

EXHIBIT O

POINTERS in the

Feel like a contortionist when using quirky trackballs and other built-in pointing devices? You're not alone. Here's a guide to portable gizmos that work. **By Gene Smarte**

If the pointing device on your notebook computer makes you feel as if you're all thumbs, take comfort: You're in good company. Most

of these devices are a pain to use no matter what type they are—from ball to stick—or where they are located on the computer.

Notebook vendors know this only too well. Each year they receive a sizable number of complaints and requests from users who want better-working built-in pointing devices. In fact, the number one service problem reported to many notebook vendors is trackballs that break down during normal use. Meanwhile, users are concluding that the best solution is to find an alternative to the integrated pointing device.

Designed to Travel Your first inclination may be to take your desktop mouse with you on your next business trip. But toting a desktop pointing device adds yet another piece of hardware to your mobile arsenal. While you can certainly attach any desktop pointing device—be it mouse, trackball, or joystick—to your notebook, these products carry the weight and bulk of items designed to traverse the vast steppes of your desktop. What you need is a pointer with the familiarity and ease of setup of a point-and-click unit, but compact and lightweight enough to go unnoticed with you on your travels.

That's where we come in. We've assembled a list of 15 pointing devices designed for mobility. On the chart, note the customization capabilities you want in a pointer. While one or

two buttons will be adequate for most software functions, some devices have additional buttons that you can program to perform often-repeated functions. Most portable mice and trackballs have base resolutions in the 200-to-400-dots-per-inch range—similar to those of desktop devices. But like desktop pointers, many of the

Mobile PC Pointing Devices

MANUFACTURER	PRODUCT	PRODUCT TYPE
APT APPOINT, INC. 800/448-1184	Gulliver Thumbelina	mouse trackball
AXELEN (U.S.A.), INC. 206/643-2781	miniTrak	trackball
CIRQUE CORP. 800/454-3375	GlidePoint	touch surface
DYNAPOINT, INC. 818/854-9355	DynaTrak	trackball
INFO PRODUCTS 800/775-7576	Info Track	trackball
INTERLINK ELECTRONICS 805/484-1331	ProPoint ³	sensor button
KRAFT SYSTEMS, INC. 619/724-7146	uTrak	trackball
KYE INTERNATIONAL CORP. 800/456-7593	HiPoint	trackball
LOGITECH, INC. 800/231-7717	TrackMan Voyager TrackMan Portable	trackball trackball
MICROSOFT CORP. 800/426-9400	BallPoint Mouse	trackball
MICROSPEED, INC. 800/232-7888	MicroTrac	trackball
SIIG, INC. 510/657-8688	Mouse Trax	mouse/trackball combination
XTEND MICRO PRODUCTS 800/232-9836	SuperMouse 3-in-1	sensor button

n/a = not applicable ¹ Limited lifetime. ² Unlimited replacement.

Microsoft's
BallPoint
Mouse

Logitech's
TrackMan
Voyager

Right Direction

portable devices offer additional, higher resolutions.

All the pointers here connect through your computer's serial or mouse port. If you don't have a mouse port and your serial port is occupied, you can use a serial port add-on via any PCMCIA slot. Socket Communications (510/670-0300) offers Socket Serial I/O, a \$199 RS-232 adapter card that gives your note a second serial port.

Cordless mice or trackballs seem like a logical solution for mobile computing. But consider this: You have to carry the pointer and its receiver—and batteries to power the receiver. Fortunately, some subnotebook vendors are working to integrate an infrared receiver into their units and to offer cordless portable pointers as options.

If possible, try out any potential candidate on your notebook, testing the product for ease of use, ease of mount-

ing, and clicking ergonomics. Practice using the pointer before you take that big presentation on the road. Try the simulated airplane flight test: Sit in a small, awkward chair, place your notebook on a TV-dinner table, and play with the pointer. Does it feel comfortable? If it does, you're pointed in the right direction.

Best Bets Three favorite pointers among *PC World's* editors are Logitech's TrackMan Voyager, Microsoft's BallPoint Mouse, and Cirque's GlidePoint. The Logitech and Microsoft devices are trackballs; Cirque's is a touch-surface pointer that lets you click and drag by tapping the surface of its pad.

Gene Smarte is the editor of PC Graphics & Video.

**Cirque's
GlidePoint**

PRICE	ERGONOMIC FEATURES	NUMBER OF BUTTONS	BALL/BUTTON DIAMETER (INCHES)	BASE RESOLUTION (DPI)	DYNAMIC ACCELERATION	WARRANTY (YEARS)	READER SERVICE NO.
\$69	minisize	2	n/a	250	yes	1 ¹	601
\$69	drag-lock button	2	.375	150	n/a	1 ¹	601
\$89	ambidextrous, clip-on mount	4	.875	200	n/a	1	602
\$99	click and drag by tapping surface	2	n/a	speed dependent	adjustable	2 ¹	603
\$69	ambidextrous, clip-on mount	2	1	400	n/a	1 ¹	604
\$49	ambidextrous, hand-held	3	1.25	200	n/a	5 ²	605
\$129	hand-held	2	1	pressure dependent	pressure dependent	1	606
\$89.95	ambidextrous, clip-on mount	2	1.18	80	yes	1	607
\$69.95	ambidextrous, clip-on mount	2	1	400	yes	lifetime ²	608
\$89.95	ambidextrous, clip-on mount	3	.75	250	yes	3 ¹	609
\$69.95	clip-on mount	2	1	200	yes	3 ¹	609
\$85	ambidextrous, clip-on mount	3	1.1	400	yes	1 ¹	610
\$89.95	2- and 3-button versions, mounting bracket	3	.75	400	yes	1	611
\$69	flip over to change from mouse to trackball	2 or 3	.875	300	yes	1 ¹	612
\$79.95	ambidextrous, desk mount	2	1	pressure dependent	pressure dependent	1	613

¹ Comes with 6-foot cord plus 6-foot extension cord.

For more information about all products in this table, circle reader service no. 901.