

HotZone™

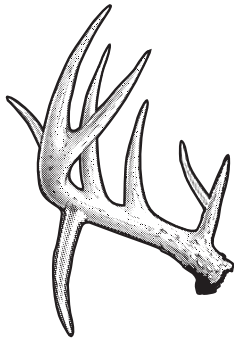
DEER EXCLOSURE SYSTEM

MASTER INSTRUCTIONS

HotZone™ Deer Exclosure System, HotZone Expansion Kit, and HotZone Energizer

Instructions #: 1021236 Revision A

HotZone Deer Exclosure System #717100, HotZone Expansion Kit #717122, HotZone Energizer #717133



Non-Typical™
WILDLIFE SOLUTIONS

STOP!

If you have a problem with this product, **DON'T RETURN IT TO THE STORE WHERE YOU PURCHASED IT.** Contact customer service at...

Battenfeld™
Technologies, Inc.

5885 West Van Horn Tavern Road / Columbia, MO 65203
573-445-9200 / Email: sales@battenfeldtechnologies.com
Or visit our website @ www.battenfeldtechnologies.com

NOT WARRANTED AGAINST MISUSE, ABUSE, OR COMMERCIAL USE.

Limited Warranty

Every Non-typical Wildlife Solutions product is warranted to be free of defects in materials and workmanship for a period of one (1) year from the date of original purchase. NTWS will, at its option, repair or replace without charge, except for transportation costs, parts that fail under normal use and service when operated and maintained in accordance with our Instructions. This warranty does not apply to normal wear or to items whose life is dependent upon their use and care. This warranty is in lieu of all other warranties, expressed or implied and releases NTWS, its affiliates, and its vendors from all other obligations and liabilities.

ATTENTION CUSTOMERS

Battenfeld constantly seeks to improve our products. As a result of these efforts, your package may include components that vary slightly in appearance from product photos on packaging or instructions.

READ THESE INSTRUCTIONS IN THERE ENTIRETY BEFORE YOU SET UP YOUR FENCE

WARNING ELECTRIC SHOCK HAZARD

- **DO NOT** connect the fence to any other electric device.
- Lightning may strike your fence. A severe electric shock hazard exists to anything connected to the fence or in near proximity to the grounding system.
- If connecting energizer to AC power source, only use the provided AC adapter. The energizer connected to AC power shall be covered adequately to protect it from rain, snow or other moisture. Keep out of reach of children.
- **DO NOT** Charge the battery with a battery charger while the energizer is connected. Disconnect and remove battery if re-charging is necessary.
- **DO NOT** connect more than one energizer to the fence at one time.
- **DO NOT** connect two fences to the same energizer.
- Keep fence at least 2 yards away from other fences with metal posts.
- **DO NOT** connect energizer to barbed wire or razor wire.
- **DO NOT** install fence or grounding system within 10 yards of electrical power lines, telephone lines, or telecommunications equipment.
- If running leads underground, use insulated wire and conduit rated for a minimum of 12,000 volts. Prevent water from entering conduit.
- Keep young children away from the electric fence at all times.
- **DO NOT** touch the fence with head, neck or torso.
- **DO NOT** climb over, through or under a multi-wire electric fence. Use a gate or disconnect the fence wires to cross.
- **DO NOT** put electric fence in areas of public access.
- Clearly mark the electric fence in several locations if located where people unfamiliar with the fence may come into its proximity. Check your local and state laws regarding placement of electric fences.
- Keep fence clear of obstructions or other objects that could potentially cause a person or animal to become entangled in the fence.
- **DO NOT** use a water pipe, well, or your main power system ground as the ground for your energizer. If lightning were to strike the fence, the current could travel through the system causing a severe electrical shock hazard.
- Place the grounding rod in a location that will not cause a person or animal to trip into fence or be trapped between the ground wire and the fence.
- **DO NOT** attempt to service or repair the energizer yourself. Call Customer Service at number on the front of these instructions.
- Always mount the energizer securely such that it will not fall if bumped by an animal or person.

WARNING FIRE HAZARD

- Disconnect energizer if conditions are extremely dry and represent high risk of fire.
- Keep combustible materials away from fence, energizer and battery.

SAVE THESE INSTRUCTIONS

Principle of Operation:

The Hot Zone Deer Enclosure System is a dual perimeter combination of electric wire and tape designed for wildlife management. The HZ12KV is an electric energizer which generates short electric pulses that travel along the combination of electric wire and tape. The system is "Earth Grounded" (the energizer links with the soil through a ground rod) and all perimeter wires are "Hot" so when an animal touches any wire, an electric circuit is formed and the animal is hit with a sharp shock and is deterred. As a result, the animal outside the enclosure zone will be kept away from what is fenced off. An additional kit for deterring non-deer animals such as raccoons, hogs, rabbits, etc... is available for purchase.

The ideal time to setup the Hot Zone Deer Enclosure fence is right after a food plot has been planted. It is critical to protect the food plot during germination until full maturity at which time it will be able to handle heavy browsing pressure.

