

U.S. Technologies, Inc.

Test Report, Part 15

Rev: 040103

Issue Date: May 25, 2004

Report Number: 04-0020

Customer: Radio Systems Corporation

Model: TC-101

Radio Fence *Plus* Remote Trainer Owners Manual



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THE RADIO FENCE PLUS REMOTE TRAINER SYSTEM

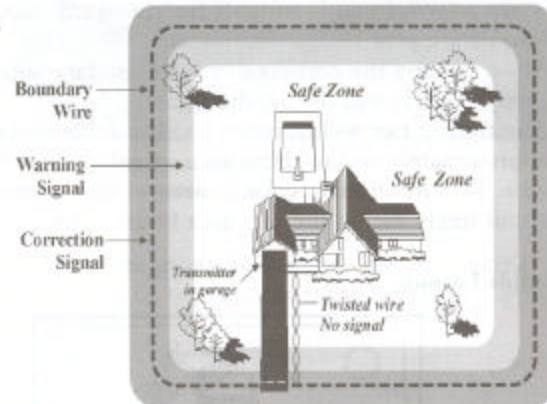
Radio Fence PLUS is an electronic training system that incorporates two distinct functions into one complete system. The Radio Fence PLUS system can be used to contain your dog within your yard and can also be used as a remote training system. For example, the remote trainer can help teach your dog not to dig holes in your garden while the containment system will keep your dog safely in your yard out of harms way.

Our goal is to provide you with a training system that will not only help train your pet, but keep him safe as well. The busy lives we lead can complicate pet ownership. We are committed to making responsible pet ownership simpler.

In the following pages we will cover operation and training using first, the containment system, and then the remote trainer. We urge you to read the entire manual before beginning. Then use the manual to refresh your memory on the best techniques to successfully train your pet.

Introduction to Both Systems

The containment transmitter is both a very low frequency radio transmitter, and a high frequency radio receiver, which plugs into a standard electrical outlet. The signal is carried by the boundary wire, which serves as an antenna. The range of the signal (i.e. the distance from the boundary wire to where the receiver collar is first activated) can be adjusted from a few feet up to thirty feet by the signal range adjustment knob. The hand held remote transmitter sends a signal to the containment transmitter, which then switches to the remote training mode. While in remote training mode, the containment transmitter sends a signal through the boundary wire to the dog's receiver collar and delivers the appropriate correction to the dog. The receiver collar must be within the containment area and the remote transmitter must be within 200 feet of the containment transmitter for the entire system to operate correctly.



NOTE: The signal range adjustment knob controls only the width of the signal field. It does not in any way change the electronic correction felt by your dog.

Components:

- Containment transmitter
- Receiver collar
- Remote training transmitter
- Extra probes
- Batteries
- Owners manual
- Neon test light
- Training/Installation video

Required but may be sold separately

- 50 Boundary flags
- 500ft. of boundary wire
- Wire nuts, or wire fasteners.

Use only PetSafe® Pet Containment System Wire.

Range Adjuster



U.S. Technologies, Inc.

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To complete installation you may need the following items:

- Wire stripping pliers
- Wire nuts or wire fasteners, electrical tape and waterproofing compound (splicing boundary wire)
- Straight edged spade or a lawn-edger (for cutting groove in yard)
- Grounding rod and clamp (for grounding containment transmitter)

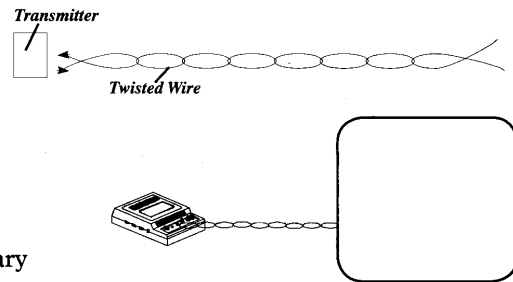
NOTE: PetSafe has a team of trained professionals all over the country ready to install your fence for you. Please call our Customer Support at 800-732-2677 for more information on professional installation or for answers to any other questions you may have.

