ELECTRIC FENCE CONTROLLER
USERS MANUAL

ZAREBA™

SMART SYSTEMS
FOR ANIMAL CONTROL

CONTENTS

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Warranty

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This manual provides instructions for all these fine brands of fence controllers from Zareba Systems:

ZAREBA® RED SNAP'R® BLITZER®

HOL-DEM® International® Bull Horn®

▲ ***Warning: Read ALL these instructions.*** *Only use electric fence controller products for the purpose intended as defined in this manual.*

INTRODUCTION

Welcome to Zareba Systems, the complete electric fence solution for controlling a wide variety of animals. This Installation and Users Manual will guide you to properly install and operate your electric fence system. These instructions provide the information you need for your electric fence system to be safe, flexible, easy to install, affordable, and maximize its life. Also, the Troubleshooting section will assist you in identifying problems if your fence system doesn't work properly.

Before You Start

Before you start your electric fence installation, check local zoning laws for guidelines within your area. Also check with local utilities before digging to identify any buried cables or natural gas lines.

Designing Your Fence

It helps to plan your fence layout in advance and choose the various components you'll need to complete the installation. Refer to the Zareba *Do-it Yourself Electric Fence System Planning Guide* or our website at www.zarebasystems.com for information on designing your electric fence. Understanding the various portable, temporary and permanent electric fence systems as well as species considerations will help you to minimize costs in building the best fence for your specific application.

▲ ***Tip****: While this manual covers information for most electric fence systems, refer to the Zareba High Tensile Electric Fence Guide for installing permanent, high tensile fencing.*

PRODUCTS

When installing an electric fence system, you will need the following products:

- Fence controller - AC, battery (DC) or solar

- Grounding system
- Posts - wood, metal, fiberglass or plastic
- Fence wire - metal wire, poly wire, poly tape or poly rope
- 20,000 volt (20KV) insulated lead-out and underground wire
- Insulators for line posts and corner posts
- Gate handles and kits
- Fence tester
- And various accessories and replacement parts, including lightning and surge protectors, warning signs/flags and other hardware

▲ ***Tip****: We recommend using our Fence Builder™ design tool on our website - www.zarebasystems.com. It will walk you through the exact products and quantities you need for your specific electric fence application.*

HOW ELECTRIC FENCING WORKS

Electric fencing is an affordable, safe and durable system for containing animals or keeping them out. A short, safe pulse of electricity creates a psychological barrier that trains animals to avoid the fence. In order for the animal to feel a shock, the voltage produced by the fence controller must be high enough to penetrate the animal's hair, hide and hoof. Many animals such as sheep and predators need a minimum of 5,000 volts on the fence line.

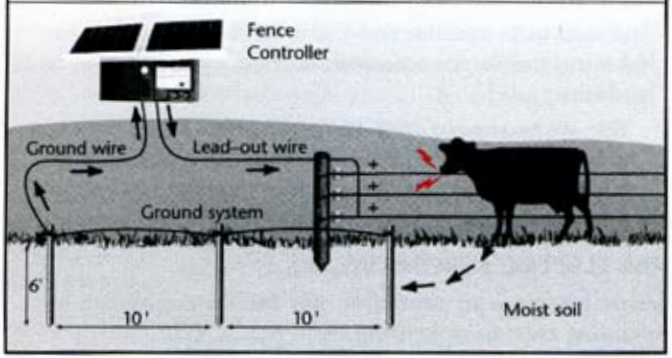
The system works when an animal provides an electrical path by touching the fence wire and the earth simultaneously. The electricity then passes through the animal, into the soil and back to the ground rods, which are connected to the ground terminal of the fence controller. Only then is the circuit complete and the animal instantly receives an electrical shock.

▲ ***Tip****: The installation must be grounded sufficiently for the system to work effectively. Poor grounding can also cause interference on telephone lines, radios and television and could invalidate your warranty.*

▲ ***Warning:*** *You could receive a shock from a metal cased fence controller or ground rod if the fence controller is not grounded properly.*

▲ ***Warning:*** *Never electrify barbed wire or similar fence types where an animal or human may become tangled in the fence or caught against the fence.*

How Electric Fencing Works



Electric fences that use pulse-type electric fence controllers are safe. With the extremely short on-time followed by an off-time of over 1 second, the pulses of electricity can be high voltage and high amperage without causing harm to humans or animals. Since the animal remembers the jolt of electricity, it "trains" it to stay clear of the fence. Plus the short on-time electric pulse limits heat, which prevents burning.