Common Uses:

- Protection of:
- Food Plots
 - Vegetable Gardens
 - Flower Gardens
 - Trees
 - Any other area that needs protection from deer

Detailed List of Components:

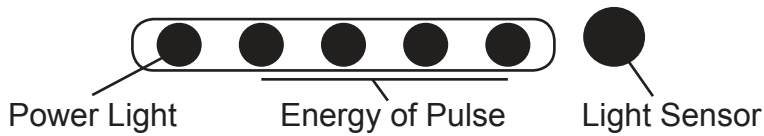
Item Description	Quantity
Energizer	1
Solar Panel	1
7/8" Post8
1/2" Post32
Wire460 yards
Tape230 yards
Post Pins65
Wire Tensioners3
Ground Rod	1
Voltage Tester	1

Energizer Features and Specifications:

- Features:
- LED lights show voltage and status of the battery
 - 1.5 and 2.5 second pulse interval modes
 - Automatic switch between day and night modes
 - Powered by 12V DC battery, Solar Panel or 110AC

- Energizer:
- Input: 12V DC
 - Output: 12KV Stored Energy
 - Stored Energy: 2.7 Joules
 - Max Output Energy: 2.0 Joules
 - Power Consumption: 3.5 Watts
 - Pulse Width: 100us (1/1000 second)
 - Pulse Frequency: 1.5s or 2.5s (Switchable)
 - Max Fence Coverage: Up to 20 Acres
 - AC/DC Adapter: Input: 100~240v AC, 50/60Hz, .35A; Output: 12VDC, 1200mA
 - Waterproof

Energizer Operation Mode:



The light sensor detects if it is day or night and automatically will switch between day and night modes.



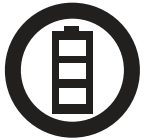
Hold-on mode: the green led indicator is on. Under hold-on mode, the energizer does not generate pulse.



1.5 Second pulse mode: energizer generates pulse at intervals of 1.5 seconds. The green led indicator is on and all red indicators flash every 1.5 seconds as the energizer pulses. *** This mode provides the Best Protection from deer during the day and night, but causes the most drain on your battery***



2.5 Second pulse mode: energizer generates pulse at intervals of 2.5 seconds. The green led indicator is on and all red indicators flash every 2.5 seconds as the energizer pulses.



Battery mode: The energizer generates pulse every 2.5 seconds. The green indicator is on and all red indicators are on. The voltage of the battery cannot be less than 11.8V. When the voltage decreases to 11.7V one red indicator will shut off. One light will turn off with every .1V it decreases. When the battery decreases below 11.4V it will not have enough voltage to power the energizer and all red indicators will turn off.



Day 1.5 /Night 2.5 mode: Light sensor detects when it is day or night. In daytime the pulse will be generated every 1.5 seconds and in the night it will be generated every 2.5 seconds. The green led indicator is on and all red indicators flash as the energizer pulses.



Day 2.5 /Night 1.5 mode: Light sensor detects when it is day or night. In daytime the pulse will be generated every 2.5 seconds and in the night it will be generated every 1.5 seconds. The green led indicator is on and all red indicators flash as the energizer pulses. ***Provides maximum protection at night (decreased protection in the day) this mode will conserve battery power compared to 1.5 second pulse mode***