THE CONTAINMENT SYSTEM

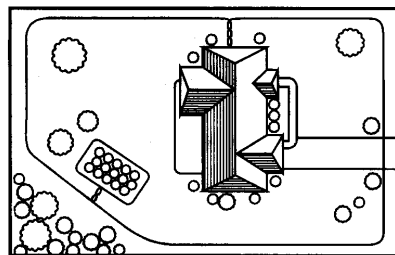
Laying out the System

Basic Planning Tips:

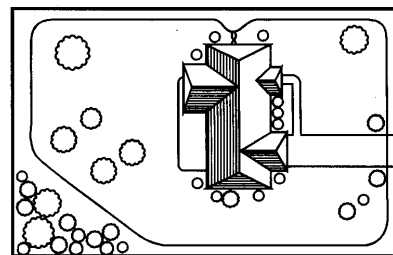
- The boundary wire must make a continuous loop back to the transmitter.
- Make a layout that is suitable for your yard. Sample layouts are provided.
- Always round the corners of your boundary with the wire. Sharp corners will distort the signal.
- The transmitter will transmit an adjustable signal from approximately two to thirty feet on either side of the boundary wire. Be sure to leave enough area so that your dog can move about freely within the safe area boundaries.



Sample Layouts:



BASIC LOOP WITH GARDEN



FRONT OR BACK ACCESS

Locate the Transmitter

- Place the transmitter **INDOORS ONLY** and near an electrical outlet. The transmitter is not waterproof.
- Install the transmitter at least three feet from any large metal objects such as breaker boxes, water heaters, metal garage doors, or washer and/or dryer.
- Secure the transmitter to a stationary surface using the appropriate mounting hardware. A mounting template is located on the back cover of this manual.
- When installing the transmitter make sure the wire twists are not cut off or pinched by a window, door or garage door.
- Install the transmitter only in buildings that meet state and local electrical codes, to prevent fires and electrical hazards.
- If it is necessary to drill a hole make sure there are no electrical wires, nails or screws inside the area you are drilling.

Layout the Boundary Wire

- Lay the wire along your proposed boundary. Connect it to the transmitter.
- Running wire parallel to electrical wires, telephone wires, television cables or antenna, or near satellite dishes will result in signal interference. If you must cross, do so at 90 degree angles.

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Rev: 040103

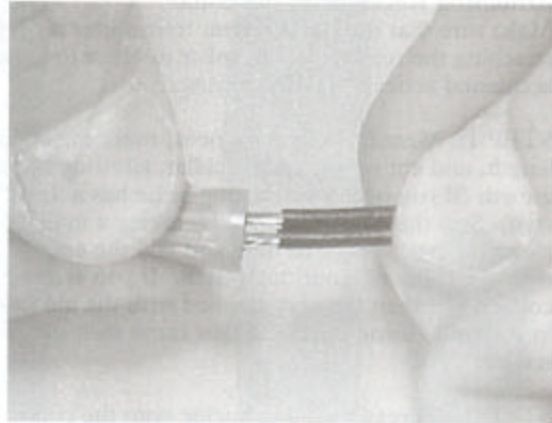
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Report Number: 04-0020
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- Twisting the boundary wires will cancel the signal in a specific area. This will allow your pet to run over this area. Current in the wires must be traveling in the opposite directions to cancel the signal. Make at least ten twists per foot, up to 100 feet maximum, to cancel the signal in the twisted wires.

Connecting Wire to the Transmitter

- Strip the ends of the boundary wire approximately 1/2 inch.
- Connect the boundary wire to the boundary wire terminals.
- Turn the Boundary Width Control to the number 10 setting. This will set the boundary warning zone at the maximum width. The smaller the number setting, the more narrow the boundary warning zone will be.
- Plug the AC power adapter into the power jack on the transmitter and into an electrical outlet.
- The power indicator and loop connection indicator lights should be on.