▲ ***Tip****: All Zareba brand pulse-type discharge electric fence controllers meet Underwriters Laboratories (UL) standards for safety.*

INSTALLING YOUR ZAREBA ELECTRIC FENCE SYSTEM

There are general rules for installing any type of electric fence system - AC, battery or solar. For proper installation, we recommend you read this entire Users Manual. Certain models of fence controllers have a section dedicated to its installation.

Warning: *To reduce risk of electrical shock, do not remove the fence controller cover. Refer to service personnel.*

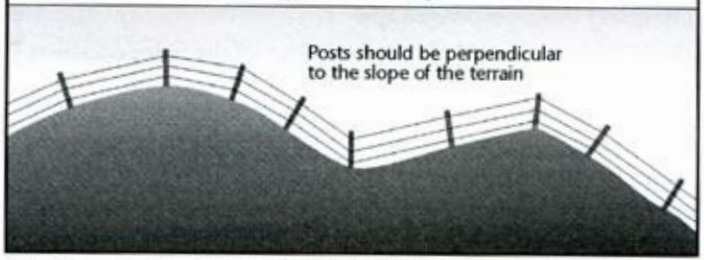
▲ ***Tip****: An electric fence line does not have to be constructed in a continuous loop; it works effectively when dead-ended.*

Installing Posts

A fence system typically requires corner posts, used in areas such as corners and gates where greater tension occurs on the fence line; and line posts, used to support the fence wire between corner posts. Post selection depends on the type of fence and the expected fence life. In general, permanent fences use wood posts for corners, and steel posts for line posts. Temporary fences tend to use fiberglass or metal rod posts or plastic step-in posts for corner and line posts. With temporary fencing, a bracing system may be needed on the corner posts.

Electric fencing will usually use fewer posts than conventional barbed or woven-wire fencing, making it less expensive and easier to install. Post spacing will vary, depending on the animal being controlled, the topography and the type of fence. Temporary or portable fencing is typically 12 feet to 25 feet between posts, whereas permanent fencing is 25 feet to 75 feet between posts.

Post Spacing on a Hilly Terrain



Don't try to space posts evenly. In level terrain, posts can be spaced farther apart; for uneven terrain, a post should be placed at high and low points; and on hillsides, posts should be

installed perpendicular to the slope. This keeps the wire at the proper height and prevents it from binding on insulators or clips.

▲ ***Tip**: For detailed fence recommendations by type of animal, refer to our website at www.zarebasystems.com.*

Installing Insulators

Insulators isolate the electrified wire(s) to prevent shorting and electric current leakage. Always install high quality, UV-resistant insulators on your fence line and corners - they will last longer, improve fence performance and will cost you less money over time.

▲ ***Tip**: Be sure the electrified wires do not touch the posts.*

The type of fence insulator selected should be designed to fit the type of post you choose. We highly recommend using Red Snap'r® plastic insulators designed specifically for every type of post - wood, T-posts, rods, corner posts, and tube or chain link fencing. These insulators are available with various options of pinlocks, extenders, clips - everything you need to accommodate your selection of wire, poly tape or poly rope.

▲ ***Tip**: Refer to our website at www.zarebasystems.com or our Do-it-Yourself Electric Fence System Planning Guide for more information on specific insulators.*

Installing Wire, Rope or Tape

Electric fence wire around the perimeter of the fence conducts the electric charge from the fence controller. Galvanized steel, aluminum and poly woven fence wire are recommended. With poly wire, poly tape and poly rope, strands of conductive wire are woven into the fabric.

