
LIMITED THREE YEAR WARRANTY

The CP-3 is warranted against defects in material and workmanship for three years. This warranty does not cover defects caused by, but not limited to: acts of God, improper installation, abuse, fire and water damage, electrical surges, and damage to cable caused by slicing, pulling, tangling, or improper splicing. For more information, contact US Automatic.

RETURNING MERCHANDISE

Before returning products for repair, please call USAutomatic at (866) 711-0001 to troubleshoot and for a Return Merchandise Authorization (R.M.A.) number. Products without an R.M.A. may not be accepted. Write the R.M.A. number on the return shipping box and any correspondence included with the defective product.

TECHNICAL SPECIFICATIONS

POWER REQUIRED:	6 - 31 VAC or 10 - 40 VDC
STANDBY CURRENT:	150 Microamps (μ A) maximum
ALARM CURRENT:	25-30 Milliamps (mA) maximum
RELAY CONTACTS:	3 Wire: SPST, Trip to GROUND
RELAY CONTACT RATING:	1 amp/24 VDC (1 mA at 5 VDC min. load)
RELAY TIME:	2-3 seconds
TEMPERATURE RANGE:	-25° F. to + 125° F.
DIMENSIONS:	20 in. long x 3/4 in. diameter
WEIGHT:	5 lbs. with 100 ft. cable



CP-3 SELF-CONTAINED

PROFESSIONAL FREE EXIT SYSTEM



INSTALLATION/OPERATION & OWNER'S MANUAL

Please Note:
After power-up, it takes at least two minutes for the CP-3 to be functional.

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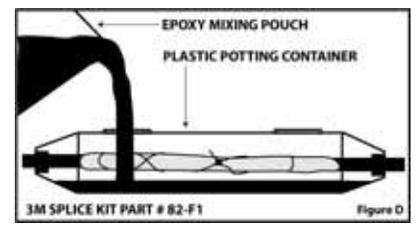
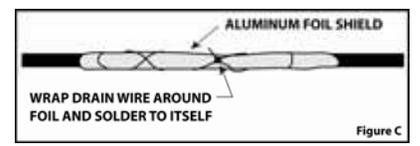
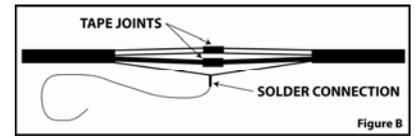
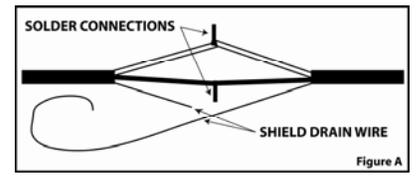
WARNING!	The CP-3 is only a trigger, not a safety. To use with a gate operator, an external safety must be added.
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WARNING!	A child on a bicycle, tricycle or other moving steel playing equipment; horses, ATV's, golf carts, lawn mowers and other small vehicles may trip the CP-3 and cause the automatic gate to open. See "ALTERNATIVE INSTALLATIONS" on p. 8 for further information.
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Preferred Technologies Group: First, a two-wire or four-wire shielded direct burial cable (unshielded cable and PVC jacketed cable will not give proper splices). Second, an underground splice kit made by 3M, part #82-A1; USAutomatic's part number is 070320).

Follow these instructions:

1. See Figure A.
 Strip the outer jacket on one cable back 10 inches and cut the RED and BLACK leads (and GREEN and BLUE, if applicable) to 3 inches, leaving the SHIELD drain wire the full 10 inch length. Strip the outer jacket off the mating cable back 3 inches and strip the jacket of the RED and BLACK lead (and GREEN and BLUE, if applicable) of both cables back 1/2 inch. Twist the BLACK to BLACK and RED to RED (and GREEN to GREEN and BLUE to BLUE, if applicable) and solder the connections.



2. See Figure B.
 Trim the RED and BLACK (and GREEN and BLUE, if applicable) joints and tape for proper insulation. Twist the 3 inch SHIELD drain wire to the 10 inch SHIELD drain wire and solder the connection. DO NOT cut off the excess SHIELD drain wire.