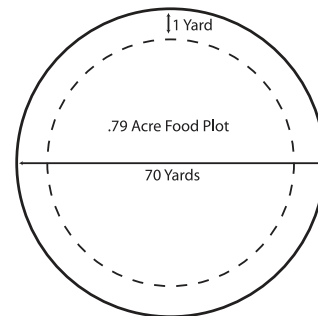
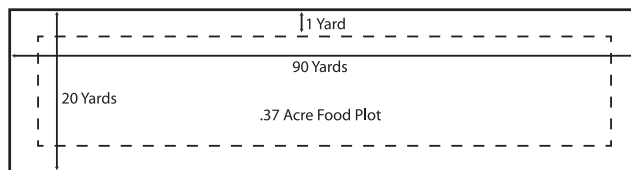
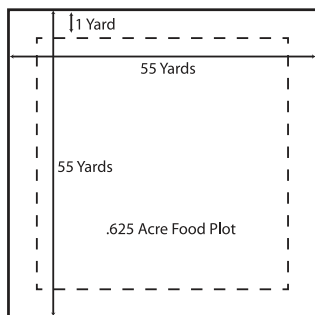
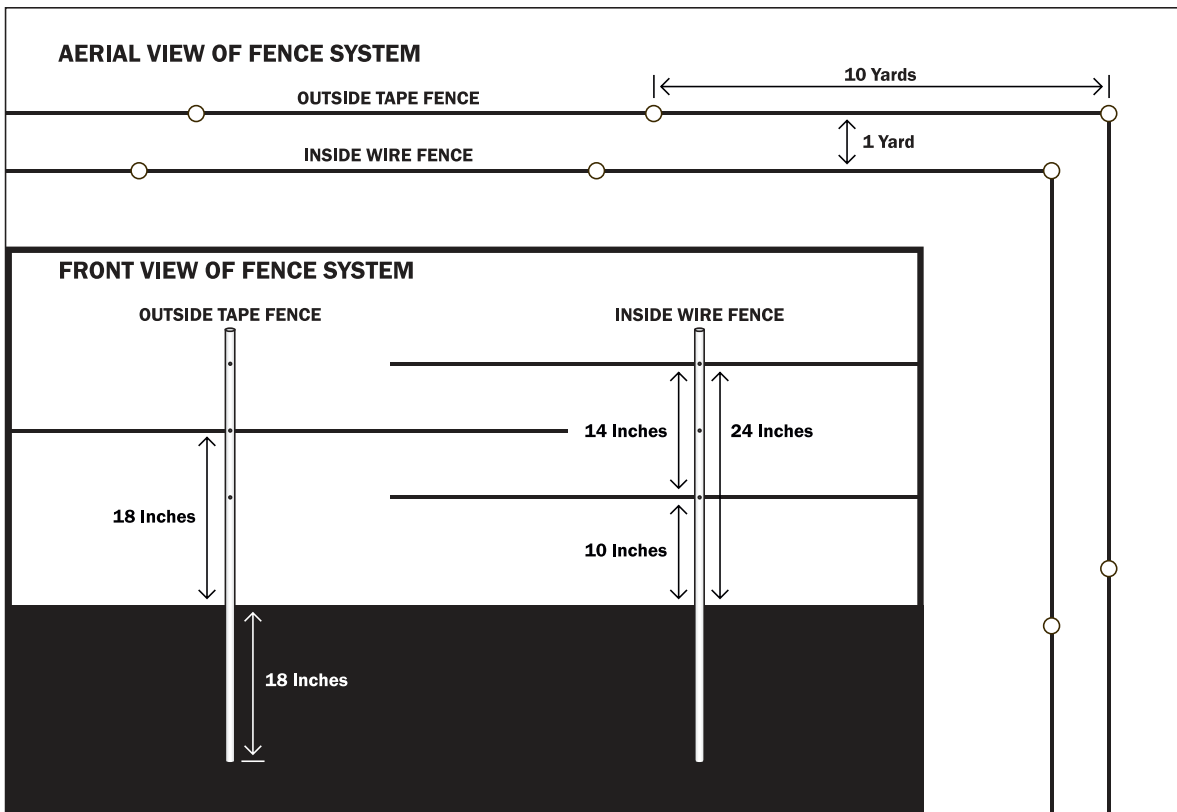
Installation:

Setting up the Fence:

When setting up the Hot Zone Deer Exclosure System examine the land and determine which ½ acre shape will best suit the situation and provide the best coverage. The system will allow coverage of approximately ½ acre depending on the shape so it will be helpful to plan the layout based on a maximum perimeter of 220 yards. Common examples of maximum sizes/shapes are as follows: 55 yard x 55 yard square, 90 yard x 20 yard rectangle or a 70 yard diameter circle. Whichever shape you choose doesn't matter because the Hot Zone Deer Exclosure System will yield the same results, great looking food plots protected from over browsing. After the shape is determined, deciding where to set the poles can be determined through a number of methods: using a range finder, walking off the distance, using a tape measure or a hand held GPS. Any of these will work and will allow you to lay out the fence appropriately.

*** For the example in this manual we will be using a 55yd x 55yd square. ***

Installation:



Setting the Posts:

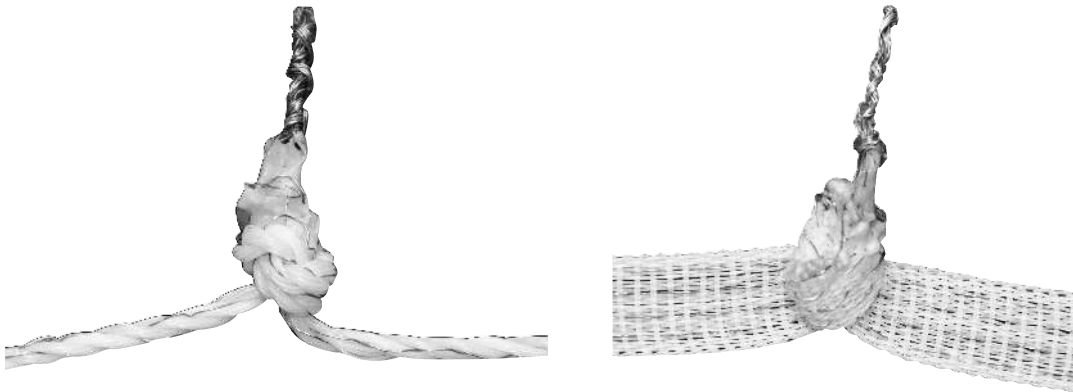
1. Start in one Corner and hammer in one 7/8" post until the horizontal line on the post is flush with the ground. We recommend using a post driver.
2. Then measure 55yds by a method listed above and hammer in your second 7/8" corner post the same way.
3. Repeat Step 2 until you have a square formed that is 55yds x 55yds.
4. Start at one corner and work towards the next corner hammering in a 1/2" post (until the black horizontal line on the post is flush with the ground) at 11yd increments or 4 per side.
5. Repeat Step 4 until all sides have four 1/2" posts in place and a square of the outer perimeter is formed.
6. Now repeat for inner perimeter. Start at one corner and hammer in one 7/8" post 4.25' inside the outer corner post and diagonally in line with post in the opposite corner.
7. Repeat Step 6 for setting all four inside corner posts.
8. Take a piece of rope and tie a loop in one end just large enough to fit over a post. Measure out from the loop 3 feet and cut the rope or mark the rope. (This will be used for setting the inside perimeter fence posts and maintaining 3 feet of separation from the outer posts.)
9. Hook the loop end of the rope on a 1/2" post from the outer fence posts, pull the rope tightly perpendicular to the square side and hammer in a 1/2" post to set the inner perimeter fence post.
10. Go to each 1/2" post from the outer perimeter and Repeat Step 9 to set the rest of the interior fence posts.
11. The fence perimeters are now setup and you should have 2 squares of posts that are 3 feet apart.

