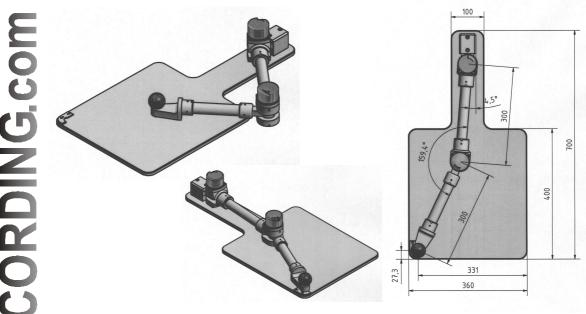
## Thomas RECORDING GmbH

Scientific Resources



## **2D-MANIPULANDUM**



Thomas RECORDING introduces a newly developed 2D-manipulandum for neurophysiological applications.

One goal of the TREC manipulandum development was to provide a helpful tool for the investigation of control and learning mechanisms of our motor system.

The manipulandum is delivered completely with software. It is possible to adapt the manipulandum to your current research setup.

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## 2D-MANIPULANDUM



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or unconstrained hand movements, there is a very large set of possible trajectories determined both by the path as well as by the time at which each point on the path is reached. Accessing such trajectories requires special tools like a 2D manipulandum. The TREC manipulandum is made of a 2D planar base plate with an arm that can be moved by the subject without resistance. The movement of the manipulandum is meas-

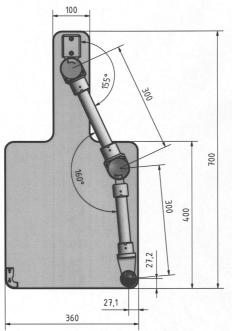
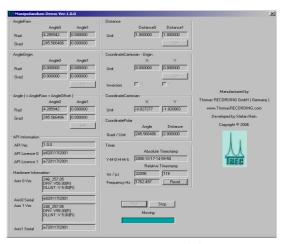


Figure 1: Sketch of the 2D-Manipulandum

ured continuously and the current position of the ball shaped knob, representing the hand position of the subject, is displayed in real time on a pc screen. The graphical



**Figure 2:** Graphical user interface (gui) of the manipulandum software that allows to measure arm or hand position.

user interface of the manipulandum software is shown in figure 2.

ustom-made adaptation of the software to special applications or integration of the manipulandum in different research setups is possible. Please feel free to aks for you special adaptation!

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