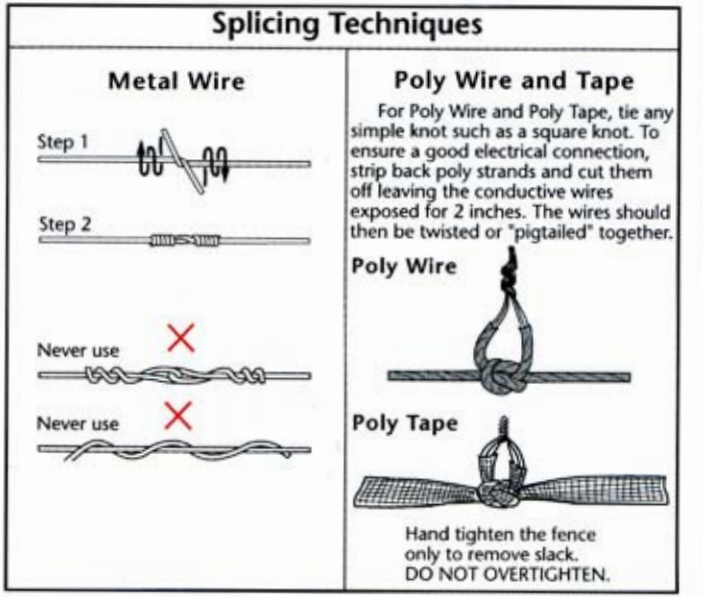
▲ ***Tip**: For equine enthusiasts, we recommend using 1-1/2 inch white poly tape or 1/4 inch white poly rope. They are highly visible to horses and help them to avoid the fence.*

▲ ***Warning:** Never electrify barbed wire or woven-wire fences, as these are more likely to injure animals.*

For installation, pull the wire, tape or rope taut enough to maintain the same height between the posts.

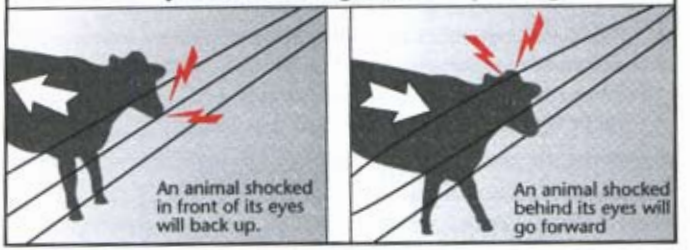
▲ ***Tip**: Good connections using wire clamps and proper splicing are important to maximizing power on the fence. For best results, Zareba Systems offers splicers for poly rope (PRS2) and poly tape (SBS4 for fi inch tape and SBL4 for 1 fi inch tape).*

Splicing Techniques

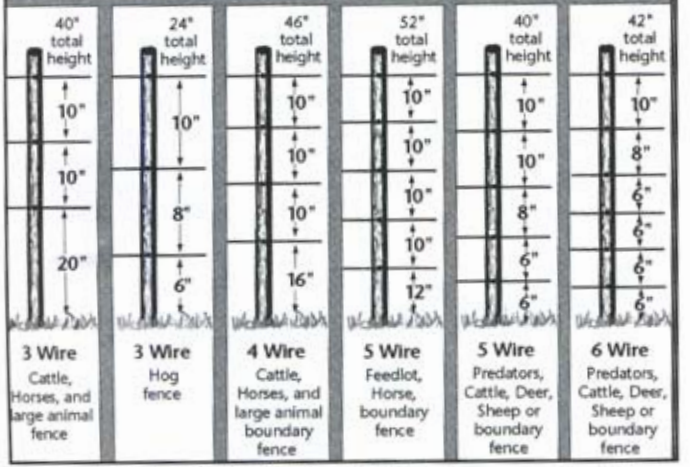


The height and spacing of the wires will vary with the animal being contained (or kept out). Always position one electrified wire at the animal's shoulder height; as this will cause it to hit the fence with its nose, making it back up. With electric fencing, proper spacing of the wires to the application is more important than fence height.

Proper Wire Height and Spacing



Electric Fence Wire Height and Spacing



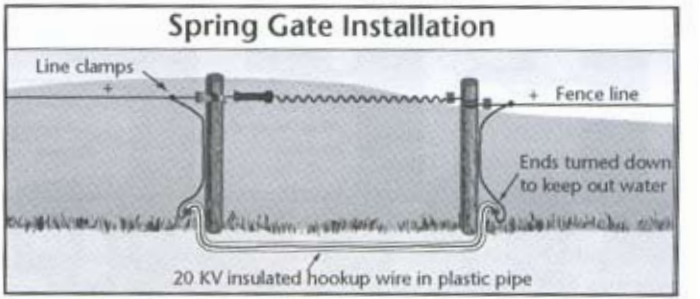
Electric Fence Heights for Portable/Temporary Fencing

Animals to Control	# Wires	Height/Spacing
Managed grazing:		
Cattle	1	32" to 42"
Sheep and Goats	1	18" to 24"
Horses - Portable Corral	1	36" to 48"
Lawn & Garden	3+	12" to 20" / 3 - 4" apart

