

FASTRAK DIGITIZER

HIGH-FIDELITY 3D DIGITIZING SYSTEM

The FASTRAK® Digitizer provides unmatched accuracy in an ultra portable and easy to set-up package. FASTRAK® Digitizer is a trusted asset for EEG localization, rapid prototyping and CAD applications.



HOW IT WORKS

FASTRAK Digitizer allows for the digitizing of points with our digitizing stylus, using a single electromagnetic source. The source emits an electromagnetic field in which the stylus and optional sensors are tracked in full 6DOF (6 Degrees-Of-Freedom). The included hand/foot switch provides users an alternative option to the built-in button on the stylus. Press the button, capture a point--simple!

APPLICATIONS

EEG LOCALIZATION	REVERSE ENGINEERING
RAPID PROTOTYPING	CAD MODELING

FEATURES

- ✓ Real-Time Data
- ✓ Up to 3 Additional Sensors
- ✓ Virtually No Latency
- ✓ No Line-Of-Sight Occlusions
- ✓ Included User Software (PiMgr)
- ✓ Repeatability Data
- ✓ Full Software Developers Kit
- ✓ Simple Set-Up
- ✓ Reliable, Proven Technology
- ✓ Scalable System for Digitizing & Tracking

OPTIONS



Standard Sensor (RX2)



3-inch Digitizing Stylus (ST3)



4-inch Source (TX4)

COMPONENTS

The standard FASTRAK® Digitizer system includes an SEU (System Electronics Unit), 8-inch stylus, 2-inch source (TX2) and the hand/foot switch. For additional motion tracking, you can easily expand the system's capabilities by adding up to three sensors or by upgrading to a larger source.

SYSTEM ELECTRONICS UNIT

Contains the hardware and software necessary to generate and sense the magnetic fields, compute position and orientation, and interface with the host computer via USB, RS-232 or optional RS-422.

DIMENSIONS: 10.2 in (25.9 cm) x 11.5 in (29.2 cm) x 2.3 in (5.8 cm)

Dimensions and weight are approximate. Dimensional drawings available upon request.

ST8 DIGITIZING STYLUS

A lightweight stylus designed for capturing precise position and orientation data.

DIMENSIONS: 7 in (20.32 cm) x 0.5 in (1.27cm) x 0.75 in (1.91cm)

SOURCE OPTIONS

The source generates the magnetic field in which the stylus/sensor is tracked.

TX2 - WEIGHT: 8.8 oz (250 g) DIMENSIONS: 2.3 in (5.84 cm) x 2.2 in (5.08 cm) x 2.3 in (5.84 cm)

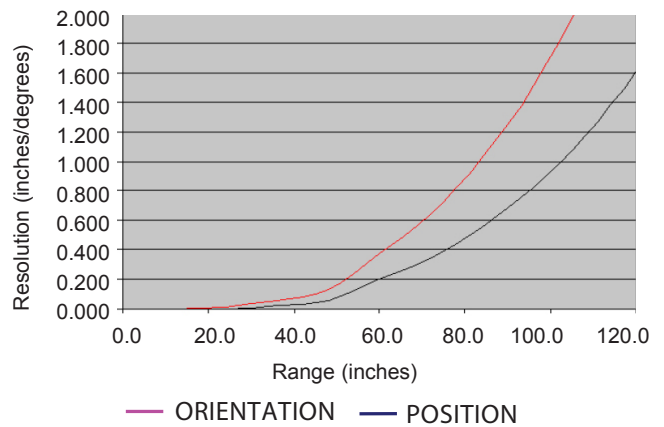
TX4 - WEIGHT: 1.60 lbs (726 g) DIMENSIONS: 4.07 in (10.33 cm) x 4.07 in (10.33 cm) x 4.04 in (10.16 cm)

TX1 - WEIGHT: 0.36 oz (10.2 g) DIMENSIONS: .9 in (2.29 cm) x 1.11 in (2.82 cm) x .6 in (1.52 cm)

SPECIFICATIONS

UPDATE RATE	120 updates/second divided by the number of sensors
INTERFACE	USB; RS-232 with selectable baud rates up to 115.2 K (optional RS-422)
LATENCY	4 milliseconds
STATIC ACCURACY (IN A MAGNETICALLY CLEAN ENVIRONMENT)	0.03 inches RMS for the X, Y, or Z position; 0.15° RMS for sensor orientation. The system will provide the specified performance when the sensors are within 30 inches of the source. Operation over a range of up to 10 feet is possible with slightly reduced performance.*
OPERATING TEMPERATURE	10°C to 40°C at a relative humidity of 10% to 95%, noncondensing
POWER REQUIREMENTS	15 W, 100-240 VAC, 47-63Hz
SOFTWARE TOOLS	GUI included USB drivers for Microsoft Windows® Linux® - contact Polhemus
REGULATORY	FCC Part 15, class A EN61326-1: 2013 Emission EN61326-1: 2013 Immunity, Basic Environment

RANGE VS RESOLUTION



Range (inches)	Position Resolution (inches)	Orientation Resolution (degrees)
12.0	0.0023	0.0026
24.0	0.0030	0.0147
36.0	0.019	0.0558
48.0	0.055	0.1266
72.0	0.346	0.369
120.0	1.605	2.960

GET IN TOUCH

Our technology powers applications in a wide variety of markets, catering to healthcare, military, and in countless research areas. Talk with our Motion Tracking Experts™ today.

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*Large metallic objects, such as desks or cabinets, located near the source or sensor, may adversely affect the performance of the system.

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