Apply waterproofing compound and wrap with electrical tape.

Grounding your Transmitter

Proper grounding is necessary to reduce the chance of lightning damage to your transmitter. Connect a wire between the transmitter and a ground rod buried at least 3 ft. into the ground. You may use an existing ground rod. Ground rods with clamps and 14 to 18 gauge wire may be obtained at most electrical supply stores. Locate the transmitter as close as possible to the ground rod.

Splicing the Wire

If you need more than 500 feet of wire, splice the wire together with wire nuts or shrink tubing.

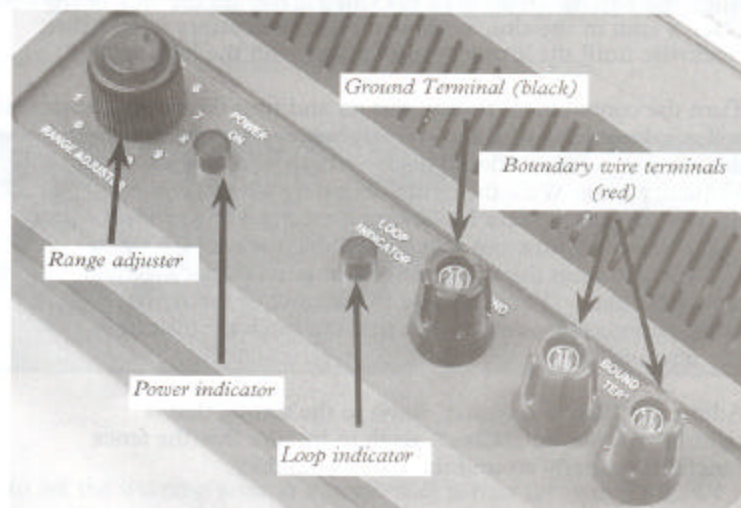
Note the location of all splices on the layout you drew for future reference. Most wire breaks occur near or at the splices.

Begin by stripping the ends of the wires to be spliced. Insert the stripped ends into the wire nut and twist. Pull on the wires to make sure you have a strong splice connection. Apply waterproofing compound (like silicone caulk) in and around the wire nut. After the compound dries, you may also wrap the wires and the wire nuts with electrical tape to prevent them from pulling loose and to protect from moisture. If your splice or the connection pulls loose, the entire system will fail. Make sure of a good connection.

TESTING THE BOUNDARY WIRE

The Containment Transmitter

For testing purposes, the mode should be in the BEEP/SHOCK position. Connect the ends of the wire to the two red boundary terminals on the containment transmitter. Turn the signal range



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Test Report, Part 15

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adjustment knob to full clockwise. Plug in the AC adapter into any electrical outlet and into the power jack on the containment transmitter. Turn the power switch ON. The power indicator and loop indicator lights will glow if system is hooked up properly and turned on.

Attaching Receiver to the collar

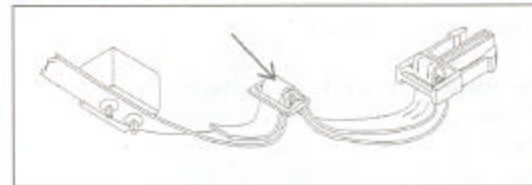
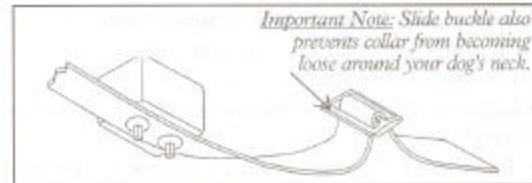
Make sure that the containment transmitter is off before attaching the receiver to the collar in order to avoid accidental activation of the receiver.

STEP 1: Measure your pet's neck, mark the appropriate length, and cut off the excess collar, allowing room for growth (if you own a young dog or he has a thick winter coat). Seal the edge of the cut by taking a match or lighter along the frayed edge to melt and seal the edge. Do this with the collar off your dog's neck. If you are using a collar other than the one supplied with the kit, punch holes in the collar using the collar that came with the kit as a template.