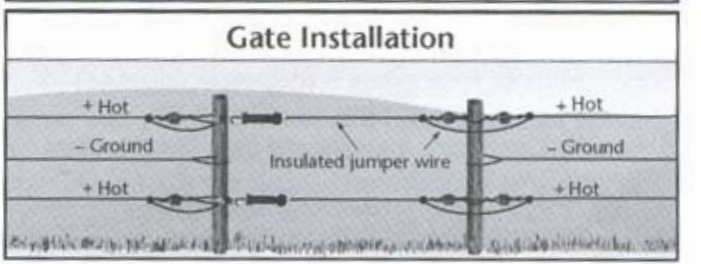
Gate Installation

Gate openings can be installed a variety of ways. Typically the same fence wire is used across the opening. However, spring gate kits or metal gates can also be installed.

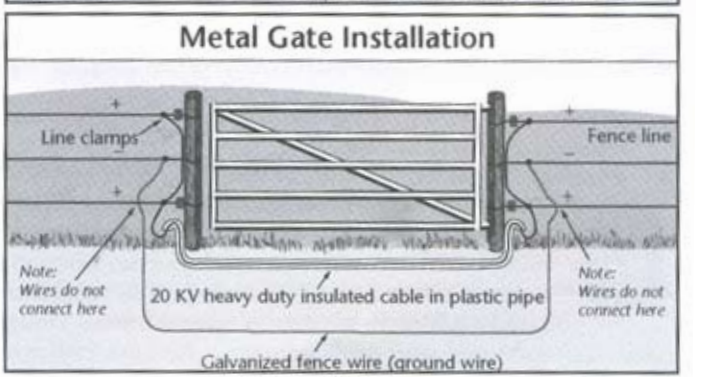
Spring Gate Installation



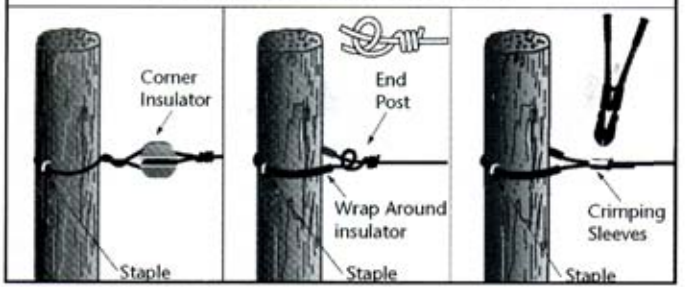
Gate Installation



Metal Gate Installation



End Post or Gate Insulators



INSTALLATION AND OPERATION OF FENCE CONTROLLERS

When power is on the fence, the fence OK light will flash and you may hear a clicking noise at the fence controller. Zareba small application AC fence controllers, including the A5, 10 Acre and 20 Acre, the fence OK light flashes 40 to 60 times per minutes when the fence voltage is adequate to deliver a shock, and flashes at a slower rate when the voltage is low.

Always check your fence controller and fence line for voltage once installation is complete.

▲ ***Warning:*** *Never run more than one fence controller on the same fence line at one time. The pulse time between the fence controllers will be too close together and could be hazardous to animals and people. It could also damage your fence controllers.*

▲ ***Warning:*** *Never alter the design of a fence controller or substitute components, as it could be hazardous and will void the warranty.*

▲ ***Warning:*** *Post warning signs on electric fence lines, especially near residences or along public roads.*

▲ ***Warning:*** *In brushfire-prone areas, turn the fencer off on extremely dry days. For backup, be sure others know how to disconnect the fence controller. Also, never disconnect wires or approach a fence during lightning storms.*

▲ ***Warning:*** *Do not operate fence controllers near any combustible materials including gasoline, kerosene and cleaning fluids.*

AC-Powered Fence Controllers

Low Impedance:

A100LI, A200LI

A10LI, A25LI, A50LI

LI15, LI30, LI50, LI100

Solid State:

A5, A15 A20

A10M, A15M, A20M

A20CP, A20ML

10-Acre 20-Acre

66B, 88B

RS3

ACC2 33B

Install your Zareba® AC fence controller in a building or weatherproof area, protecting all electrical connections from moisture.

AC operated fence controllers have a polarized 2-blade attachment plug for 120-volt circuits. The plug must be inserted into a properly installed outlet in accordance with all local codes and ordinances. If an extension cord is required, use only a polarized cord that properly fits into the outlet. Repair or replace all damaged cords. Note: the RS3 has a 3-prong ground plug.

