

## Contact Information



Welcome to the World of  
**E-Collar Technologies, Inc.**

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**1000 Series**

**Installation Basics**

**“Happiness is a Dog  
that Stays Home”**

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## 1000 Series Installation Basics

### 1000 Series E-Fence System

Thank you for purchasing the 1000 Series Wired E-Fence System from E-Collar Technologies, Inc. We have made every attempt to provide you with the most technologically advanced product using the most stringent quality and manufacturing standards.

Good luck with your dog's safe containment and please feel free to contact us should you have any questions.

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# E-Fence Installation Basics

## Principles of an E-Fence:

In the 1800's, scientists discovered that an alternating current sent through a wire produces an electromagnetic field. E-Fence uses this principle by sending a low frequency alternating current through the boundary wire producing an electromagnetic field of the same frequency. Faraday and Lenz also discovered the converse, whereby an electromagnetic field will induce an alternating current on a parallel wire. This is how induction motors and transformers work. The E-Fence collar receiver is a device that detects the electromagnetic field generated by the current sent from the E-Fence transmitter.

**SPECIAL CARE IS REQUIRED IN THE INSTALLATION TO AVOID INDUCTION VIA CONCRETE REBAR AND ELECTRICAL WIRING.**



## E-Fence Installation Basics

### Before You Dig:

Please call 811 to have all of your underground utility lines marked by a professional. Even though most utilities are buried much deeper than the E-Fence containment wire it is important to know where they are located. Privately buried wires and plumbing such as septic tanks and sprinkler systems will not be marked by the 811 professionals. **YOU SHOULD MARK THEM AND SHUT OFF ALL WATER AND POWER BEFORE INSTALLING THE E-FENCE. PLEASE ALSO KEEP THE E-FENCE CONTAINMENT WIRE SHALLOW IN SUCH AREAS.**

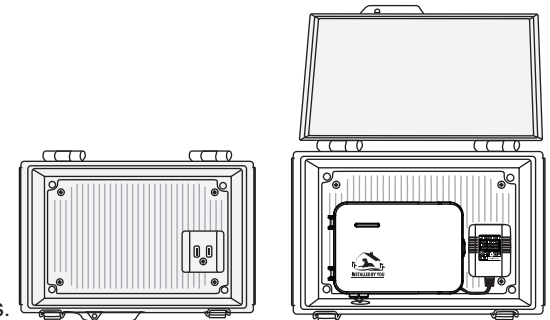
### Laying Out the Containment Area:

Here are few helpful and important reminders as you layout your containment area(s):

- 1) The corners should be gradual. Avoid abrupt 90 degree turns, which can cause signals to be distorted.
- 2) Concrete driveways and sidewalks should cross at right angles to avoid energizing the metal rebar that is used to strengthen the concrete. Make every attempt to keep the parallel runs a couple of feet from the concrete.
- 3) Electrical power lines should also cross at right angles to avoid energizing them. If the electrical wire is energized by the containment, unintended activations may occur. This rarely occurs but you should be aware of its possibility.
- 4) If your neighbor has a boundary wire buried, please ensure there is at least 6 feet separating the wires.
- 5) Twisted wires and closely placed parallel wires will cancel the signal providing a safe zone.
- 6) The loop needs to be continuous wire for the signal to create a complete circuit. Waterproof wire connectors can be used to attach wires together.

### Transmitter Box Position:

Determine where the transmitter is to be mounted. An electrical outlet should be available within a few feet of the transmitter's placement. If outdoor mounting is preferred an environment box is needed, please contact for more information on our environmental boxes.



## E-Fence Installation Basics

### Sample Yard Designs:

The most basic design is to allow your dog(s) full access to your yard as in figure 1. The twisted wire allows your dog to freely cross over that area moving from the front to the back yard. It is suggested that the front yard boundary wire be set back a yard or two from the sidewalk to limit your dog's access to pedestrian sidewalk traffic.

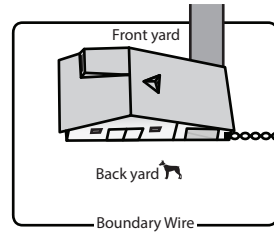


Figure 1

Another popular option is to allow the dog access to the backyard only. Three possible options are available:

In figure 2, the wire is brought around the front of the house close enough to not allow access via the side yard, but not too close as to allow the signal to enter the house.

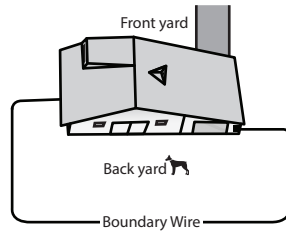


Figure 2

Figure 3 demonstrates the parallel wire approach; the wires need to be separated by a minimum of 6 feet to prevent cancellation of the signal.