Running the Wire/Tape:

1. Select a corner where the energizer, battery and solar panel will be located. Consider where the maximum sunlight will be available for the solar panel.
2. Start at that corner post of the inner perimeter. Push a post pin through the hole that is 10" off the ground level. When the post pin is through the post bend the ends in opposite directions to lock it to the post. Tie the wire in a knot through the loop of the pin; make sure to leave approximately 6 feet of extra wire. Walk and unspool the wire around the outside of the posts of the inner square until you get back to the post you started with.

Tips:

- A dowel rod placed through the spool of wire makes the unspooling process go faster.
- Consider using a knot for the wire that can be untied for disassembly.
- To connect two sections of wire or tape take the two ends side by side and tie them in an over hand knot making sure to leave 2" of wire as tag ends. Then melt these tag ends and twist them together to make sure there is good conductivity between lines. This will be necessary if adding an Expansion Kit to the original Deer Exclosure System.



3. When you get back to the corner post where you started, pull wire to eliminate slack, measure an extra 6 feet and cut the wire.
4. Take the loose end of wire and thread on one wire tensioner. Slide the wire tensioner down the wire until it is near the opposite corner from where you started.
5. Install a second pin in the same post in the hole that is 24" above ground level. Repeat the remainder of Step 2, 3 and 4.
6. Start at the corner where the wires are tied and walk to the first post on the inside. Pull the wires up and over the post to the inside. Slide the lower wire into a post pin, then insert the post pin through the hole 10" above the ground on the post. Once the post pin is through the post, bend the two ends in opposite directions to lock it on the post and to secure the wire. Now do the same thing for the upper wire 24" above the ground.
7. Repeat Step 6 for each post until you are all the way around the square and back at the corner where you started.
8. Insert the lower wire through the post pin at the corner post where you started. With one hand keep the wire tight, with the other hand snap the line and swing it to get rid of all the slack in the wire until it is taught all the way around the square. Once the wire is taught all the way around the square, tie it in a knot to the post pin. Additional slack can be removed by adjusting the wire tensioners.
9. Repeat Step 8 for the upper wire.
10. Repeat Steps 2-4 and 8 for the outer perimeter posts using the spool of tape. Install the tape using the holes that are 18" above the ground.
11. At this point you will have 4 tag ends of wire and 2 tag ends of tape, all approximately 6' long. Bring all tags ends together near the outer corner post. Cut off the excess so that all ends terminate about 1' beyond the corner post.

Running the Wire/Tape cont.

12. Take all ends and melt 3-4" off with a lighter, matches or a torch leaving metal conductor strands exposed. Then twist all 6 ends together to make a solid contact point for the power clip from the energizer to attach to.
13. Once the tag ends are joined together they can be looped around the outer corner post and tied or ran through a post pin to support them above the ground. Contact with the ground would cause the fence to short out.

Mounting the Energizer/Solar Panel:

At the corner where the wire and the tape are connected, drive a five foot 2" x 4" into the ground 12" deep or until the 2" x 4" is stable. Make sure you drive this post close enough to the fence so the wire and tape can reach leads from the energizer. Half way up the post or about 2 feet high run a screw or nail into the board. Hang the energizer on the screw/nail.

Determine which side of the 2" x 4" board will receive the most sun light, on that side hold up the solar panel bracket to the top of the post and mark the location of the 2 holes on the board. Then remove the bracket and put a screw or nail on each mark to hold the solar panel bracket. Then take the provided screws and mount the solar panel bracket to the back of the solar panel. Then align the holes on the back of the solar panel bracket with the screws/nails on the post and slide the bracket down until it is locked in placed.

Ground Connection:

Grounding the energizer is the key to a successful electric fence system. Use the 3' galvanized rod included in the kit to ground your system. Drive the ground rod in the soil close to the post where the energizer is located so the wire lead from the energizer can reach it. Drive in until only 2" of the rod is exposed above ground level. If the conductivity of the ground is poor due to dry or sandy soils we recommend that a second ground rod is added to help with conductivity. By doing so, the system should work as efficiently as the ideal condition of normal soil and one ground rod.

