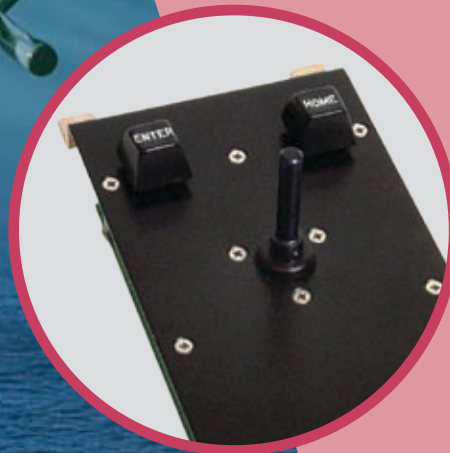


Cursor Controllers

- Trackballs
- Force-Sticks



Interface With Excellence

For Ultra-Reliable Precision Cursor Control in the Most Extreme Environments, Turn to Orbit.

Cursor controllers are the most widely used and abused human-machine-interface (HMI) devices, and the trackball and force-stick products from Orbit Electronics Group have been proven to meet the challenge. Whether withstanding the rigors of mission-critical military applications, defeating downtime in business and industry, or frustrating would-be vandals in the public arena, Orbit's ultra-rugged cursor controllers have delivered superior performance, reliability and longevity for more than 50 years. That track record simply cannot be matched by standard, commodity-type, cursor controllers.

Orbit's rugged Cursor Controllers are widely utilized for extremely accurate positioning applications. They are extensively used in conjunction with military radar, sonar, electronic countermeasure and weather system displays, as well as, air traffic control systems and as manual inputs for navigation and control systems. They have been adapted for use with industrial graphic display and machine tool applications. The Cursor Controllers convert physical device movement into a series of electrical pulses by means of an encoding system. The encoded pulses are then either sent to a display system that utilizes the raw data or pulses are converted to a standard electrical interface (i.e. PS/2) that transmits the control data to the system.

In addition to performing reliably when integrated into our wide range of ruggedized keyboards, Orbit track ball and 'force-stick' devices have been embedded/integrated in custom applications by and for our customers. Because many of our basic/core products have been tested to military environmental and EMI/EMC requirements as stand-alone devices, we are able to ensure that all specifications are met for our customers' military, aerospace, industrial and general-purpose applications.

Orbit Electronics Group military-grade cursor controllers are designed to perform under the most extreme operational and environmental conditions and require little or no maintenance. MTBF for Orbit military grade trackballs are experiencing 100,000 hours or greater.

NOTE:
*The products shown
in this brochure
represent only a few
of the many custom
designs we have
produced. Contact us to
discuss what we can
custom design and
manufacture for your
applications.*



Trackballs

When system requirements define the need for a very accurate cursor controller, an Orbit Electronics Group trackball sized anywhere from one to three inches in diameter is an ideal choice. Cursor controllers utilizing an Orbit trackball, enhanced with any number of embedded control switches, have been integrated into countless numbers of military airborne, shipboard and ground transportable systems. Orbit Electronics Group engineers have the expertise and experience to generate software code that enables the trackball to flawlessly perform the specific requirements for any application.

Orbit trackballs support a wide range of electronic interface standards, including RS-232, RS-422, PS/2, Sun, USB, Quadrature and any other simple serial or complex custom interface that may be required.

Orbit trackball configurations include:

- Enclosed/encased desktop devices suitable for table-top applications
- Embedded devices installed into consoles and systems connected directly to mission computers
- Handheld and miniature trackmarbles/trackballs for small fielded systems and compact computer/tablet applications
- Integration into Orbit custom keyboards or installed as an enhancement into your existing keyboard/keypad application

Orbit trackball applications include:

Military:

- Naval surface and subsurface vessels
- Air Force, Naval and Army airborne systems
- Ground mobile, transportable and fixed
- Handheld devices

Industrial:

- Factory automation
- Hazardous environment
- Medical equipment
- Vehicular
- Outdoor
- Desktop/benchtop

General purpose:

- Security systems
- Video/audio broadcast
- Kiosks
- Point-of-sale systems

Force-Sticks

For small spaces, horizontal enclosures, wall-mounted and one or two-finger applications in which trackballs may not be preferable, Orbit Electronics Group force-sticks are an optimal solution – performing to the same high standard as our trackballs. They are ideal cursor control devices, and are often used to input precision movement coordinates into computational systems.

Orbit force-sticks range from simple strain-gauge devices to precision assemblies that offer additional interfaces and rate-aid functionality. Rate-aid accelerates the cursor according to the amount of force that is placed on the stick shaft. This feature enables an operator to quickly cross the entire screen when additional force is applied, and then precisely position the cursor with minimal force when the cursor is near the desired target on the monitor.

Orbit force-stick devices support numerous standard serial interfaces including: RS-232, RS-422, PS/2, Sun, USB and any other custom interface required. Orbit engineering has the experience and expertise generate software code to support any number of switches required for your specific force-stick cursor control application.

Orbit Electronics Group engineers have the expertise and experience to generate software code that enables the trackball to flawlessly perform the specific requirements for any application.

Orbit force-stick applications include:

- Keyboard cursor control
- Helicopter Integrated Switch Panels
- Fixed Wing A/C Integrated Switch Panels
- Topographical mapping
- Industrial control units



Superior Human-Machine Interface Solutions for Mission Critical Applications

Orbit Electronics Group hardware and software solutions provide the critical HMI link in many of the most demanding airborne, shipboard, sub-surface, ground-based and handheld mission critical applications. With superior quality as a mandatory design and manufacturing criteria, we deliver leading-edge products with extreme environmental and operational survivability. Downtime is simply not an option to our customers, and our products' proven ability to operate in extreme battlefield conditions for extended periods of time has made us the a reliable source for military and non-military government and industrial programs requiring the highest degree of long-term operational reliability.

Orbit's longstanding relationships with government research and development laboratories help keep our engineering and design capabilities at the industry's forefront, where our solutions to technical challenges consistently result in state-of-the-art product advancements.

In addition to our Cursor Controllers, Orbit Electronics Group product categories include:

- **Control Display Units**
- **Flat Panel Displays**
- **Keyboards/Keypads**
- **Integrated Switch Panels**

Our focus on superior customer support, and our company-wide commitment to the continuous improvement of HMI tools, enables us to deliver solutions that meet and exceed our customers' requirements for performance, reliability, longevity and economy.

**For information or a quotation,
contact the Orbit Electronics Group.**



ORBIT INSTRUMENT

80 Cabot Court • Hauppauge, NY 11788
TEL: 631 435-8300 • FAX: 631 435-8458
sales@orbitintl.com

4532 Telephone Road, Suite 103 • Ventura, CA 93003
TEL: 805 642-0545 • FAX: 805 642-0790

www.orbitintl.com

TULIP DEVELOPMENT LABORATORY

1765 Walnut Lane • Quakertown, PA 18951
TEL: 215 538-8820 • FAX: 215 538-8866
info@tuliplabs.com

www.tuliplabs.com



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