A NOSE OPERANDUM FOR RATS

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A simple, inexpensive operandum for rats which requires a nose response instead of the traditional paw response is commercially available.¹ A microswitch with a 2.5 in. extended arm is inverted and attached by a metal bracket to the back of the front wall of an operant chamber. The switch is positioned so that its extension arm protrudes

about .5 in. into the animal's side of the chamber and is 3 in. above the floor. The rat closes the switch by placing its nose under the extension arm and lifting up on it with a force of approximately 15 g. To prevent the rat from injuring its nose while responding, the edges of the metal arm should be rounded.

Visual inspection shows that rats maintain a more constant head position during nose responding than during paw responding. Stable rates as high as 90 responses per min have been maintained on a mult VI 30 sec ext schedule of food reinforcement with corresponding low S^A rates (see Fig. 1). The nose device is very durable. After more than one million operations its physical characteristics appear unchanged. Another desirable feature is that it can be used in conjunction with other operanda where different responses are needed. The nose operandum is being used in this laboratory in a variety of food-reinforcement problems.

Fig. 1. S^D (A) and S^A (B) performance of a rat on a mult VI 30 sec ext schedule (alternating 2.5 min legs) after 32 hr of training. Pips indicate food deliveries.

¹The microswitch BZ-2RW84 is obtainable from Micro Switch, Freeport, Illinois for about \$2.00.