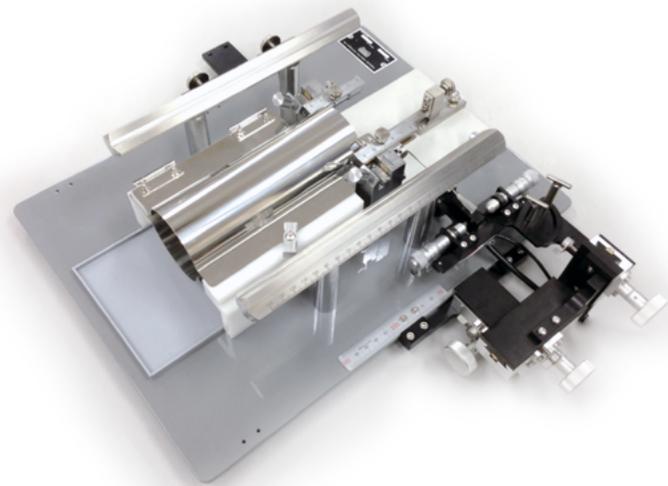


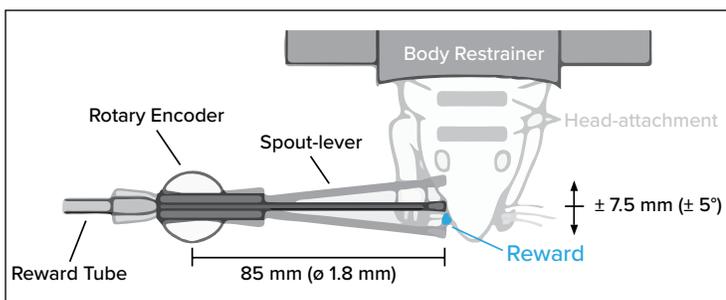
TaskForcer

Obtain precise real-time measurements of neural circuits during operant conditioning



Features

- ▶ The stainless-steel restraint operant chamber prevents movement with the exception of the eyes, mouth, and forepaws.
- ▶ The lever contains an integrated water spout (Spout-lever) for quicker learning (Kimura et al., 2012).
- ▶ Operant Task studio software allows researchers to easily program their tasks.
- ▶ Compatible with existing **in vivo** electrophysiology and advanced imaging methods.
- ▶ Compatible with sound/visual/odor stimuli and **in vivo** optogenetic stimulation.
- ▶ Cables and speakers are electromagnetically shielded for electrophysiology recording.



The TaskForcer is ideal for examining neural circuit mechanisms during a variety of operant tasks. In the TaskForcer, animals learn to pull a lever to receive a water reward under partial restraint. The stainless steel chamber prevents movement except for the eyes, mouth and forepaws. Unlike traditional operant tests where the operandum and reward are separate, the TaskForcer utilizes a lever with an integrated water spout for quicker learning. Animals learn the task in just 3 days. (Kimura et al., 2012).

The TaskForcer comes with Operant Task studio software that allows researchers to easily program their own tasks.

Originally developed by Professor Yoshikazu Isomura (Brain Science Institute, Tamagawa University, Japan)

Kimura R1, Saiki A, Fujiwara-Tsukamoto Y, Ohkubo F, Kitamura K, Matsuzaki M, Sakai Y, Isomura Y (2012). Reinforcing operandum: rapid and reliable learning of skilled forelimb movements by head-fixed rodents. *J Neurophysiol* 108(6): 1781-1792.



Component Example

1



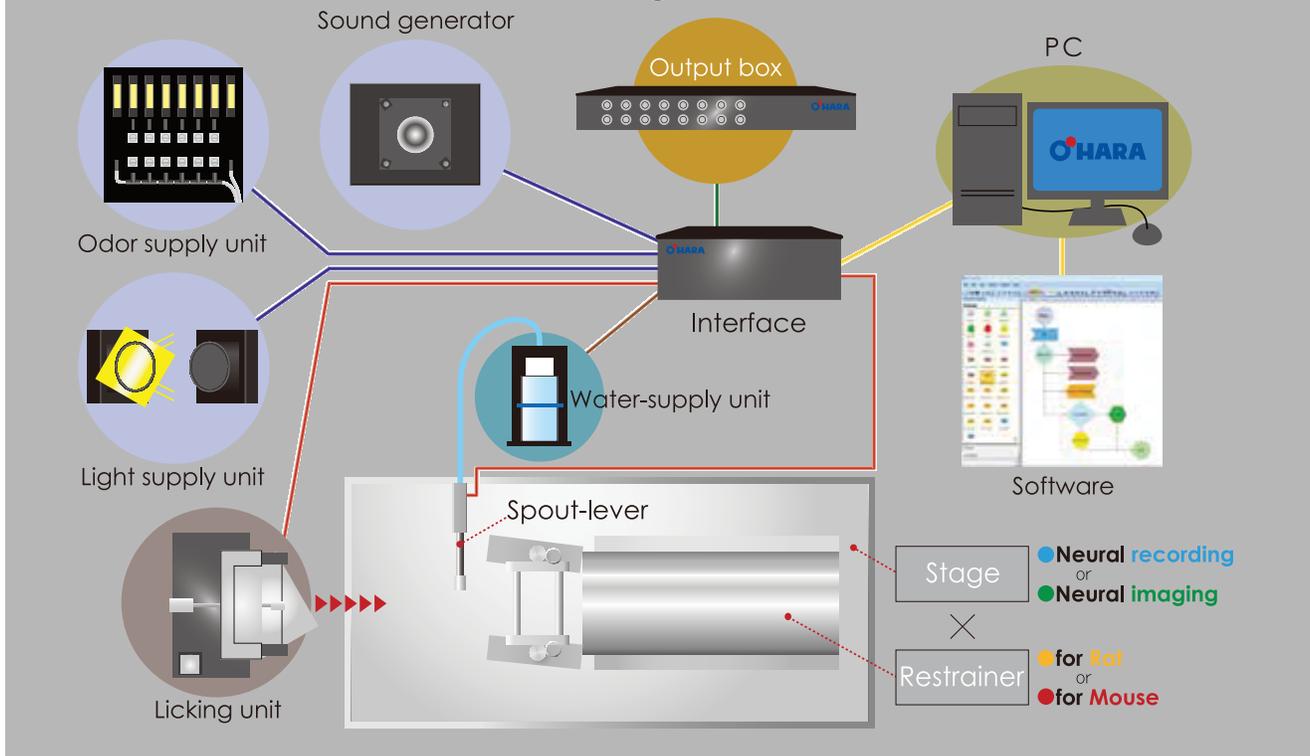
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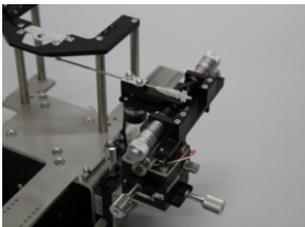
3



TaskForcer System Chart



4



5



6



1. TaskForcer water-supply unit
2. TaskForcer sound generator with speaker
3. TaskForcer Interface

4. TaskForcer spout-lever
5. TaskForcer habituation tube for rat
6. TaskForcer restrainer for rat

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