Connecting the Components:

1. Install the output wires to the energizer: Insert metal tip of green wire under the black knob, tighten knob until the wire is secured.
2. Repeat Step 2 with the red wire under the red knob.
3. Take the red wire from the front of the energizer and clip it to the bundle of wire and tape that are melted and twisted together at the corner of the fence. **Be sure to secure it to the corner pole so the wire and tape cannot come in contact with the ground.**
4. Take the green wire from the front of the energizer and clip it to the ground rod that is in the ground by the base of the post.
5. Follow the instructions below to power you system.

Tip:

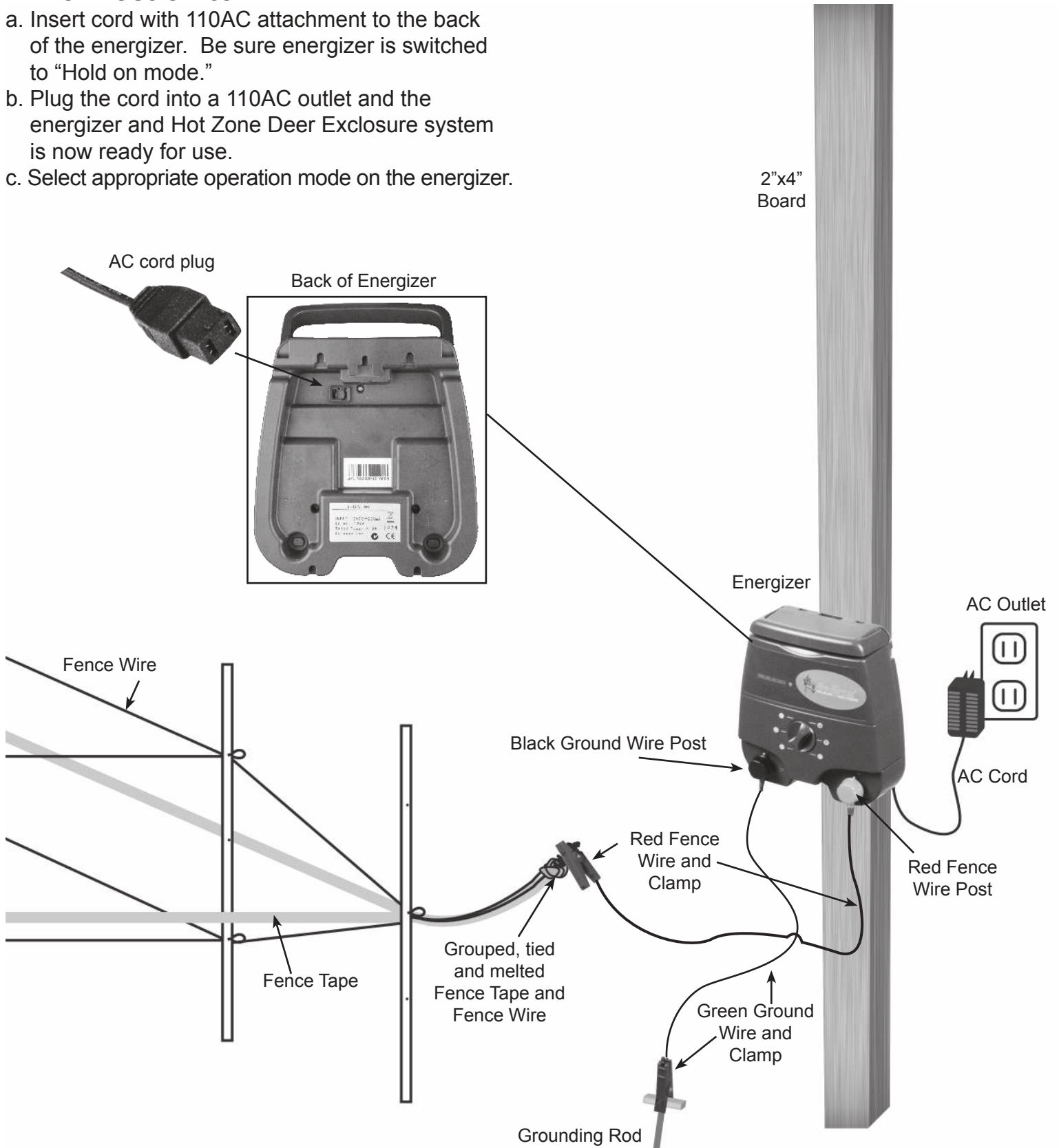
- Adding some terminal grease can help insure a good connection with exposure to the elements.

Powering the Energizer Using AC Power:

The energizer can be powered through 110AC or battery and solar panel. When using a battery source we recommend the use of a deep cycle battery. Separate input power harnesses for 110AC and 12 volt battery are included.

1. Connection to AC

- Insert cord with 110AC attachment to the back of the energizer. Be sure energizer is switched to "Hold on mode."
- Plug the cord into a 110AC outlet and the energizer and Hot Zone Deer Exclosure system is now ready for use.
- Select appropriate operation mode on the energizer.

