



## SD-6 DOUBLE PROBE INSTALLATION

USE WITH CT-2B, CT-2BG AND CF-2C CONTROL UNITS

AS PART OF THE DRIVEGUARD BASIC, ULTRA AND INTEGRATOR SYSTEMS

The Short Driveway Probe system is made up of two sensor probes wired in series. Install both of the probes parallel with the driveway and **perpendicular to outside road traffic**. Bury the short probe 10-15 feet from outside road traffic and 2½ feet before the long probe.

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### SENSOR PROBE AND WIRE CHECK-OUT

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It is advisable to check the sensor probe assembly before and after installation in the earth. Use a good multimeter. With the probe wire disconnected from the control unit, measure the resistance between the red and black leads. It should read between 2,000 and 3,200. The reading should be stable with zero fluctuations.

The resistance between the red lead and the shield, or the black lead and the shield should be millions of ohms. The resistance between the shield drain wire and earth-ground should be millions of ohms.

While making measurements to the shield drain wire, do not touch the bare wire or the multimeter leads with your fingers as that will spoil the readings.

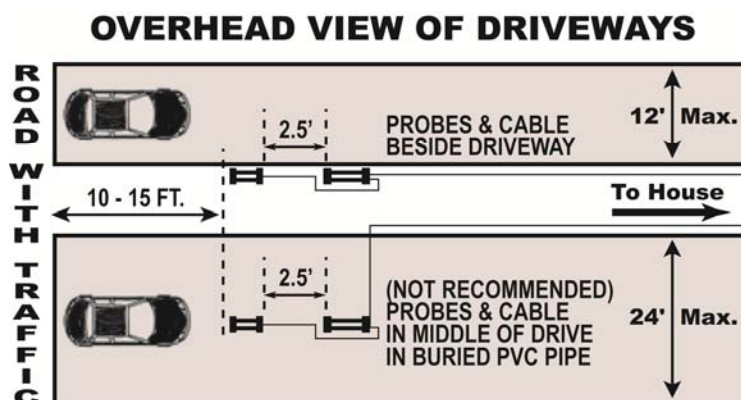
If a bad probe is indicated, it may be an improper wire splice. Before digging up the system, dig up the wire splice only, cut the wire on the probe side and retest the system. If the bad readings still exist, cut the cable several feet from the probe and retest. Call Preferred for further troubleshooting before digging up the system.

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### PROBE DON'T'S

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- DO NOT bury the probes within 6 to 10 feet of a buried power or telephone line.
- DO NOT bury the probes within 6 to 10 feet of a buried invisible dog fence.
- DO NOT bury the probes within 10 feet of a natural gas line.
- DO NOT bury the probes within 20 feet of a power pole with a transformer on it.
- DO NOT bury the probes within 100 feet of railroad traffic.
- DO NOT bury the probes within 200 feet of sub-station type overhead power lines.
- DO NOT mount the probes vertically when used for above-ground applications.



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## INSTALLATION OF DUAL-PROBE SYSTEM

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The sensing range of a probe buried beside the driveway is 5 to 8 feet with a small car going 5 MPH. Taking the width of the car and the sensing range, this system covers a 12 foot wide driveway. Buried in the middle of the driveway, this system covers a 24 foot wide driveway.

The double probe system should be buried 6-10 inches below ground, beside and parallel to the driveway and **perpendicular to the outside road**. Bury the short probe 10-15 feet from and perpendicular to the outside road. Bury the long probe 2½ feet from the small probe (see illustration on page 1). It is advisable to bury 6-10 feet of extra cable (coiled up) for future maintenance or relocation.

It is not recommended to use the double probe system with a driveway wider than twelve feet for reasons of installation and repair. However, if one has a wider driveway, the system can be buried parallel to and in the middle of the drive perpendicular to the outside road (see illustration on page 1). If this course is pursued, the following precautions should be taken:

- 1) Place probes and cable in a 2 inch PVC pipe when buried under gravel drives for mechanical protection.
- 2) Ensure probes are buried 2½ feet apart, as outlined above.
- 3) Install probes in a manner they can be retrieved in the event of a repair situation.

Failure to follow these precautions compromises any warranty covering the probe system.

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## INSTALLATION OF PROBE CABLE

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The probe cable is direct burial and does not require conduit. Depth of burial depends on lawn conditions. In cultured grass, bury the cable 2-3 inches deep. The root system of the grass will capture the cable for life. Use a lawn edger to slice a 1/4 inch wide trench across the lawn to the location of the control unit. Push the cable to the bottom of the slice, fill, and tamp. In uncultured field grass or in soil without cultured grass, bury the cable at least 6-8 inches deep.

When pulling the cable through conduit or PVC pipe, it is important that every inch of cable be liberally lubricated. Use a wire lubricant and pull only 100 feet or less at one time. The cable is coated with polyurethane and has extremely high traction which causes a tremendous drag when not lubricated; enough to inconspicuously snap the wire inside the cable.

**NOTE:** The cable can be buried in the same trench as power and telephone lines. DO NOT put in the same conduit. Follow all electrical codes.

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## CONNECTING TO CONTROL UNIT

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The Short Driveway Double-Probe System can be used with the CT-2B, CT-2GB or CF-2C control units. It is hooked up to those control units the same as the CT-6 sensor probe. Follow the instructions as outlined in the manual that came with your control unit.

<b>WARNING!</b>	The polyurethane coating on the probe cable demands that extreme care be taken when unrolling it. To unroll, put your arm through the center of the roll, remove the tape, and unravel the roll one wrap at a time. Once you begin unrolling the cable, do not lay it down before you are finished lest it becomes irreparably tangled.
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