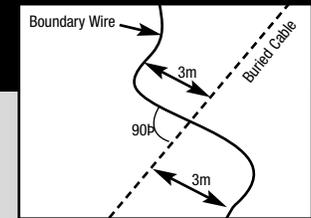


## Quick Start Guide

SD-2100E

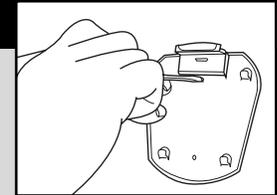
### Step 1 Design Your Fence



Have the local utility companies mark your underground lines. On a sheet of paper, draw your house and yard. Draw a line around your property that represents the in-ground fence area for your dog.

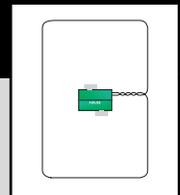
### Step 2 Install the Transmitter

Most people find that the inside of an exterior wall of a garage or basement is ideal. From the sample layouts, you can see the twisted wire running from the house attaches directly to the transmitter.

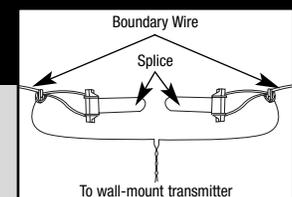


### Step 3 Lay Out the Fence Wire

Run the in-ground fence wire around the property as outlined in your plan.



### Step 4 Final Connections



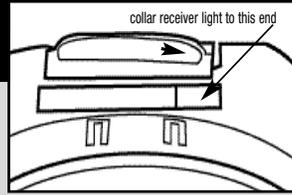
Splice the in-ground fence loop wires to the twisted wire using the supplied waterproof splices. Connect the other end of the twisted wire to the wall-mount transmitter. Plug in the AC adapter, connect it to the transmitter, and turn it on. The green light should illuminate on the transmitter indicating a successful loop. Charge your collar receiver by placing it in the receiver cradle located on top of the transmitter.



IN, USA

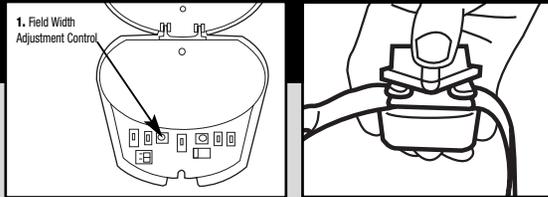
[www.innotek.net](http://www.innotek.net)

**Step 5** Charge Collar



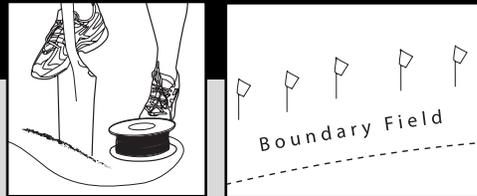
Position the collar receiver in the charging cradle located on the top of the wall transmitter. Orient the light on the collar receiver toward the end of the charging cradle marked with an arrow and identified on the label.

**Step 6** Test Your Fence



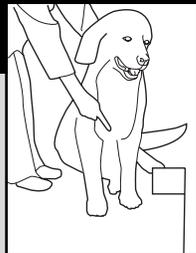
Set your FIELD WIDTH ADJUSTMENT KNOB to the 9 o'clock position. Using the supplied test light, walk the dog's collar up to the fence wire. Listen for the warning tone and look for the test light to light. Try a number of different places around the fenced area to verify the range is consistent.

**Step 7** Bury Fence Wire



Dig the trench 7 to 10 cm deep with a flat edge spade. Or, it is faster to use a gas-powered edger. Digging the trench at an angle helps keep the wire in the ground as you place it. Place flags at edge of selected boundary field where the warning tone is first heard, NOT at wire.

**Step 8** Train Your Dog



Watch the training video and follow the training steps outlined in the separate Training and Troubleshooting Guide. Your dog may respond immediately to the training, however, continue to follow the enclosed Training Guide to fully train your dog. The convenience that your new fence offers plus the added safety for your dog are well worth the time invested.