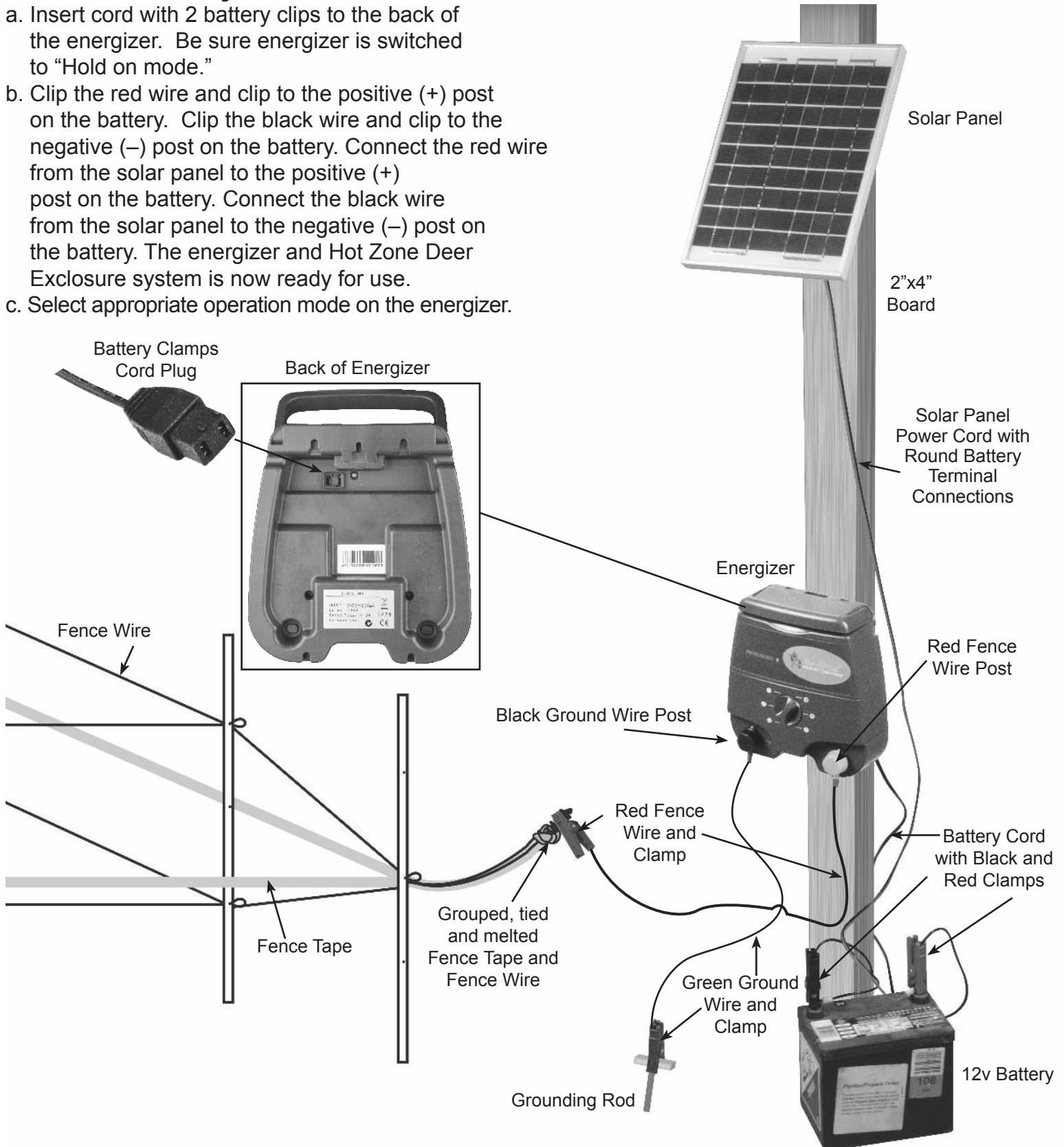


Powering the Energizer Using Solar/Battery Power:

The energizer can be powered through 110AC or battery and solar panel. When using a battery source we recommend the use of a deep cycle battery. Separate input power harnesses for 110AC and 12 volt battery are included.

2. 12 volt battery

- Insert cord with 2 battery clips to the back of the energizer. Be sure energizer is switched to "Hold on mode."
- Clip the red wire and clip to the positive (+) post on the battery. Clip the black wire and clip to the negative (-) post on the battery. Connect the red wire from the solar panel to the positive (+) post on the battery. Connect the black wire from the solar panel to the negative (-) post on the battery. The energizer and Hot Zone Deer Exclusion system is now ready for use.
- Select appropriate operation mode on the energizer.



Note:

Battery Life: With average sunlight, a 24 or 27 series deep cycle battery and minimal vegetation contact, the solar panel will prevent the battery from discharging.

