App. Note Code: 5-Y Revision: 4

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Keeping Pests Away from Equipment



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This application note is a compilation of customer-supplied methods that have successfully kept pests away from our equipment in the field. Also provided is a list of companies that supply animal control products. Campbell Scientific does not endorse or eschew any particular method or company.

1. Insects

1. Place moth balls or crystals in enclosures to prevent fire ants, wasps, spiders and other insects from nesting.



The fumes of moth balls or crystals could be hazardous. Therefore, enclosures that contain moth balls or crystals should be opened in a well-ventilated area.

2. Put animal ear tags in the enclosure. Apparently some ear tags are treated with an insecticide; talk with personnel in an agricultural store to determine the best ear tag for controlling the pest in your area. This technique originated in southern Texas.

2. Birds

- 1. Twist cable ties (such as those supplied with Campbell Scientific tripods and towers) along the fuselage of a wind monitor to prevent birds from landing on the sensor. Point the free ends up.
- 2. Strap a strip of bird control wire around the funnel of a tipping bucket using a pipe clamp so that the needles extend up beyond the funnel. See *Section 6*, *Suppliers of Animal Control Products*.
- 3. Install a crossarm higher than the wind sensors for the birds to perch on. Position the perch so it isn't directly above other equipment.
- 4. Install a perch away from the equipment.
- 5. Stretch fishing line across the top of the bird landing zone. The fishing line should be two to three inches above the equipment.
- 6. Install a visual deterrent such as realistic looking owl. Mounting the owl so that it swings will prevent the birds from becoming acclimated to it. Companies listed in *Section 6*, *Suppliers of Animal Control Products* provide a wide variety of visual deterrents.

3. Rodents

- 1. Place moth balls or crystals along the length of wires to prevent rabbits or other rodents from chewing on wires.
- 2. Route wires through flexible metal or plastic conduit to isolate sensor cables from the environment and secure the ends with Atum heat shrink.
- 3. Run wires through PVC pipes that terminate in rodent free areas.
- 4. Wearing gloves, wipe wires or flexible conduit with a thick cloth soaked in rubbing alcohol or deer/rodent repellent. If protecting the wires in PVC pipes, wipe the wire as you feed it into the PVC pipe and wipe the PVC pipe with the alcohol or repellent as well.



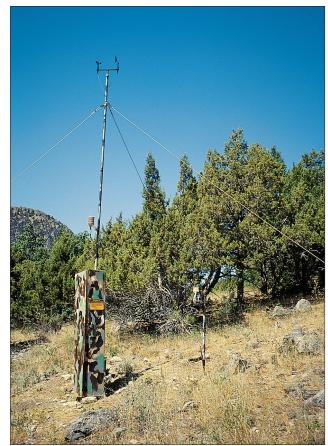
Flexible metal and plastic conduit and PVC pipes are available from electrical supply stores. Irrigation control valve vaults are available from plumbing supply stores.

4. Cows and Other Large Animals

- 1. Enclose equipment in barbed wire fences.
- 2. Stack large diameter concrete pipes on end.

5. Vandals

- 1. Camouflage the station.
- Disguise enclosure boxes to look like rocks or unimportant objects (old Coleman coolers).
- 3. Put *Warning* stickers on enclosures.



At right is a station that is camouflaged to prevent human pests from damaging it.

6. Suppliers of Animal Control Products

Nixalite—Specializes in bird control wires. Also has bird netting, visual deterrents, and repellents. Website: *www.nixalite.com*

Wildlife Control Technology—Products include bird netting, visual and sound deterrents, and anti-perching devices. Website: *www.wildlife-control.com*

BirdX—Products include ultrasonic bird repellers and repellents. Website: *www.pest-control-supplies.com*

Margo's Supplies LTD—Specializes in sound deterrents. Website: www.margosupplies.com

Critter Control—Products include repellents, flexible electrical tracks, bird control wires, electric fences. Website: *www.crittercontrol.com/catalog/enter.html*