**IMPORTANT ADVICE**

1. Read the complete manual and follow all directions. This includes the Training and Troubleshooting Guide.
2. This device is intended for use only on dogs. Never attempt to use it for any purpose not described in this manual.
3. Never perform set-up procedures while the collar is on your dog.

4. Any collar worn for extended periods can cause a condition similar to bedsores, known as Pressure Necrosis. To reduce the possibility, you must do the following:
  - Never leave the collar on the dog for more than 12 hours per day.
  - Check the fit to prevent excessive pressure; you should be able to insert one finger between the collar strap and your dog's skin.
  - Examine the dog's neck daily for any signs of a rash or a sore.
  - Wash the dog's neck area and the probes of the collar weekly with a damp cloth.
  - If the condition persists beyond 24 hours, see your veterinarian.

5. Always use the rubber insulators between the collar strap and probes to provide insulation in damp conditions.
6. Other collars and metal tags should be removed as they may interfere with proper operation.
7. Do not attempt to dismantle or repair any components of this system; doing so will void the warranty in full. The computerized circuitry should be serviced only by an authorized expert.
8. Realize that because dogs have unique temperaments, there is no way of knowing how your dog will react to the introduction of an in-ground fence system. For the safety of your dog, a long lead should be used during initial training so you have control of the situation.
9. If you have reason to believe that your dog may pose a danger to others, harm itself, or react adversely to the collar, do not rely solely on this product to train your dog. If your dog shows signs of growling, snarling or biting while using the collar, stop immediately. Aggression in dogs has many causes. We recommend that you consult a knowl-edgeable professional dog trainer or animal behaviorist with experience with aggressive dogs if your dog has shown any of these characteristics.
10. Occasionally, a dog cannot be trained to respond to an in-ground fence collar. Sometimes even a properly trained dog may disobey a command. Therefore, Invisible Technologies, its distributors, and dealers cannot guarantee that the system will in all cases keep the customer's animal from disobeying commands.

**LIMITED INTERNATIONAL WARRANTY**

Innotek, Inc. warrants to the original retail purchaser, that INNOTEK brand products will be free from defects in material and workmanship, under normal use, for a period of two years from the date of the original retail purchase. This Limited Warranty excludes: accidental damage due to dog chews; lightning damage where an INNOTEK brand lightning protection component is not in use (in-ground pet fencing systems); or neglect, alteration, and misuse.

Innotek Inc. offers several product exchange options during the warranty period. If service is required, call your authorized INNOTEK Service Center to discuss the service plan that best serves your needs. Costs are dependent on the processing time and the desired shipping options. **Please do not return this product to your retailer.**

After two years from date of original retail purchase, we will repair, replace or upgrade your product at a fixed rate based on the component.

Innotek, Inc., shall not be liable or responsible for any incidental or consequential damages resulting from the use of the product or caused by any defect, failure or malfunction of the product, whether a claim is based upon warranty, contract, negligence or otherwise.

INNOTEK brand products are not substitutes for traditional obedience training. Innotek, Inc. does not guarantee the effectiveness of its products due to variances in canine personality, temperament, and influences beyond INNOTEK control.

If services are required, please contact the nearest INNOTEK Service Center to obtain a Return Merchandise Authorization (RMA) number and return instructions. If the return request is approved, please send the defective part or the complete system by insured carrier to the specified address. Shipping costs are not covered.

**Caution for Battery Use:**

- Do not disassemble
- Do not short circuit
- Do not expose to high temperature: 60°C/140°F
- Do not incinerate
- Avoid high humidity
- Keep batteries out of reach of children



Batteries must be recycled or disposed of properly. They should NEVER be placed in municipal waste. Should it necessary to remove or replace your unit's batteries, your INNOTEK Service Center will dispose of them according to local regulations.

# Smart Dog In-ground Pet Fencing System

## Model SD-2100E

### The Transmitter

The transmitter is the system's control center. The front cover lifts to reveal the switches that can customize your system.