Tips:

- Excessive vegetation contact with wire and/or tape will discharge battery at an accelerated rate.
 - Trim or spray vegetation under tape and wire paths.
 - If vegetation contact is inevitable, fully charged deep cycle batteries can be rotated periodically to maintain a proper charge for the enclosure system.
 - A battery box, piece of wood or rubber used to elevate the battery off of the ground can increase battery life.
 - Larger reserve capacity batteries will last longer.
 - Position solar panel to have the most direct sunlight possible throughout the day.
 - Wire tensioners can be used to eliminate any slack that develops in the wire or tape.
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Product #717122

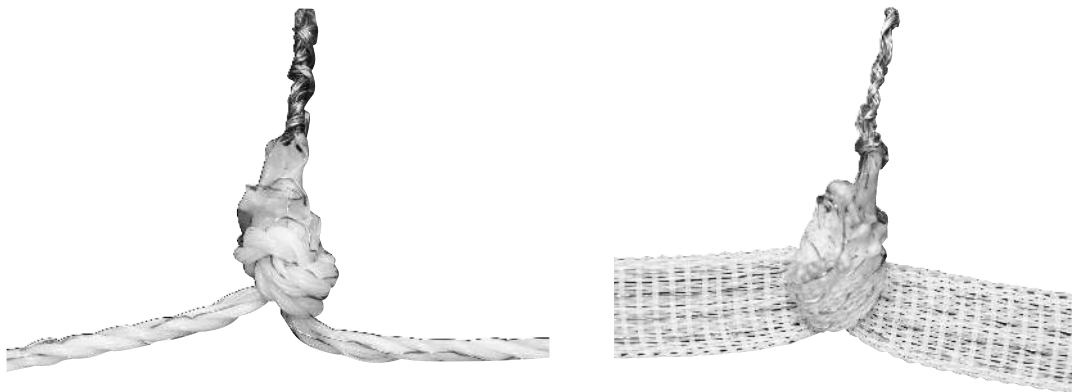
The Hot Zone Expansion Kit allows the user to increase the coverage of the protection area for larger food plots. The kit includes everything needed to expand the initial Hot Zone Deer Exclosure: additional wire, tape, tensioners, a ground rod, and a ground rod wire and clamps. The addition of the Expansion Kit to the Original Hot Zone Deer Exclosure System will allow up to 420 yards of perimeter fencing to protect larger areas.

Adding the Expansion Kit:

When the Expansion Kit is added to the Hot Zone Deer Exclosure some disassembly may be required if the original fence is currently setup. If the original fence is up you will need to unhook the components and the wire/tape of the fence from the corner post. Depending on the shape chosen for the new fence configuration at least one side of poles and wire/tape will have to be removed to open up the protected area for the expansion.

Determine the shape of your larger protection area (see page 12) and set your posts evenly in a shape that has 420 yards of perimeter according to the directions above **“Setting the Posts”** for the Hot Zone Deer Exclosure. The 7/8” posts should be evenly spaced around the perimeter or can be used in any area needing more stability. After the posts are set, the wire /tape of the new kit can be attached to the original wire and tape to provide 420 yards of perimeter fence.

Note: To connect the new wire and tape to the original kit take the two ends side by side and tie them in an over hand knot making sure to leave 2” of wire as tag ends. Then melt these tag ends and twist them together to make sure there is good conductivity between lines.



