

Videotape recording of socioactography in rats

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Socioactography (Tikal & Benesova, 1972) combines measurement of motor activity and elementary social interactions (in terms of physical contacts) of a group of five rats. The behaviour of each rat in the group is descriptively categorized at 30 s intervals as either (1) active rat in contact, (2) active rat in isolation, (3) immobile rat in contact, or (4) immobile rat in isolation.

Such forms of behaviour are greatly influenced by prior social experience of the rat and by pretreatment with psychotropic drugs. The effects of both are conveniently observed when rats are confined in a square activity arena (Schiorring & Randrup, 1971); because of the rapidity with which rats make social contacts it is necessary to make videotape recordings of their activity in the arena. Subsequent replay enables accurate quantification to be made.

Previous isolation of the rats for a period of two weeks gives rise to increased active contact and increased immobile contact, while rats which have previously been group-housed show increased active isolation when tested for 30 min daily over eight consecutive days.

Behavioural testing commenced on the third day of drug administration (1 mEq/day i.p. for 10 days). In previously group-housed rats, rubidium chloride increased immobile contact while lithium chloride depressed it. At the same dose, rubidium chloride decreased active isolation while lithium chloride increased it. In isolated rats, neither compound had significant effects at this dose.

References

- SCHIORRING, E. & RANDRUP, A. (1971). Social isolation and changes in the formation of groups induced by amphetamine in an open-field test with rats. *Neuro-psychopharmacology*, **4**, 2–12.
- TIKAL, K. & BENESOVA, O. (1972). Socioactography—a method for quantification of contact behaviour and motor activity of rats in a group and its use in psychopharmacology. *Activ. nerv. sup.*, **14**, 273–279.

A versatile laboratory alarm/timer

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A versatile timer/alarm unit has been developed for a variety of uses in the laboratory and lecture theatre utilizing a commercially available clock module (type MA1002H—National Semiconductors) interfaced with complimentary metal oxide semiconductor (CMOS) logic subunits. A schematic diagram is shown in Figure 1. A timed output from the clock module drives both the alarm circuitry and, if required, up to three auxillary timer/alarm subunits of independently variable duration. Pilot lights are latched on after each

alarm call to indicate which alarm periods have been registered.

Each auxillary timing module utilizes the high input impedance of the CMOS devices to monitor voltage changes across a resistance/capacitance network without causing undue loading. At a preset voltage a Schmitt trigger configuration drives both the alarm circuit and consecutive timing modules. The timers may be simultaneously reset by a hand held push button without affecting the initial alarm settings.

The alarm circuit uses a low voltage piezoelectric sounding device which may either sound continuously or for a user defined period. Provision is made to isolate the sounder allowing only a visual indication of the alarm state. Each alarm call is also able to operate a switching mechanism which may be used to drive external circuitry or apparatus.