1. Field Width Adjustment - Controls the distance from the wire your dog can venture before hearing the warning tone.
2. Field Size - Set switch to small (SM) for installations of 300 meters of wire or less.
3. Stimulation Level Switch - Select from levels Low, Medium, or High, the correction level your dog will feel after the 2 second warning tone (LOW and MED selections only). The tone will sound immediately with the correction when level is set on High.
4. Loop Wire Terminals - Connections for the in-ground fence wire.
5. Collar Receiver Charge Reminder - Set to A to remind you to recharge your dog's collar every 30 days. Set switch to B for every 60 days. Always check for low battery light before putting collar on your dog.

**NOTE:** Recharge reminder tone can be reset by placing the collar receiver in the charge cradle for more than five minutes.

6. Power Connection - Power for the in-ground fence system is supplied by the 24 volt adapter plugged into any 220v household outlet.
7. Battery Backup Monitor - If power is interrupted to the system, the battery back will keep the system working up to 40 hours. Install 8 AA alkaline batteries (not included). The monitor will sound when batteries need to be replaced. For the safety of your dog, the battery backup should be turned on and kept in good working order at all times.
8. Power - ON/OFF Switch
9. Alarm Volume - Alarm volume adjustment.
10. Indicator Light and Alarm - The light on the front of the transmitter will indicate the following conditions.

TRANSMITTER STATUS INDICATIONS		
STATUS LIGHT	ALARM TONE	CONDITION
SOLID GREEN	NO	POWER ON / SYSTEM OK
FLASHING GREEN	NO	RECEIVER CHARGING
FLASHING RED	YES	BOUNDARY WIRE BROKEN OR DISCONNECTED
FLASHING RED AND GREEN	YES	RECEIVER RECHARGE REMINDER
FLASHING YELLOW	YES	BACKUP BATTERIES LOW
NONE	YES	AC POWER DISCONNECTED OPERATING ON BATTERY
NONE	NO	TRANSMITTER IS OFF OR POWER IS DISCONNECTED

**Over-Stimulation Prevention** - In the unlikely event that your dog becomes "trapped" in the in-ground fence field, this feature limits stimulation duration to 10 seconds. The system shuts off for 10 seconds before resuming stimulation for another 10 seconds. This pattern will repeat for a maximum of three cycles, a duration of 60 seconds.

**Run-Through Prevention** - Special features are incorporated in your system so your dog cannot "run-through" the in-ground fence field without activating a strong stimulation. The receiver automatically increases the stimulation when your dog continues more than 1/3 of the way through the in-ground fence field, regardless of the transmitter stimulation level setting. For example, if the signal is detected 4 meters from the wire and your dog enters the in-ground fence field, this feature is activated when he is approximately 2.5 meters from the wire. At this point, your dog automatically receives the highest level of stimulation.

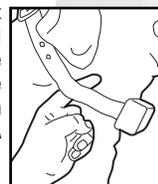
### The Collar Receiver

The collar receiver is attached to a nylon collar strap that your dog will wear. The collar receiver administers the warning tone and correction should your dog attempt to leave the yard. Your collar receiver is rechargeable, and can be charged by placing the collar on the charging cradle located on top of your wall-mount transmitter.

INDICATOR LIGHT	tone PITCH	CONDITION
GREEN FLASHING (ONCE EVERY 2 SEC.)	NONE	COLLAR IS READY TO RESPOND TO THE IN-GROUND FENCE FIELD
GREEN PULSATING	INTERMITTENT LOW PITCH	WARNING TONE IS OCCURRING
RED PULSATING	INTERMITTENT MEDIUM PITCH	ENTRY LEVEL STIMULATION IS BEING DELIVERED
	INTERMITTENT HIGH PITCH	RUN-THROUGH STIMULATION IS BEING DELIVERED
RED FLASHING (ONCE EVERY 2 SECONDS)	NONE	RECEIVER BATTERY IS LOW
SOLID GREEN	NONE	STIMULATION IS LOCKED OUT (OVERSTIMULATION PREVENTION IN EFFECT)
YELLOW FLASHING (ONCE EVERY 2 SECONDS)	NONE	OVER-STIMULATION PREVENTION HAS EXCEEDED THREE CYCLES (STIMULATION IS LOCKED OUT UNTIL YOUR DOG RETURNS TO THE SAFE ZONE)
NONE	NONE	RECEIVER BATTERY IS COMPLETELY DISCHARGED

### Fitting the Collar on Your Dog

The collar strap should fit snugly towards the top of your dog's neck with the collar receiver box on the bottom of the neck. You should be able to get one finger between the collar strap and your dog's neck. The contact points must make contact with the dog's skin for proper operation. A little hair thinning may be required.