STEP 2: Thread the slide buckle onto the collar first.

STEP 3: Thread end of the collar up through the buckle.

STEP 4: Thread excess collar through the slide buckle to hold it in place. This will allow you to adjust your pet's collar as he grows.



NOTE: When attaching the receiver to the collar be sure to place a washer over each hole. Then insert the contact probe and screw into the receiver. You may use a wrench to secure but be sure to not over-tighten.

The Receiver Collar

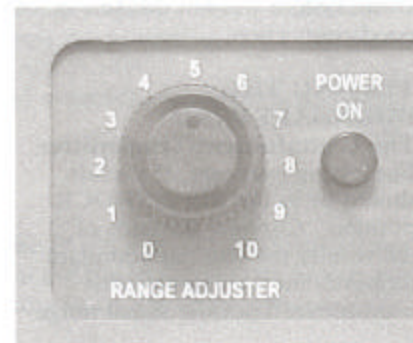
Insert a coin into the slot just below the white arrow. Turn the coin counterclockwise, and remove the battery. Peel the insulation tape off as shown in the picture. The unit will not operate with this tape over the battery.

Align the battery arrow with the small arrow on the side of the case. Place a coin in the slot, as shown. Push the battery in and turn clockwise until the arrow symbol aligns with the lock symbol.



Turn the containment transmitter on and turn the range adjustment knob to about position "5". Hold the collar at knee level with the receiver hanging toward the ground. As you approach the boundary wire with the receiver collar, it should begin to beep. As you get closer to the boundary wire, you should hear a higher frequency beep. Walk the entire boundary wire to ensure the containment system is working correctly. The receiver collar has safety time out that will disable the receiver when it has been within the signal range continuously for a certain amount of time. You will need to walk out of the signal range periodically to make sure that the receiver collar does not time out.

Adjust the "Range Adjuster" knob to the setting that is right for your layout. Check again to be sure that the fence functions properly around the entire boundary.



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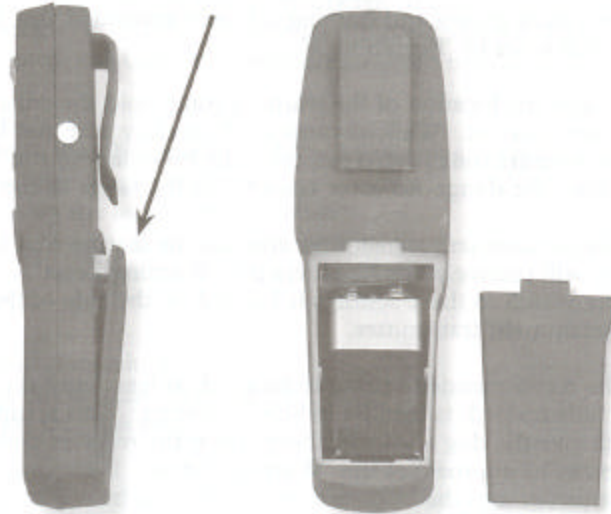
THE REMOTE TRANSMITTER

Installing the batteries in the remote transmitter

The transmitter takes one (1) 9-Volt alkaline battery. To install the battery, follow the instructions listed below:




- Place your finger on top of the "Pull" area of the battery door, located on the backside of the transmitter.
- Remove the battery door by lifting your finger.
- Connect the battery and replace the battery door by placing the bottom side of the battery door in first.

Pull Area battery door must be lifted up in order to insert the battery.



Testing the remote transmitter

The light at the top of the remote transmitter should light up when any button is pressed. Also, the containment transmitter will beep when it receives the signal from the remote transmitter. For initial testing, stand within ten feet of the containment transmitter and press the "PROGRAM" and

the "  +  " buttons at the same time on the remote transmitter. Then press the "  " button. If the containment transmitter beeps, the remote transmitter is working correctly. The containment transmitter must be turned on with the boundary wire properly connected, and the antenna positioned vertically.