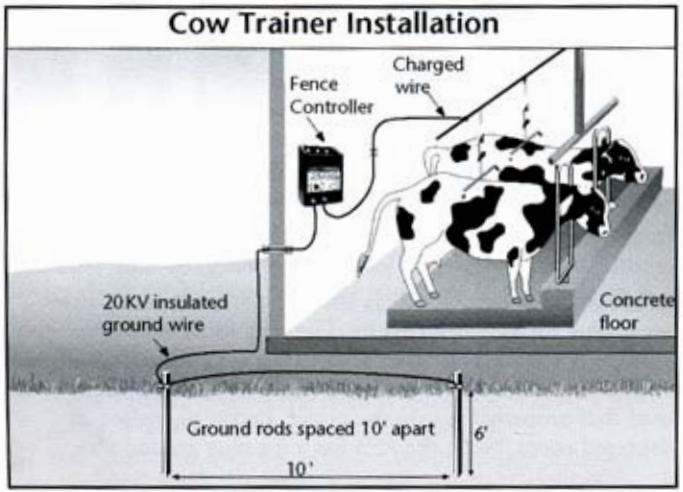
▲ ***Warning:*** *For AC operated fence controllers; do not modify the plug provided with the controller if it doesn't fit into the outlet. Contact a qualified electrician for proper outlet installation.*

Zareba Model 8200 (ACT): Solid state fence controller designed specifically for use as a livestock trainer.

In stanchion-style dairy barns the cow trainer fence controller can help keep cows clean by forcing them to defecate in the gutter, not in their stall. The cow trainer fence controller powers the t-bar which hangs over the cows back, preventing them from hunching their back.

For maximum performance, properly ground the 8200 using two 6-foot galvanized rods. All lead-out wires must be properly insulated when installing through wood, steel, stone or concrete walls by using insulators or 20KV underground hookup wire. Always use brass ground clamps when connecting ground wire to ground rod. The wire must be clean at all connections, with all joints tight.

▲ ***Warning:*** *Never use a water line pipe as a ground rod.*

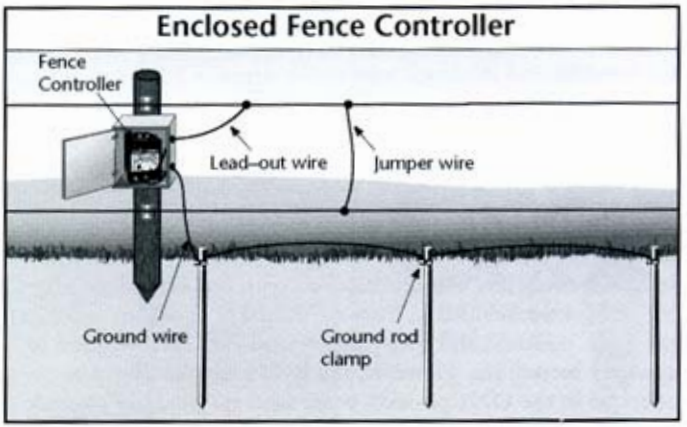


Battery-Powered Fence Controllers

Low Impedance: **Solid State:**

B25LI, B50LI LIB15, LIB30 B5, B10 B10M 44B

Battery-operated fence controllers are ideal for remote locations or areas without access to AC power. Install the fence controller indoors or in an enclosure to protect it from severe weather. The B10LI model does not require an enclosure.



Connect the red section of the power cord to the positive (+) terminal and the black section of the power cord to the negative (-) terminal of the battery. We recommend using a deep cycle marine battery rated at 85 amp hours or more. The battery should operate 4 to 8 weeks continuously before having to be recharged.

▲ ***Warning:*** *Always disconnect the battery from the fence controller before recharging the battery. Failure to do so could damage your fence controller and battery charger and void your warranty.*

▲ ***Warning:*** *Never connect a DC fence controller to an AC power supply.*

Zareba Model B10LI:

The Zareba® B10LI is operated on 4 "D" Cell alkaline batteries or a 6 or 12-volt battery.

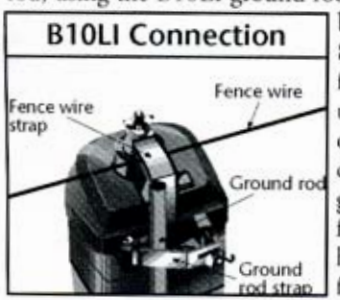
For use with 4 "D" batteries, remove the front battery compartment by depressing the plastic tab while pulling

downward. Install the batteries according to the positive (+) and negative (-) markings on the battery compartment and snap back into place. The B10LI should operate continuously for several weeks before having to replace the batteries.