3. See Figure C.
 Wrap aluminum foil around splice area (to properly shield it). Wrap the 10 inch SHIELD drain wire tightly around the outside of the foil and solder it to itself in order to hold it in place. This procedure insures that any signal to the splice SHIELD will drain to ground and thus prevent false alarms.

4. See Figure D.
 Place an underground splice kit potting container around the spliced cable and epoxy, following the kit instructions carefully.

ALTERNATIVE INSTALLATIONS FOR GATE OPERATORS

If children on tricycles and horses with steel shoes trip the CP-3, simply bury the CP-3 probe two feet deep and parallel with the driveway. This reduces the possibility of small objects tripping the CP-3. If there are other questions concerning applications, call USAutomatic at 866-711-0001.

WIRE HOOK-UP (SENTRY ONLY)

See Figure 3.

Connect all wires to the J2 terminal strip. Connect RED wire (Power) to pin 1. Connect SHIELD wire (Ground) to pin 2. Connect BLACK wire (Relay Closure) to pin 3.

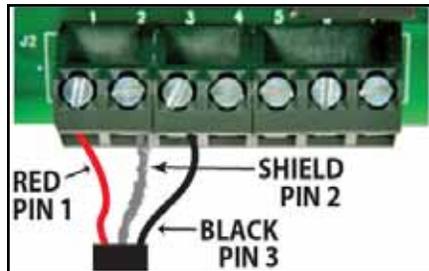


Figure 3

NOTE: For Patriot or Ranger control boards: connect BLACK wire (Relay Closure) to J2, Pin 9.

EARTH-GROUND

A proper earth-ground is essential for the system's lightning protection and EMF shielding. Normally, burying the CP-3 copper probe is sufficient to meet the grounding requirements.

However, in areas where there is a poor earth ground, the probe is inserted in a PVC pipe, or the probe is mounted above ground, the grounding strap that is part of the CP-3 should be soldered and clamped to an eight foot copper or copper-clad ground rod driven deeply into the ground (DO NOT use a galvanized ground rod). Extra wire can be added to the grounding strap if needed.

SPLICING INSTRUCTIONS

The cable supplied with your system is coated with polyurethane because it will bond with epoxy and make a sealed splice. If you purchase your own cable, make sure it is polyurethane coated or it will not splice. Improper cable splices will cause false alarms and failures. To insure a proper splice, follow the instructions below.

Two items are necessary when splicing, both available from

INTRODUCTION

The CP-3 system is an electronic vehicle detection device based on electromagnetic induction. It is designed to provide a trigger for free exit and home automation. The sensor probe and control electronics are integrated within the same enclosure, with an attached cable, eliminating an external control board.

BENCH TESTING AND FIELD TESTING

Note: After power-up, it takes at least two minutes for the CP-3 to be functional.

The system should be bench tested before taken to the field. In the field, the CP-3 should be connected to the gate operator and tested by swinging a piece of steel over it before burial.

On the bench, make measurements with a multimeter (without touching the meter leads) as follows:

Connect one side of the meter to shield and the other side to the BLACK wire. It should measure millions of ohms. With the meter still connected to the wires, trigger the CP-3 by swinging a piece of steel over it. When it triggers, the meter reading should drop for 2-3 seconds and then rise again to its previous reading.

LOCATION OF CP-3

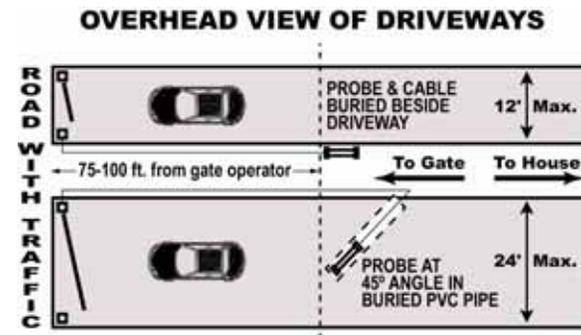


Figure 1

See Figure 1.

Used with a gate operator, the CP-3 should be installed at least 75 feet before the gate. The CP-3 can cover a 12 foot wide driveway (including width of car traveling 5 M.P.H.) from the dirt

beside the driveway. For wider driveways (up to 24 feet), bury the CP-3 under the driveway in its center, making sure to ground it (see "Earth Ground," p. 4). When two probes are used, one on each side of the driveway, together they will cover a 17 foot wide driveway.