Burying the wire

Burying the wire is recommended to help prevent damage to the wire and to help avoid possible injuries to persons tripping over the exposed wire.

Cut a trench one to three inches deep along your previously planned boundary. This may be done with a flat edge spade or a lawn edger. With a paint stick or equivalent, press the wire firmly into the groove. You may also consider renting a machine that is designed to cut a shallow trench and bury the wire.



Be sure to maintain some slack. The wire will expand and contract with temperature variations.

Crossing hard surfaces

If you have to cross a hard surface, such as concrete, lay the wire in a convenient expansion joint or use a circular saw with a masonry blade to create a groove. Again with a paint stick or equivalent place the wire in the groove and cover with an appropriate patching compound. Your local hardware store can help you choose the right compound for your type of driveway.



Setting the boundary

Adjust the signal range adjustment knob to set the warning zone at a range that is best for your yard. We recommend a minimum range of five feet on either side of the wire. It is best to have as wide a signal area

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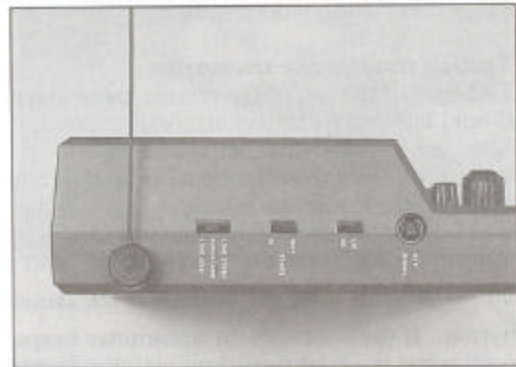
as possible while still giving your pet a sufficient "safe zone" (the area in yard that he can roam freely without getting the warning or correction).

For initial testing and training it is recommended that the range switch be set to "Low" and the mode switch is set to "Beep/Shock".

To test the location of the warning zone, hold the collar at knee level in the same manner the collar will be on your pet. Walk towards the boundary wire and listen for the warning tone. The location at which the warning tone begins indicates the boundary of the "Safe Zone" and the "Warning Zone" for your pet. Adjust the Range Adjuster knob to set the range of the "Warning Zone".

The containment transmitter also has the feature that allows you to select the type of correction your dog will receive when he enters the "Warning Zone". The switch to these settings is located on the side of the containment transmitter.

The recommended setting to be used, at least until the dog is fully trained, is the "Beep/Shock" setting. This setting will give the dog a warning beep, from the receiver collar, first as he approaches the "Warning Zone". If the dog continues into the "Correction Zone", then he will receive a correction with beeping from the receiver collar. This setting allows the dog to learn to associate the warning beep with the unwanted behavior of trying to leave the yard.



The "Beep Only" setting only gives the dog a warning beep only when he enters the "Warning Zone". No correction is given in this mode.

The "Shock Only" setting gives the dog a correction with beeping only when he enters the "Warning Zone". No warning beep will be given before the correction when beeping begins.

Regardless of which setting the Containment transmitter is in, the dog will receive the correction desired when the remote trainer is being used.

Grounding the containment transmitter

Proper grounding is necessary to reduce the chance of lightning damage to the containment transmitter. To do this, connect a wire from the containment transmitter to the ground rod buried at least 3 ft. into the ground. You may use an existing ground rod. A ground rod (with clamps) and 14 to 18 gauge wire may be obtained at most electrical supply or hardware stores. Be sure to locate the containment transmitter as close as possible to the ground rod.