For use with 6 or 12-volt battery, use the red and black wires furnished with the B10LI. Connect the red wire to the positive (+) terminal and the black wire to the negative (-) terminal located on the bottom of the B10LI. Attach the red wire to the positive (+) terminal of the battery and the black wire to the negative (-) terminal. The B10LI should operate 4 to 8 weeks continuously before having to recharge the battery.

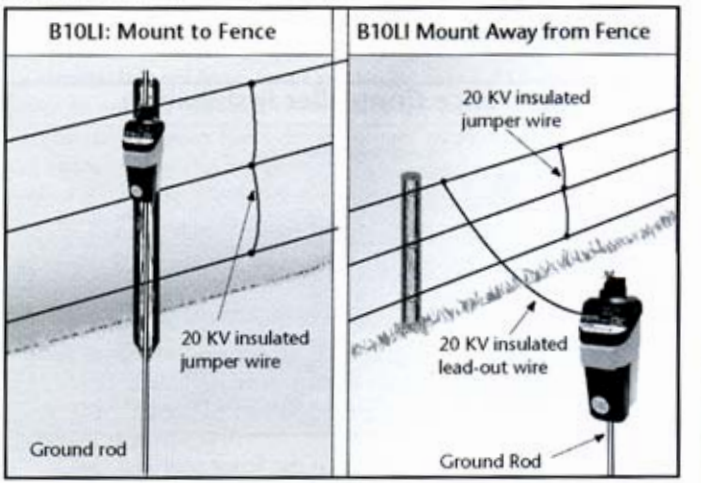
The B10LI has a 3-position switch located on the bottom of the unit: ON1, OFF and ON2. ON1 puts out more current but reduces battery life. ON2 reduces current, but extends battery life. It is recommended to train an animal to avoid the fence in the ON1 position, and then operate it in the ON2 position to conserve battery life. However, the B10LI should always be operated in the ON1 position when used for predator control.

Mount the B10LI directly to a galvanized or copper ground rod, using the B10LI ground rod mounting strap located on the back of the fencer. With a 6 to 8-foot ground rod, attach the fencer directly to the fence line using the fence terminal strap on the top of the B10LI. When connecting the fencer to a ground rod away from the fence, use 20KV insulated hookup wire as a lead from the fencer to the fence.



For additional or alternate grounding in dry, sandy or frozen ground conditions, run a #10 or #12 ground wire from the ground terminal on the back of the B10LI to a 6-foot galvanized metal or copper ground rod driven into the ground.

Connect the ground wire to the ground strap using the wing nut to tighten the wire. In extreme conditions, 2 ground rods spaced 10 feet apart may be required.



Solar-Powered Fence Controllers

SP3, LIS3

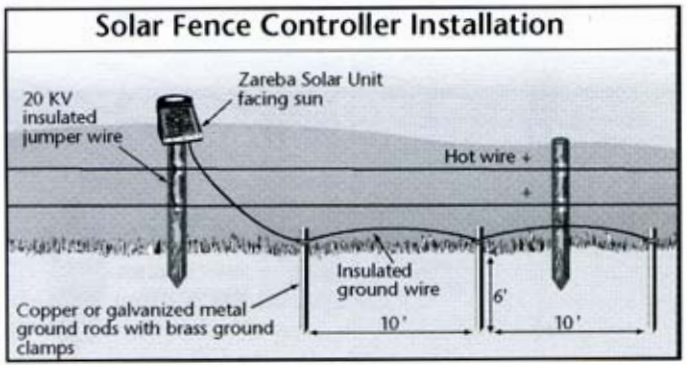
SP10, LIS10

Solar-powered fence controllers substantially reduce the need to recharge and replace batteries. They are easy to maintain and less costly to operate, as they use free energy from the sun to charge the internal gel cell battery. The solar panel collects the sun's energy during both sunny and cloudy weather conditions. The battery will retain its maximum shock on your fence line for up to 2 weeks of total darkness.

The solar panel on the fence controller is set at an angle to ensure maximum year-round energy collection. Changes in the

weather will not effect the controller's performance.

