

**INSTRUCTION**

**MANUAL**

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**HOBBYIST  
ELECTRIC BEEHIVE  
ENCLOSURE**

(BEAR PROTECTION ELECTRIFIED FENCE)

# Colorado Parks and Wildlife: Game Damage Unit

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## INTRODUCTION

A properly constructed electric fence is safe for people and pets and has proven to be effective at deterring bears from apiaries (beehives), fruit trees, gardens, livestock pens, rabbit hutches, garbage containers, dog kennels, chicken coups, compost piles, storage sheds, along with numerous other uses. There is an abundant variety of applications and effective fencing designs for deterring bears. Design, construction and proper maintenance will determine the effectiveness of your electric fence. Safety is always a concern when using electrified equipment. Modern electric fence energizers have been shown to be safe for humans, animals and vegetation. The pulse rate of a modern energizer is so quick that they cannot generate enough heat to start vegetation on fire. While touching an electrified fence is unpleasant, modern energizers are safe to use around pets and children.

## HOW ELECTRIC FENCING WORKS

When an animal touches an electrified wire and the ground simultaneously, the electricity passes through them, into the soil, to the ground rod and back to the ground terminal of the energizer. The circuit is then completed and the animal receives a shock. If too few grounding rods are placed, if the grounding rod(s) is not deep enough, or if soil is generally dry, the electricity will not find the path back to the energizer and the animal will receive little or no shock.

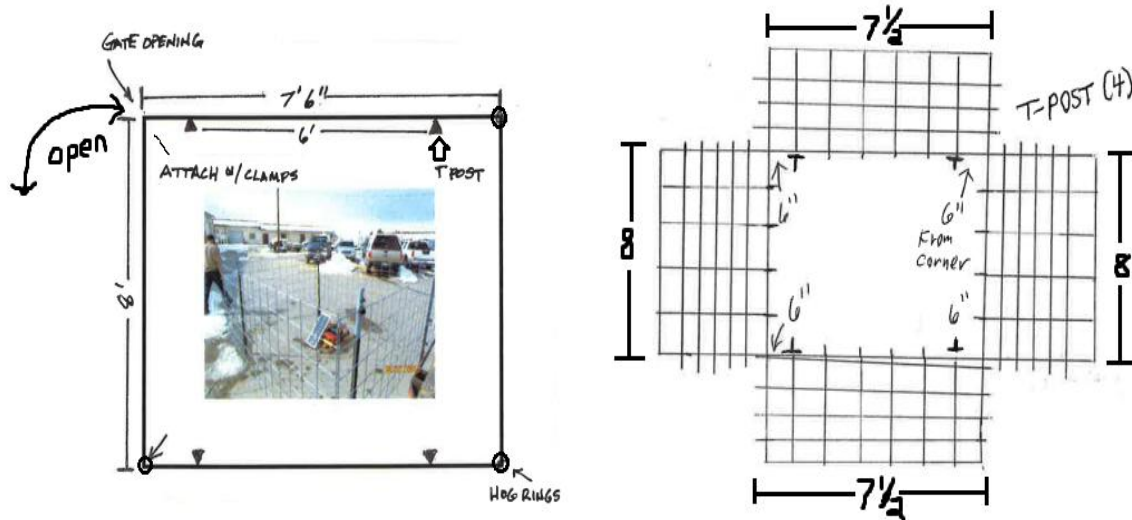
The materials list for 8'x8' electric fences are:

1. Electric Charger
2. Black wire clamp (ground)
3. Red Positive Wire clamp.
4. 16'x7'x6" wire grid cut into 4 pieces.
5. Hog rings
6. Bunge straps (closes gate)
7. 5' - T-posts
8. Insulators
9. Ground Rod
10. Electric Fence Tester (not included) but useful

There are other components that may be necessary for your fence, such as gate handles, drive through gates and on/off throw switches. These can be added as needed for your particular fencing design.

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- 1.) Layout fence panels in a square with corners together.

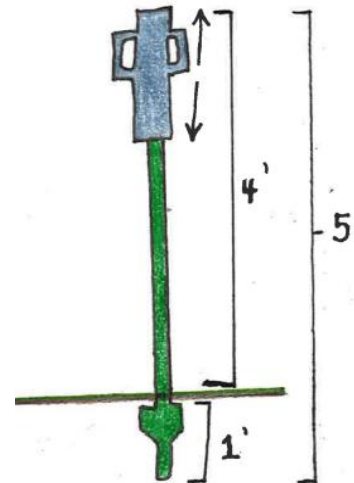


- 2.) Drive T-Posts 6 inches from each corner parallel to each other. (The T-Posts will only be clipped on two of the wire panels across from each other and the other two panels will be hog ringed to each corner of the panels attached to the T-Posts.)

