

Frequently Asked Questions

This document lists a selection of the questions that are frequently asked by customers. Just click on the section with is relevant to your question. If you don't see an answer to your question then please contact us at:

pretorian@pretorianuk.com.

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Features/Protocols

Q How are the various protocols selected on multi-protocol Trackballs?

A The unit automatically selects either USB or PS/2 protocols on power-up without setting any DIP switches.

Serial protocols (Microsoft, Mouse Systems and Sun) must be selected by turning on DIP switch 8 before power-up. Once DIP8 is on the unit cannot operate in USB or PS/2 protocols.

DIP7 selects between serial protocols- Off gives Microsoft mode and On gives Mouse Systems/Sun mode.

Q What is the difference between Mouse Systems and Sun protocols?

A Nothing! The bitmap is identical, although Mouse Systems is transmitted at $\pm 7V$ (nominal) whereas Sun is transmitted at 0V and 5V logic levels.

Q Microsoft, PS/2 and USB protocols all offer 'extensions' or augmentations to the specification. How are these enabled?

A The extra features are automatically enabled as the driver configures the Trackball. Whenever the driver polls an extended feature set, the Trackball turns that feature on. This means that old drivers which do not support extended features still function correctly with the Trackball.

Specifically, the following extensions are available:

Microsoft:	Nominally 3-byte supporting 2 buttons. Extends to 4 bytes supporting 3 buttons and wheel operation.
PS/2:	Nominally 3-byte supporting 3 buttons. Extends to 4 bytes supporting wheel operation. Further extension supports 5 buttons.
USB:	Configured during Enumeration process. Extends to include wheel operation and 5 buttons.

Q My Trackball wasn't supplied with a driver disk. Is this correct?

A Yes, Pretorian Technologies Trackballs are designed to work with native drivers and do not require any further software to be loaded.

Q I do not know which of the features provided by my Trackball operate with which operating systems. Can you help?

A Yes- please refer to Applications Note AN0006 for a full description.

Q Can I use my Trackball simultaneously with a mouse or other pointing device?

A Yes- refer to Application Note AN0008.

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Connection

Q What maximum cable lengths can I use with my Trackball?

A This depends upon the protocol which you are using:

USB: 3m unshielded and 5m shielded.

PS/2: 3m nominal but usually okay up to 5m.

Serial: Usually okay to 25m except for Sun which should be restricted to 3m.

Q My mouse was supplied with an adaptor to convert from PS/2 to serial. Can this be used with my Pretorian Technologies Trackball?

A No, it must not be used since this may lead to damage to the Trackball and/or computer. If you require serial operation please connect the Trackball unit via the 6-way JST connector only.

Q My mouse was supplied with an adaptor to convert from PS/2 to USB. Can this be used with my Pretorian Technologies Trackball?

A Yes, all pointing device manufacturers use the same connection standard between USB and PS/2.

Q The 10-way JST connector includes a 'Test' connection. How should this be connected?

A No connection should be made. This is reserved for factory-automated test only and includes an on-board pullup resistor.

Q I have been quoted a large minimum order quantity and/or long lead time for JST housings and crimps for use with your Trackballs. Can you help?

A Yes- we keep a limited stock of these items which we can supply when required.

Q I am having difficulty sourcing the necessary crimp tooling for the mating JST connectors for your Trackballs. Do you have any advice?

A Yes- please refer to Applications Note AN0012 for further details.

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Mechanical/ Maintenance

Q My Trackball occasionally feels lumpy when moved in one axis. What should I do?

A This is due to a build up of dirt on the Trackball shafts. If you have a unit with a removable ball, then remove it

and clean using a cotton bud dipped in water. Do not use solvents, abrasives or detergents of any kind to clean the shafts. The ball should be polished using a lint-free cloth before re-assembly. Do not use furniture polish or similar to polish the ball.

If you don't have a unit with a removable ball then it is usually sufficient to push gently on the ball and rotate back and forth. This crushes the dirt and pushes it away from the contact point between the ball and shafts. This simply accelerates the self-cleaning process which is going on all of the time within the Trackball.

Q Is any maintenance or adjustment required through the life of the product?

A No, other than periodic cleaning, no maintenance is required. The electronics is calibrated for life during manufacture and requires no maintenance.

Q I need to mount my Trackball on an inclined panel. What is the maximum angle of inclination that may be achieved?

A Pretorian Technologies Trackballs will function from horizontal to 30° in the case of IP40 units and horizontal to 45° in the case of IP65 units.

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Miscellaneous

Q My Trackball unit was supplied with a printed data log. What is the purpose of this data?

A This is the printed output from the factory automated test equipment. It includes a full functional test and also data relating to the phase angles of the X and Y axes. Refer to AN0005 for further details.

You do not need to return it should the unit require repair- copies are maintained in the factory for all shipped units.

Q I have a faulty Trackball and need to return it for repair. What should I do?

A Please refer to Applications Note AN0009 and follow the procedures set out in it. These procedures are designed to expedite returned units, but require a small amount of information from you so we know the nature of the fault. Please take time to fill out the form and request an RMA number before shipping the unit back to us. This helps us to continuously improve our products and to improve our service to you, the customer.

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