The CP-3 may be placed parallel, perpendicular, horizontal or vertical to the driveway surface; however, its most sensitive position is parallel to the flow of traffic. The system can be buried below the ground or mounted above ground. When mounting above ground, the CP-3 must be grounded (see "Earth Ground," p. 4). It should be installed horizontally to the ground and no higher than two feet.

When above ground, run the cable in non-magnetic conduit or PVC pipe for mechanical protection. Stationary steel near the CP-3 will not affect its operation. It may also be installed under the steel reinforcing grid of a concrete roadway without affecting its operation (be sure to ground it, see "Earth Ground," p. 4).

Install the CP-3:

- At least 6-10 feet away from a buried power or telephone line or invisible dog fence
- At least 10 feet away from a natural gas line
- At least 20 feet away from a power pole with a transformer
- At least 200 feet away from high power substation power lines
- At least 100 feet back from railroad traffic
- At least 50 feet back from traffic traveling over 35 MPH
- At least 35 feet back from traffic traveling under 35 MPH

INSTALLATION OF CP-3

See Figure 2 on page 3.

Bury the CP-3 sensor probe 6-8 inches below the surface and beside the driveway. Bury an additional 10 feet of coiled-up cable with the probe for future maintenance or relocation, etc.

Bury cable 3 inches deep in cultured grass using a trencher or lawn edger (use an abrasive concrete saw in frozen ground). In field grass or uncultured grass, bury cable 6-10 inches deep. Be sure to push the wire to the bottom of the slice and tamp the sliced area. When running above ground, place the cable in non-

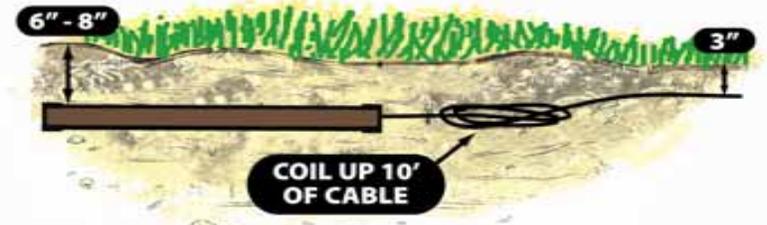


Figure 2

magnetic conduit or PVC pipe for protection. If run overhead, attach to a steel cable with plastic ties every 6-10 feet. Connect to power as described on page 4, "Wire Hook-Up."

NOTE: The cable CAN be buried in the same trench as power, telephone and water lines, if codes permit, but **not** in the same conduit. Refer to local and national electrical codes.

When installing the CP-3 in concrete or pavement, bore a 1" diameter hole VERTICALLY and 24 inches deep. Make a 1/4 inch wide slice in the pavement from the bored hole to the side of the driveway and patch over the cable. Be sure to ground it (see "Earth Ground," p. 4).

When installing the CP-3 in or under a dirt or gravel driveway, first bury a 1 inch schedule 80 PVC pipe in the center of the driveway, 6-8 inches deep, and diagonally at a 45 degree angle (see Figure 1 on page 5). Slide the CP-3 and cable in the pipe to the center of the driveway. This could be used in a driveway up to 24 feet wide. When installing in new construction, bury the 1 inch PVC pipe under the driveway as described above. Pour cement, or asphalt the drive. Insert the CP-3 and cable after landscaping is complete to prevent possible damage to cable. Be sure to ground it (see "Earth Ground," p. 4).

Warning! When pulling cable through conduit or PVC pipe, it is important that every inch of cable be liberally lubricated and pull only 100 feet or less at one time. The cable is coated with polyurethane for splicing purposes and has extremely high traction. When pulling cable not lubricated it can inconspicuously snap the wire inside the rubber casing.

Warning! Extreme care must be taken when unrolling CP-3 cable. To unroll it, put your arm through the center of the roll, remove the tape, and unravel the roll one wrap at a time. Unwrap the roll entirely before trenching.