### Important Notes:

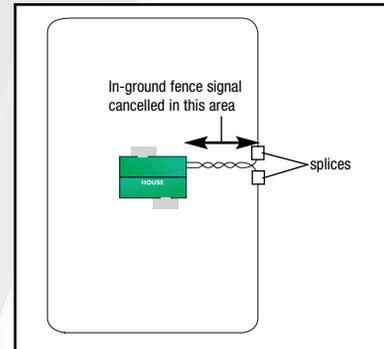
1. Always use the rubber insulators and the collar strap. They provide insulation in damp conditions and keep the collar receiver secure.
2. A small amount of hair thinning makes contact with the dog's skin easier.
3. This product is recommended for dogs six months of age and older.

Occasionally, check the tightness of the receiver probes to ensure the receiver does not fall off of the collar. Lost collars are not covered under your warranty.

## Step 1 Design Your Fence

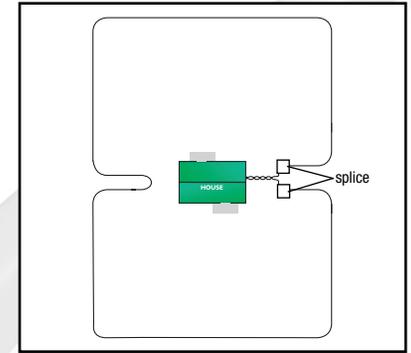
- Although the in-ground fence wire is only buried 7 to 10 cm deep, make sure you contact your utility companies to mark underground cables and wire before you dig.
- Interference can occur around large metal objects and buried electrical, telephone and cable TV wires. Do not run closer than 3 meters to these cables. You can minimize interference issues by crossing perpendicular to these lines. See Quick Step 1 Illustration.
- The in-ground fence wire must form a complete loop from the transmitter.
- For your dog's safety, it is recommended that you keep the in-ground fence wire at least 3 meters from the street.
- Keep in mind that you will want to place the wire where there is room for a 3 to 4 meters in-ground fence field.

**Front and Back Yard Loop.** The most common installation. The wire is placed just inside the property line to form a square or rectangle.



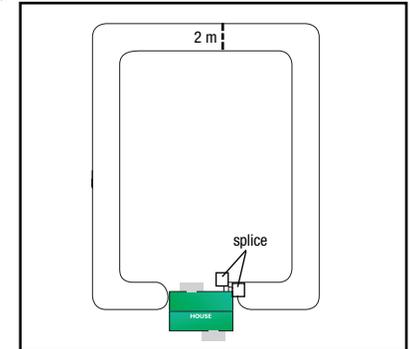
Front and Back Yard Loop

**Hourglass Loop.** Allows your dog to be contained in either the front or back yard but not around the side of the house. When the wire runs parallel to itself as it goes toward the side of the house be sure the wires don't come within 2 meters of one another to avoid canceling the signal.



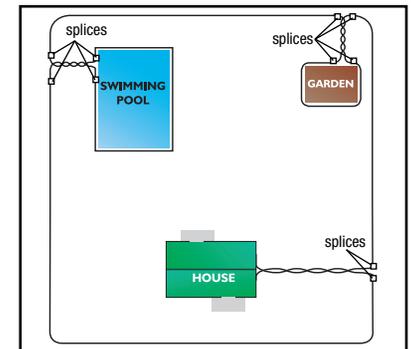
Hourglass Loop

**Double Loop.** Confines your dog to the backyard only. The wire needs to run around the backyard, using the house as a natural barrier and doubling back to the transmitter to finish the complete loop. When doubling back, make sure that there is at least 2 meters between the lines to avoid canceling the signal.