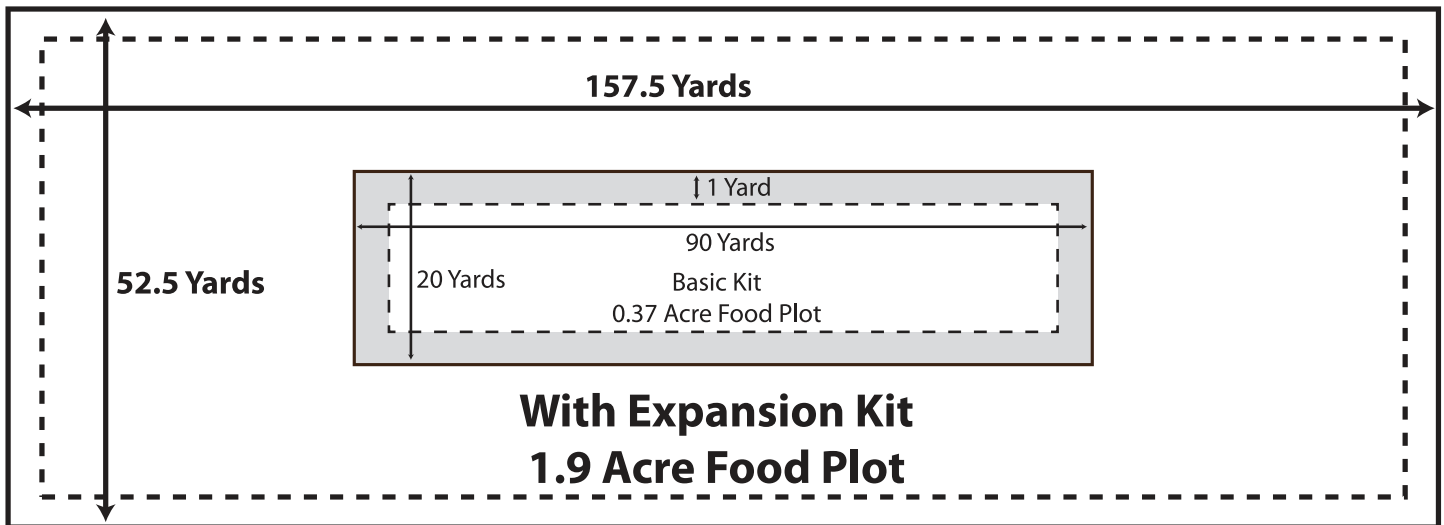
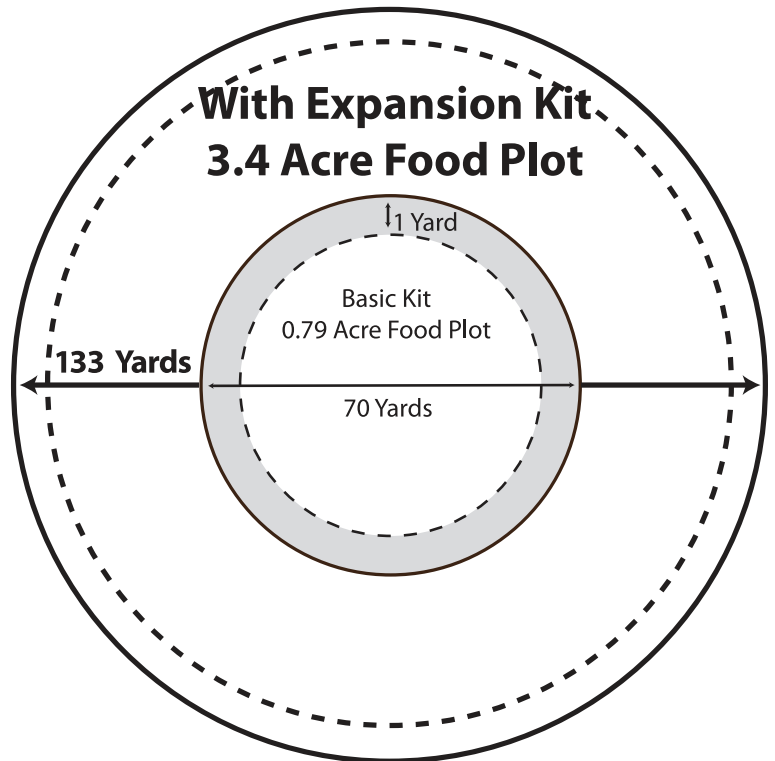
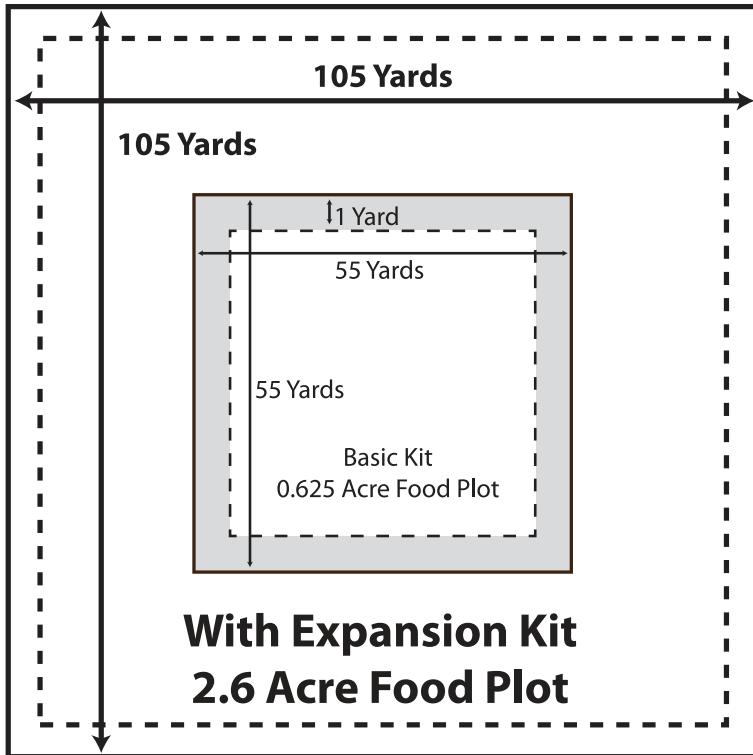
After the wire/tape are connected, it is ready to be set around the perimeter of posts according to the directions above **“Running the Wire/Tape”** for the Hot Zone Deer Exclosure.

Drive the additional ground rod in the soil approximately 15’ away from the ground rod of the Initial Hot Zone Exclosure system, so the included wire and clamps reach both rods. Then attach clamp to original ground rod, insert wire in clamp and screw clamp down until wire is contained in clamp. Run wire to the new ground rod and repeat.

To complete the setup follow the directions above **“Connecting the Components”** and **“Powering the Energizer”** for the Hot Zone Deer Exclosure.

HotZone Expansion Kit Example Plot Size Diagrams

420 yard outer perimeter total, achieved by utilizing Deer Exclusion System and Expansion Kit combined.



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