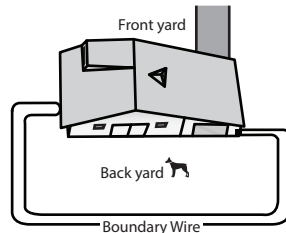


Figure 3

Figure 4 demonstrates the over the house approach by fishing the wire through the guttering of the house. It is important to make sure no signal enters the house. The collar receiver should be tested inside the house to assure there is no signal reaching into the house.

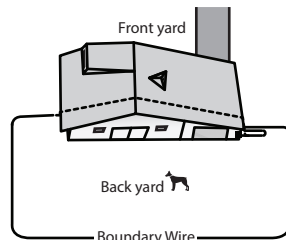


Figure 4

## E-Fence Installation Basics

"Keep out" areas are great to keep your dog out of flower gardens. Figure 5 demonstrates how to create "keep out" areas using loops with a twisted wire. The dog can cross the twisted wire but not enter the "keep out" area.

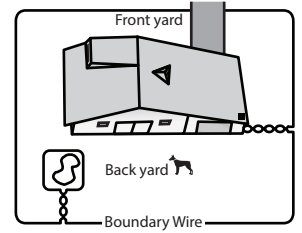


Figure 5

Figure 6 demonstrates the figure eight approach to allow your dog access to the front or back yard but not access between them.

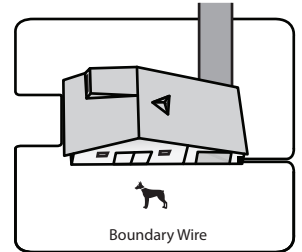


Figure 6

Figure 7 demonstrates how to protect your dog from only one side of your yard.

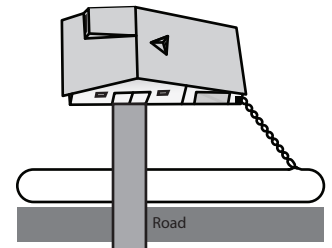


Figure 7

Figure 8 demonstrates how to make an open area for your dog to leave and enter your containment zone.

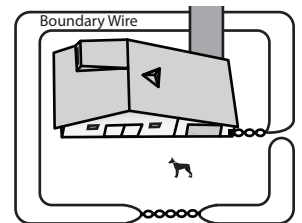


Figure 8

## E-Fence Installation Basics

Figures 9 and 10 demonstrate the two possible options for lake properties. Both options allow your dog access to the lake from the containment area. Figure 9 requires the wire to be installed at the bottom of the lake deep enough so the signal does not activate the collar receiver. A minimum of 10 feet deep water is recommended.

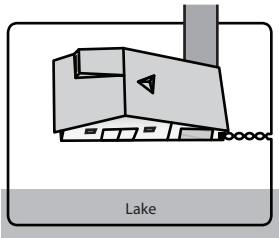


Figure 9

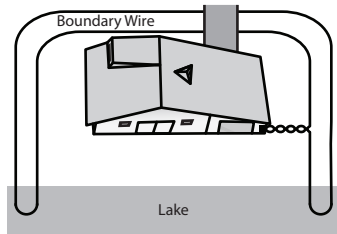


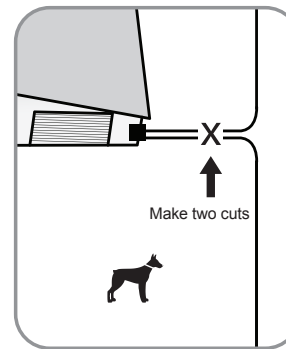
Figure 10

## E-Fence Installation Basics

### How to Make Twisted Pair Wire:

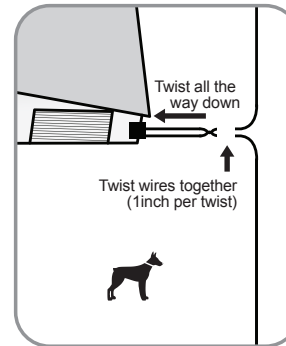
**A**

Cut the boundary wires at the following point marked ("X") and disconnect the wire from the control box. Replace this section with the pre-twisted wire and skip to Step C where we connect the twisted wire. If you did not purchase the pre-twisted wire, skip to Step B. You will need to twist the wires manually.



