and daily living products including computer software design and engineering along with other technology items. Visit [www.aph.org](http://www.aph.org) for more information.

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