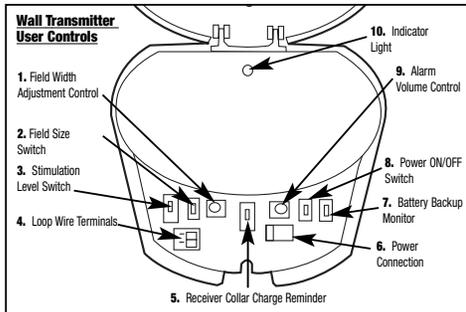


Double Loop

**Customized Loops.** You can create off limit areas, such as pools and gardens by encircling the area with wire. Run twisted wire from the fence loop to the encircled area and splice the ends together.



Customized Loops



## Step 2 Install the Wall-mount transmitter

### 1. Select a Location

Select an indoor, dry location to hang the wall-mounted transmitter. You will need a standard 220v grounded outlet within 1.5 meters for power. Most people find an inside exterior wall of a garage or basement works well. You will need easy access to run the in-ground fence wire outside.

### 2. Install the Mounting Plate

The mounting plate is attached to the back of the transmitter. Remove by lightly depressing the dot on the top tab and sliding the transmitter housing down the plate.

Use the mounting plate as your template and mark holes with pencil. Fasten plate with supplied screws.

### 3. Install Battery Backup Batteries

*(Optional, but recommended)*

In case your power goes out, your system can run for up to 40 hours on 8 AA batteries (not included). Install batteries and flip BATTERY BACKUP MONITOR switch to the ON position. If you choose not to use the battery backup system, set the BATTERY BACKUP MONITOR switch to OFF.

### 4. Provide for wire access to outside

You will need to get the wire from the transmitter to outside where the in-ground fence loop will run. This can be done through a window or you can drill a 6 mm hole at the base of the wall to pass the wire through. After final installation and testing is complete, you can caulk the hole for weather tightness.

## Step 3 Lay Out the Fence Wire

With the transmitter installed and the hole drilled for the wire, you can position the boundary wire that will form your fence. DO NOT bury the wire until you are sure that the system is running properly.

### 1. Amount of wire

Your system includes 150 meters of boundary wire. Here are some examples of wire coverage area:

Acres	Linear meters Needed
1	259
2	366
3	457
4	518
5	579

## 2. Placing the wire

The wire must make a continuous loop from the transmitter and back again. The signal is transmitted from one terminal at the transmitter around the loop and back to the transmitter again. Keep in the mind that you will want 3 to 4 meters of in-ground fence signal field from you wire, so don't run the wire too close to the house and don't make passageways too narrow for your dog to pass.

## 3. Twisted Wire

Twisted wire cancels the radio signal coming from your transmitter. This enables your dog to cross over the wire in the safe part of the yard. Where there is single wire, the fence is active and your dog will be unable to pass. You can twist your own wire by cutting two equal lengths of wire supplied and twisting them together. Anchor one end of the wires to something secure and insert the other end in a drill. Pull wire taught. The drill enables you to twist the wire quickly. You will need at least 36 twists per meter to effectively cancel the radio signal.

## 4. Rounding Corners

Use gradual turns at the corners with a minimum of 0.8 meter radius. This will produce a more-consistent in-ground fence field.

### IMPORTANT TIPS!

- DO NOT run wire within 3 meters of or parallel to cable TV, phone and electrical lines. The signals can couple together causing collar activation in the house and safe parts of the yard.
- The wire must form one continuous loop from the transmitter.
- Use twisted wire to run between the transmitter and interior loops around pools and gardens to allow your dog to safely pass around these areas (as illustrated in the custom loop pictures).

## Step 4 Final Connections

### 1. Splicing to the boundary wire

Pull the twisted wire to the perimeter location of the two ends of your boundary wire loop. Splice the ends of the twisted wire to the ends of the boundary wire with the supplied waterproof splices as shown. Use only waterproof splices supplied with this system. Use of wire nuts alone, electrical tape or solder will not provide a waterproof and secure connection for your system to function properly.