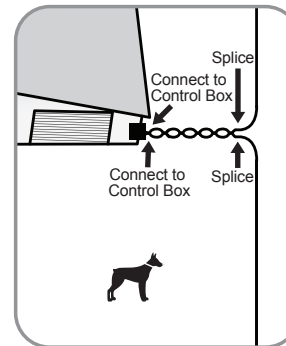
**B**

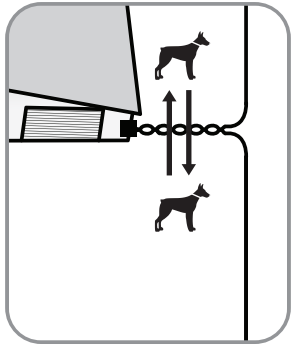
Twist the two wires together, so that there is about one twist per inch. An easy method is to attach the wires to an electric drill and let the drill do the twisting.



**C**

Next, splice the twisted wire back into the boundary loop on one side, and re-connect the twisted wire to the control box on the opposite side.





**D** Congratulations! Your dog can move freely crossing the twisted section without being alerted or warned.

The Transmitter Box generates the signal that migrates throughout the E-Fence boundary. You can set the boundary width as well as the strength to alert your dog. It also includes an indicator to let you know if the E-Fence is operating properly and will sound an alarm if there is a break in the E-Fence.

### Transmitter Box Placement:

- Near a Power Outlet – Preferably closer to an electrical outlet.
- Near an Exterior Wall – To easily run boundary wires.
- Sheltered from the Weather – Transmitters should be protected from moisture and extreme temperature.

Inside – Garage or a shed are good locations for the Transmitter Box.

Outside – An Environmental Box provides added protection if you are placing the Transmitter Box outside.

## E-Fence Installation Basics

### Mounting the Transmitter Box:

- Transmitter Box weigh less than 1lb and does not require mounting into a stud.
- Screw the Transmitter Box into the wall using the provided mounting screws.

**NOTE: YOU WILL NEED APPROPRIATE ANCHORS IF MOUNTING ONTO DRYWALL OR MASONRY.**

### Getting the Wire to the Yard:

If the Transmitter Box is Inside (in garage or a shed), you will need to run the wire outside.

- Use existing vent, window or under the garage door.
- Drill a hole through the wall, pull the wire through the hole and then caulk.

**DO NOT USE DRYER DUCTING. DRYER VENTS GET EXTREMELY HOT AND WILL MELT THE BOUNDARY WIRE AT THOSE TEMPERATURES.**

### Optional – Lightning Protection:

- Certain geographic locations that experience frequent lightning
- Or areas in excess of 5 acres.

E-Fence offers lightning protection plugs. Instead of having the boundary wires connect directly to the Transmitter Box, the two boundary wires connect directly to the lightning protection plugs. Two additional wires are deployed to connect to the lightning protection plugs to the Transmitter Box. This option protects the Transmitter Box from surges.

## E-Fence Installation Basics

### Laying Wire Steps:

1. Turn off all water and power.
2. Lay out wire above ground and connect to Transmitter Box.
3. Allow for 20% additional wire to account for burying.
4. Use twisted pair wires in appropriate sections and ordinary single boundary wires for remaining E-Fence areas.
5. Install optional Lightning Protection Plugs.
6. Turn on power and power on Transmitter Box.
  - a. If blue light, turn off power and proceed to Step 7.
  - b. If system sounds an alarm or there is a flashing light, there is a problem.

Double check all sections to ensure wires are properly connected. Ensure that the wire forms a loop.

Redo Step 6 and test for blue light.
7. Test the E-Fence system using a collar to double check that the system is properly alerting.
8. When everything is properly functioning, power off system and proceed to “Burying Wire.”

### Burying Wire:

There are 3 methods to bury the E-Fence wire:

1. **Hire a trencher.** Trenchers are pros at this type of work. Remember we recommend that you bury 1 to 3 inches.
2. **Power Edger.** Dig a shallow trench, and manually lay the wire and bury it.
3. **Shovel.** You will need to dig a narrow trench, then manually lay the wire. This method should only be used for less than ½ acre E-Fence containment areas.

Alternatively, you may deploy E-Fence containment wire above ground or on a fence mount.

1. **Above Ground.** You do not have to bury the wire at all. **PLEASE NOTE THAT THIS METHOD SHOULD BE AVOIDED IN AREAS THAT REQUIRE MOWING.**
2. **Fence Mounting.** If you have a fence, the boundary wire can be attached to the fence instead of buried.

### Connecting and Testing:

1. You are almost finished. Connect the wires to the Transmitter Box and power on the system.
  - Blue Light - Kudos! Go to Step 2 below.
  - Alarm or flashing light – Find the break in the wires. Often, it is at one of the splices where you twisted the wires. Check all joints. Alternatively, there maybe a break in the E-Fence wire.
2. Set boundary with markers or flags.
  - Initially make the boundary at least 3 feet wide on either side to train your dog.
  - Take the collar without touching the probes holding it at approximate height of your dog's head.
  - Slowly move towards the boundary wires until you hear a beep or see the collar light flash.