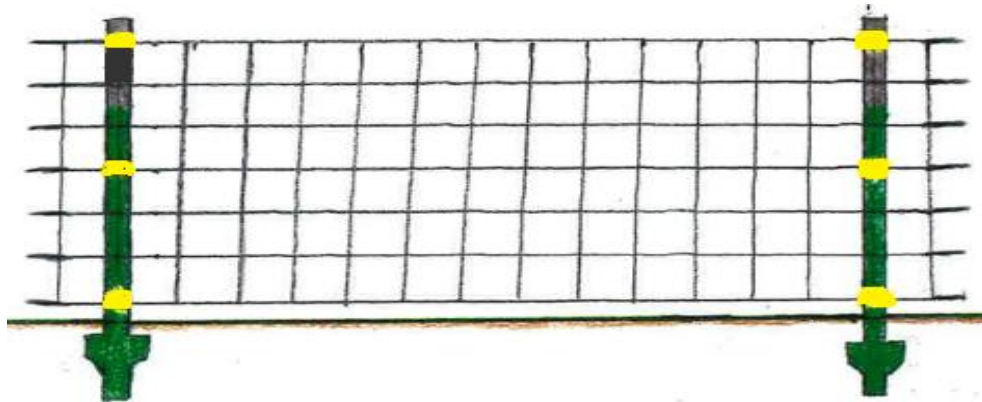
- 3.) Drive Each T-POST until the earth flange is flush with the ground (face the knobs of the post outwards so that your fence is attached on the outside)

- 4.) Attach Yellow Insulators

First, Insulator goes between the First & Second knob of T-POST



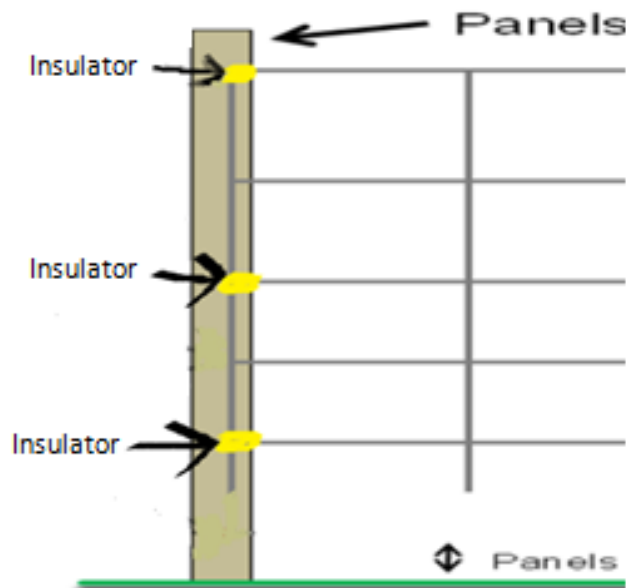
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- 5.) Hang Side Panels to the T-POST Insulators that were put on the top of the T-POST between the Top two knobs, Also make sure the fence has about 6" inch or less of clearance off the ground.



- 6.) NEXT: Place the Second Insulator in the middle and the third T-Clip on the bottom wire. (just as it is shown in the picture below)