TROUBLESHOOTING THE PLUS SYSTEM

The short loop test

If the PLUS System appears to be malfunctioning in some way, try testing the system using the following "short loop" test:

- Disconnect the boundary wire and ground wire from the containment transmitter. Then, connect a ten-foot piece of wire to these same boundary wire terminals and spread it out in a circle. Set the "Range" switch to "LOW".
- Turn the signal range adjustment knob to the complete clockwise position. Is the power light on? If not, check the AC adapter and power jack connector. If adapter and jack are not functioning, call Customer Support for additional information.
- Disconnect one end of the wire. Does the wire break alarm beep? If not, call Customer Support for additional information. If the alarm does beep, then the containment transmitter is functioning properly.
- Approach the short loop boundary wire with the receiver collar. Does the receiver beep? If not, check the battery(s) for proper installation and that it is still good. If it does beep, the receiver is functioning

U.S. Technologies, Inc.

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properly. If batteries are good and installed correctly, and the receiver still does not beep, call Customer Support for additional information.

- Press any button on the remote transmitter. Does the containment transmitter beep? If not, check the remote transmitter battery for proper installation and that it is good. If batteries are good and installed properly, but the containment transmitter does not beep, call Customer Support for more information.

If your dog does not appear to receive or feel the correction

- Refer to the section "Testing the Correction" to ensure that the receiver collar is functioning properly.
- Trim dog's hair in the area of the probes to insure proper contact with skin.
- If trimming your dog's hair does not help, then try using the long contact probes.

If dog ignores correction and runs through system

- Reinforce all training procedures.
- Try increasing the width of the signal field.
- Try using the "Shock Only" mode on the containment transmitter.
- Check batteries in the receiver collar, weak batteries can weaken correction.
- Call 1-800-732-2677 and inquire about the Stubborn Dog Receiver.

Inspect wire

If the containment transmitter and receiver collar check out good on above tests, but the receiver collar does not beep when on or near the boundary wire, the wire may be broken or your system may not be installed properly. You should walk around the perimeter of the boundary and check for activities that may have disturbed the wire (i.e. digging, trenching, etc.). Some "partial" breaks do not cause the loop light to go out or the break alarm to activate but can effect the signal. Also, check all the splices, as many breaks in the wire occur in the area of the splices.

Locating a break in the wire

Option 1:

1. Connect both ends of your twisted boundary wire to the first terminal on your transmitter.
2. Measure and cut a new piece of boundary wire that is 1/2 the length of your boundary loop.
3. Connect the new wire to the second terminal on the transmitter.
4. Locate the halfway point along your boundary loop.
6. Connect the free end of your new piece of wire to either side of your boundary loop at the half way point.
7. Turn the system on and check the range of this smaller loop with the receiver collar. If there is no improvement in the performance of your system, you may assume that there is a break in this portion of your boundary. Because there is a small chance you have more than one break in your loop, you should also try the same procedure for the other side of your loop.
8. Once you determine a section of your boundary loop has a break in it, find the middle of that section and cut the wire. Be sure to re-splice the first cut that you made and make it waterproof by caulking with silicone.
9. Connect the new wire to your boundary loop at the point at which you made the cut in STEP 9.

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10. Turn the system on and check the range of this smaller loop with the receiver collar.

11. Repeat STEPS 8 - 11 until you find the damaged section of wire.

12. Replace damaged wire with new wire. Remember that all the wire in your boundary loop must be the exact same size and type.

Option 2:

Call Customer Support and inquire about the "Wire Break Locator" accessory that is available for sale.

Placing the receiver collar on your dog

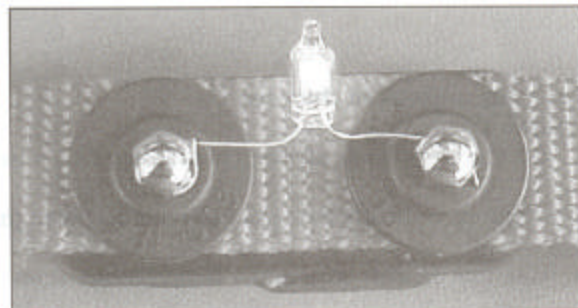
Make sure the receiver is positioned directly against your pet's throat so that the contact probes touch the skin but are not so tight as to be uncomfortable. When the collar is properly positioned you should be able to squeeze one finger between the contact probes and your pet's skin.