To use the gel-filled capsule splice, strip 15 mm of insulation from the wire ends. Insert ends of wire into nut and twist to secure. Insert the wire nut as deeply as possible into the waterproof gel and snap the lid shut. Tie a knot in the wires as shown in Quick Step #4 to avoid having the wires pull free during installation.

### 2. Bring outside wire to transmitter

From the outside, push the twisted pair of wires through the hole in the wall. Strip about 12 mm of insulation from the two ends. Insert ends into loop wire terminals marked on the transmitter.

## 3. Plug transmitter in

Use supplied adapter and plug transmitter in. Move power switch to the ON position.

The green light should illuminate on your transmitter indicating a properly installed boundary loop. If the light does not come on, refer to the Training and Troubleshooting Guide.

For the collar to properly charge, the transmitter must be plugged in, turned ON, and have the fence wire attached. For this reason you will not charge your collar until you have the layout of the boundary wire where you want it.

## Step 5 Charge Collar

To Charge:

1. Place collar receiver on top of wall-mount transmitter in the charging cradle with probes up.
2. The transmitter light will flash green when properly seated.
3. Wait 14 hours. (A high frequency noise during charging is normal).
4. If charging multiple collars, wait at least 15 seconds before placing the next collar in the cradle.

## Step 6 Test Your Fence

You should have your boundary wire laid out and properly connected and the collar receiver should have charged for 14 hours. DO NOT test the system on your dog.

### 1. Field size switch

Set to small (SM) for installations using less than 300 meters of wire. For larger installations, move the switch to large (LG).

### 2. Adjust in-ground fence field

Move the FIELD WIDTH knob to the 9 o'clock position.

### 3. Test system

Select a section of straight boundary wire that is at least 15 meters long. Attach the supplied test light to the receiver probes and hold the collar receiver at your dog's neck height. Slowly walk the collar toward the boundary wire. Listen for the warning tone and watch for the test light to light. The wider you make the in-ground fence field, the less chance your dog will attempt to run through it. Adjust the FIELD WIDTH as necessary and test again.

Test in a number of different areas until you are satisfied there are no wire breaks and the system is functioning properly.

Next walk around the "safe" part of the yard to ensure there are no stray signals, particularly near the twisted wire coming from the transmitter. Test collar inside the house as well. As mentioned prior, signals from Cable TV, electrical, or telephone lines may transfer stray signals inside and outside the house that can activate the dog's collar accidentally. If

you do encounter this phenomenon, your boundary wire is probably too close to these outside lines and will need to be moved or modified. In-ground fence collars should not be worn inside house.

## Step 7 Bury Fence Wire

You may need the following tools for efficient installation:

Straight edge spade or a gas powered edger. If you plan on running the wire across a driveway you may also need a caulk gun, silicone caulking, and a circular saw with a masonry blade.

### 1. Ensure system is turned off

Turn off the transmitter and unplug the adapter from the AC outlet.

### 2. Bury the wire

Dig a trench 7 to 10 cm deep with a flat edge spade or gas-powered edger. A 30 to 45 degree angle cut will be the easiest to close and keep the wire in the trench. Make sure there is a little slack in the wire as you bury it to compensate for expansion and contraction due to temperature changes.

When crossing an asphalt driveway, make a 2 cm deep cut across the driveway using a circular saw with a masonry blade. Place the wire in crack and seal with asphalt sealant. In concrete there is usually an expansion joint that can be cleaned out and used for the same purpose and covered with clear silicone caulk.

The wire can be placed underwater in creeks and streams by running the wire through PVC pipe or a length of garden hose to prevent the wire from being damaged.

### 3. Place training flags

Repeat the Test System steps outlined in Step 6. As soon as you hear the warning tone, place one flag. Repeat the process at 3 meter intervals around the in-ground fence area. The flags will be your dog's visual clue to the boundary during training, and will be removed during the training process. **You are now ready to begin training your dog.**