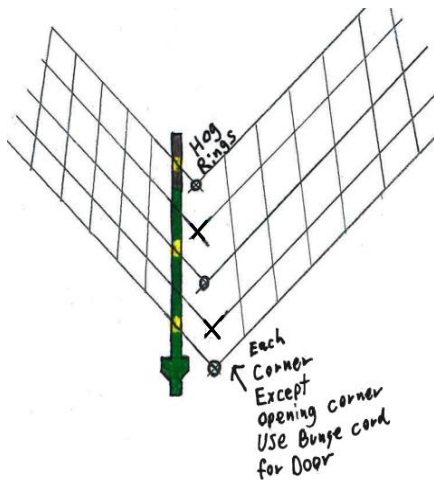
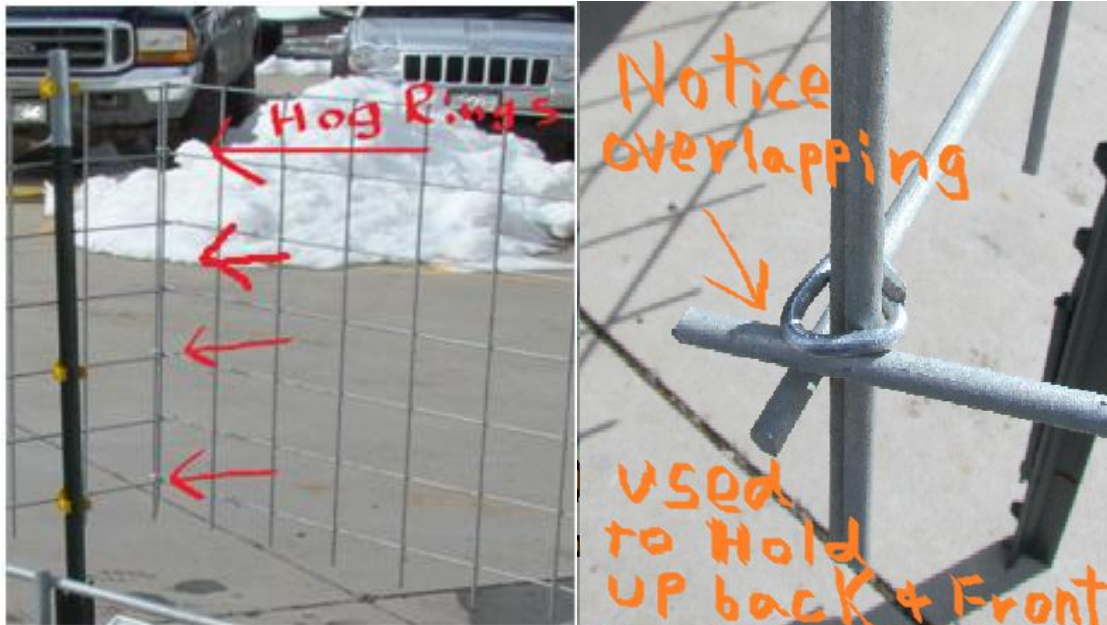


- 7.) NEXT : Attach your back fence panel to your side panels from the corners with HOG RINGS

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(As shown in the picture the Hog Rings can be squeezed with pliers to crimp them onto the corners)

**Also Notice in the picture below** that the fence has 2" to 3" pieces of wire on the sides of each panel so that the corners can overlap on top of the panels that are on the T-POST



CORNER KIT for 8'x8' Bee Yard

3 of the 4 corners of your fence enclosure will need 4 HOG RINGS at each corner. Each Ring will be placed between the top squares then the 3<sup>rd</sup> square down, the 4<sup>th</sup> and the sixth square down. As shown in the picture above on the top left. After this is done you will be left with your last corner for your swing open gate. This will be closed with hooked bungee cords so that you can open and close the enclosure. Now that you have finished the fence portion we can now install your electrical unit.



## **DON'T PLUG IN YOUR ENERGIZER UNTIL ALL STEPS ARE FINISHED.**

### 8.) Plug-in Energizer FENCE UNIT

FIRST you will need to drive the ground rod near the corner inside the enclosure next to your energizer which will be mounted and attached near the ground rod. Ground rod should be driven in the soil a minimum depth of 3 to 4 feet. It is necessary to drive ground rods as deep as possible so that the rod is in contact with the greatest amount of surface area, adequately allowing the current to return to the energizer.



This is a picture of your ground rod which will be driven into the ground and the **BLACK** Negative Cable ground cable is attached.



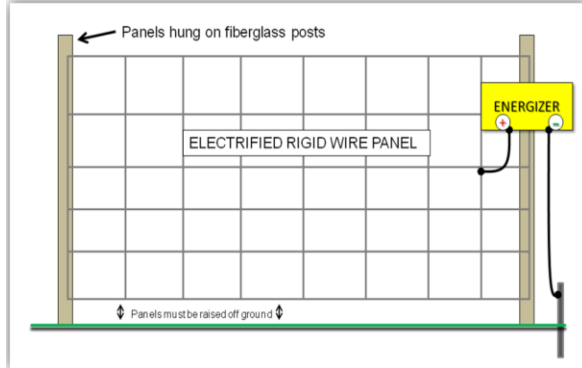
Next is your **RED** Positive Energizer cable which gives electric current to your fence this is attached to your wired panels **but not the gated panel**. The current will flow through all four panels.