NOTE: Do not leave the receiver collar on too tight or for too long! Doing so can cause Pressure Necrosis, a condition where the skin deteriorates. Check and clean your pet's neck regularly. If a rash or sore forms, take the receiver collar off for a few days. When replacing it, make sure that it is not too tight and to keep your pet's neck clean. If this condition persists - contact your Veterinarian.



Testing the Correction

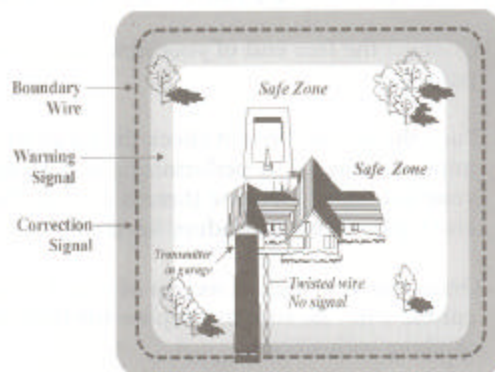
Locate the test light included with your system. Attach the test light to receiver collar contact probes. Carry the receiver collar, at knee level, with probes and light facing up, to the boundary wire. When beep changes from high tone to low tone, the test light should light. If not, call Customer Support for more information.



TRAINING YOUR DOG TO THE CONTAINMENT BOUNDARY

Important notes before beginning training

- Even though your dog may appear trained after one or two days, it is important to continue the training for the entire fourteen-day period.
- During the training period, your pet should be contained by other means and only be allowed in your yard on a leash. It should not be allowed to freely cross the boundary at any time.
- Training can be very tiring for your pet so limit training periods to 10 or 15 minutes at a time.
- Be sure all family members participate in the training so that your pet doesn't relate the training to only one person.
- If your pet acts "hesitant" during any part of the training process, remove the receiver collar and resume training the next day.



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Boundary training flags

Place the boundary flags so that they are ten feet apart and at the point where the warning tone starts. These flags serve as a temporary visual boundary for you and your pet. The flags will later be removed when your pet has become familiar with the "safe zone".

Boundary Training**Day 1**

STEP 1: Hold the receiver collar in one hand and, using a leash attached to another collar on your dog's neck, walk your pet to the boundary. Shake a boundary flag and give your pet a strong "NO" command. Be sure to allow your dog to hear the beeping from the receiver as you shake the flag.

STEP 2: Lead your dog back into the yard and praise and play with him for 10 to 15 seconds.

STEP 3: Repeat steps 1 and 2 around the entire boundary.

STEP 4: After a short rest/play period, place the receiver collar on your dog. Attach the leash to the other collar on your pet.

STEP 5: Let your pet experience a correction by walking into the signal field on his own. Then, immediately lead him back into the "safe zone" and praise him. Do not encourage the pet to cross the boundaries, as this will confuse him. If your pet will not venture into the signal field on its own, have someone else cross the boundary and allow the pet to follow.

STEP 6: Repeat step 5 again around the perimeter boundaries. Your pet should receive a correction only when it willingly attempts to cross the boundaries. Additional corrections are not necessary unless your pet willingly attempts to approach the boundary.

STEP 7: Remove the receiver collar. DO NOT leave your pet alone with the receiver collar until fully trained.



Caution: During the first week of training, you must contain your dog by other means until he is fully trained. Letting your dog roam freely in the initial stages of training without constant supervision will only confuse him.

Days 2 through 14

Repeat steps 4 through 7 at least once per day.

Days 15-30

When your dog shows acceptable learning progress, remove the training leash and allow your dog to roam freely in the "safe zone".

After 30 days from the start of training, remove every other boundary flag. Repeat every other day until the flags are completely removed.

Imaginary gate training

Be sure that several members of your family take turns training during this process so that your dog does not identify leaving the yard with just one person.