STEP 1: Mount the fence controller in a location that receives full sunlight throughout the day and secure it to prevent turning and shifting. Face the solar panel toward the noontime sun - due south in the northern hemisphere.



STEP 2: Connect the fence wire to the fence terminal and connect the ground wire to the ground terminal. (Refer to grounding on page 16.)

STEP 3: Turn controller on by pushing in the switch to the line (|) position. (The 0 pushed in is off.)

▲ ***Tip**: Prior to using your solar fencer to electrify your fence, turn the fence controller to OFF and allow the sun to charge the battery for 3 days. This will improve the battery life as well as fully charge it, as it may be partially discharged due to prolonged shelf storage.*

Zareba Model SP30:

The Zareba SP30 comes complete with two 6-volt gel cell batteries.

Set the SOLAR REGION SETTING: For optimum performance throughout the year, adjust the SOLAR SETTING to summer (left), during the 12+ hours of daily sunlight and winter (right) for less than 12 hours of sunlight.

This seasonal adjustment will lengthen the battery life of the solar fencers. When the fence controller is turned ON to summer or winter, the fence indicator light should be blinking.

To remove battery from fence controller, use a #15 torx screw driver to remove the back cover. Slide the batteries out and disconnect the wires from the terminals, marking the positive and negative wires. After battery is recharged (or replaced), hook wires to the controller the same way.

Solar Battery Maintenance

The normal life of the internal gel cell battery is typically 3 to 4 years, with properly maintained batteries lasting even longer. A solar fence controller that is being stored should be placed in the sun for 3 days every 3 months to recharge the battery. Any fence controller in use that doesn't receive sunlight during 2 weeks' time should be recharged for 3 days in sunlight with the controller turned OFF.

▲ ***Tip**: A fence controller with a low battery can be recharged using the Zareba 6-volt charger for 24-36 hours. (Part number SBC1) Always remove the battery from the fence controller to change or recharge it.*

To remove the battery from fence controller, take off the door located in the bottom of the controller using a phillips screw driver. Pull out the battery and disconnect the wires, marking the positive and negative wires. After battery is recharged (or replaced), hook wires to the controller the same way.

▲ ***Warning**: Do not charge the solar powered electric fence controller battery with an automobile battery charger, as this will damage the battery.*

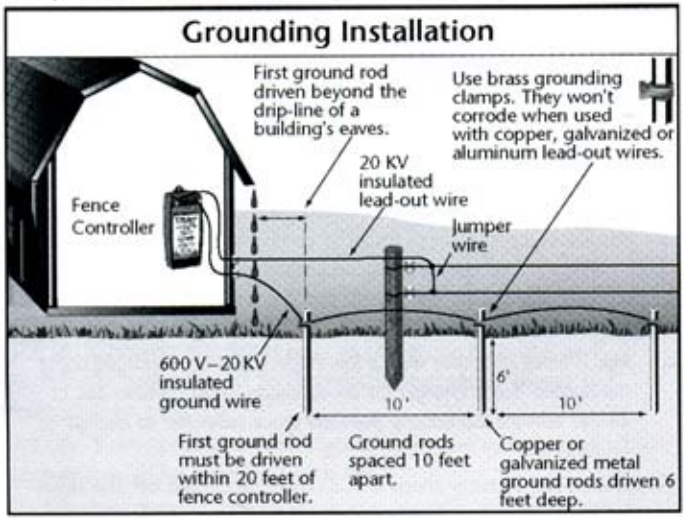
To test , measure the battery voltage with a voltmeter. 6-volt batteries should measure 6 - 6.5 volts, and 12-volt solar fencers have two 6-volt batteries that should each measure 6 - 6.5 volts.

Solar Panel Maintenance

Be sure to clean the solar panel with a soft cloth and water when replacing it or when dusty to maximize its effectiveness. Do not use detergent or abrasive cleaners on the solar panel.

GROUNDING INSTALLATION

Every fence controller must be grounded to work.



STEP 1: The fence controller lead-out wire carries the voltage from the fence terminal to the fence. Additionally, jumper wires are needed in buried wire and multiple wire fence systems to carry voltage from one electrified fence wire to another. Always use 20KV insulated electric fencing cable when insulated wire is needed. If insulators are used, regular fence wire can be run from the controller to the fence line as long as it doesn't contact any other objects that will short it out.