This picture shows the power source which is the Plug-in Energizer which give power to the Fence. The Energizer has Positive and Negative ports on it. Attach the red cable to the **POSITIVE** port and the Black cable to the negative port. All of these items need to be carefully placed within the enclosure. Energizer needs to be mounted in an upright position so that it drains properly Use a post to mount the energizer on the interior or use a t-post on the fence. **FINISHED** – now you can plug in and test.

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This Picture shows how the Energizer can be mounted onto the posts on the inside of enclosure.



## \*WARNING\*

- **Always** disconnect battery-powered fence controllers from the battery before recharging the battery. Failure to do so may damage your fence controller and battery charger, and void your warranty.
- **Never** run more than one fence controller on the same fence line at one time. The pulses of short shock solid state fence controllers will be too close together and may be hazardous to animals and people. It will also damage your fence controllers.
- **"WARNING" Risk of electric shock!** Do not connect an electric fence to any other device such as a cattle trainer or a poultry trainer. Otherwise lightning striking your fence will be conducted to all other devices.
- **Never** connect a DC fencer to an AC power supply.
- **Do NOT** touch the fence with the head, mouth, neck or torso. Do not climb over, through or under a multi -wire electric fence. Use a gate or a specially designed crossing point.
- **Do NOT** become entangled in the fence. Avoid electric fence constructions that are likely to lead to the entanglement of animals or persons.
- **Energizer** must be installed in a shelter and the supply cord must not be handled when the ambient temperature is below +5 deg C.

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- **Electric animal fences** shall be installed and operated so that they cause no electrical hazard to persons, animals or their surroundings.
- It is **recommended** that, in all areas where there is a likely presence of unsupervised children who will be unaware of the dangers of electric fencing, that a suitably rated current limiting device having a resistance of not less than 500 ohms be connected between the energizer and the electric fence in this area.
- The appliance is not intended for use by young children or infirm persons without supervision.
- **Young children** should be supervised to ensure that they do not play with the appliance.
- Do not place combustible materials near the fence or energizer connections. In times of extreme fire risk, disconnect energizer.
- Regularly inspect the supply cord and energizer for any damage. If found damaged in any way, immediately cease use of the energizer and return it to a Gallagher Authorized Service Centre for repair in order to avoid a hazard.
- Refer servicing to a Gallagher Authorized Service Centre.
- Check your local council for specific regulations.
- Energizers with a Standby mode may turn on or off without warning. The energizer must be disconnected from the mains supply if it needs to be rendered fully inoperative.
- An electric animal fence shall not be supplied from two separate energizers or from independent fence circuits of the same energizer.
- For any two separate electric animal fences, each supplied from a separate energizer independently timed, the distance between the wires of the two electric animal fences shall be at least 2.5m. If this gap is to be closed, this shall be affected by means of electrically non-conductive material or an isolated metal barrier.
- Barbed wire or razor wire shall not be electrified by an energizer.
- A non-electrified fence incorporating barbed wire or razor wire may be used to support one or more off-set electrified wires of an electric animal fence. The supporting devices for the electrified wires shall be constructed so as to ensure that these wires are positioned at a minimum distance of 150 mm from the vertical plane of the non-electrified wires. The barbed wire and razor wire shall be earthed at regular intervals.
- Follow the energizer manufacturer's recommendations regarding earthing.
- The energizer earth electrode should penetrate the ground to a depth of at least 1 m (3 ft) and not be within 10 m (33 ft) of any power, telecommunications or other system.
- Use high voltage lead-out cable in buildings to effectively insulate from the earthed structural parts of the building and where soil could corrode exposed galvanized wire. Do not use household electrical cable.
- Connecting leads that are run underground shall be run in conduit of insulating material or else insulated high voltage lead-out cable shall be used. Care must be taken to avoid damage to the connecting leads due to the effects of animal hooves or tractor wheels sinking into the ground.
- Connecting leads shall not be installed in the same conduit as the mains supply wiring, communication cables or data cables.
- Connecting leads and electric animal fence wires shall not cross above overhead power or communication lines.
- Crossings with overhead power lines shall be avoided wherever possible. If such a crossing cannot be avoided it shall be made underneath the power line and as nearly as possible at right angles to it.