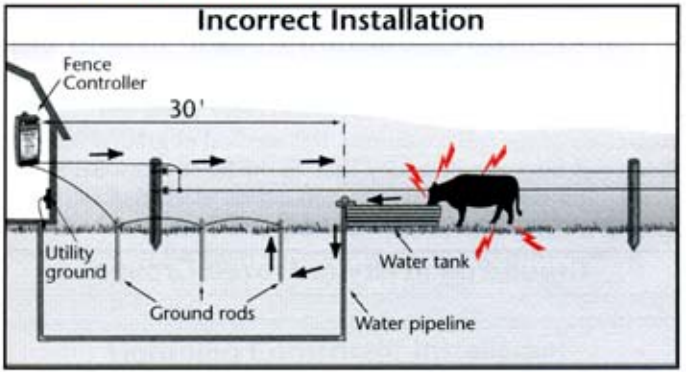
STEP 2: For maximum performance and shock intensity, drive three 1/2 inch 6-foot galvanized (07104.96)or 8-foot copper

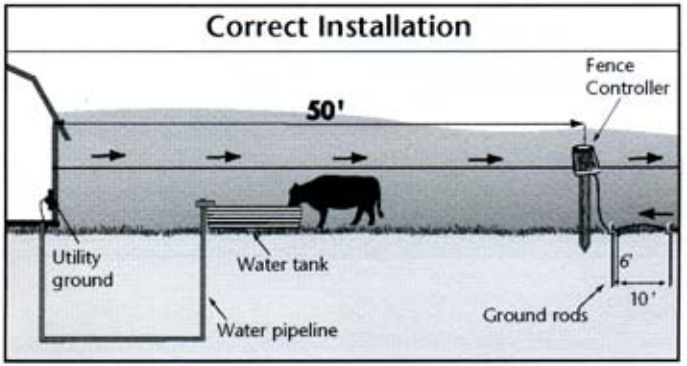
(GR8) ground rods spaced 10 feet apart into permanently moist soil. The first rod needs to be within 20 feet of wire from the fence controller.

▲ ***Tip**: During extended periods of dry weather, it is recommended to periodically water the ground system.*

▲ ***Tip**: To increase shock intensity, increase the number of ground rods.*

▲ ***Warning:** Do not install ground rods within 50 feet of a utility ground rod, buried telephone line or buried metal water line, as they may pick up stray voltage.*





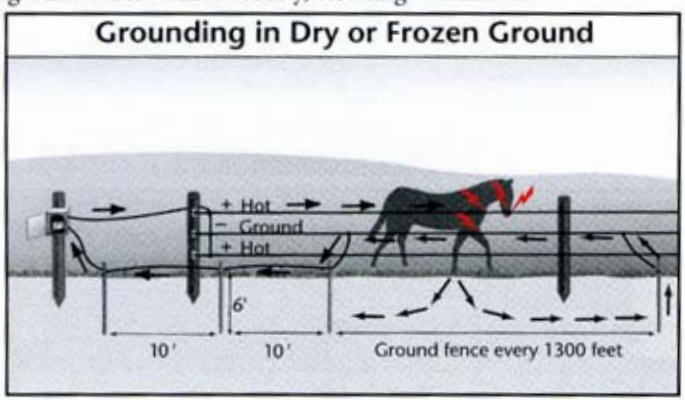
STEP 3: Using 10 to 12 gauge wire, connect the ground terminal on the fence controller to the ground rods using brass ground rod clamps (07105.96).

STEP 4: Connect the lead wire from the fence terminal on the controller to the fence wire using line clamps (07110.96) and 20KV insulated hookup wire (12.5g - UGC50;, 14g, 50' - 01404.92;, 125' - 07090.92).

▲ ***Tip**: Good connections using wire clamps and wire connectors are important to maximizing power on the fence.*

Grounding in Dry or Frozen Ground

A typical grounding system is insufficient in dry, sandy, frozen or snow covered soil, and additional grounding is required. Run a grounding wire parallel between hot/electrified wires and drive a 6-foot galvanized steel or copper rod every 1,300 feet . Regardless of the soil conditions, this method of ground installation will carry the electricity back to the fence controller's ground system when an animal contacts the electrified and ground wires simultaneously, resulting in a shock.



LIGHTNING AND SURGE PROTECTION

Lightning is one of the main causes of fence controller failure. Precautions can be taken against AC power surges and lightning. However, if you are in an area with frequent electrical storms, be sure to keep a spare fence controller for backup.

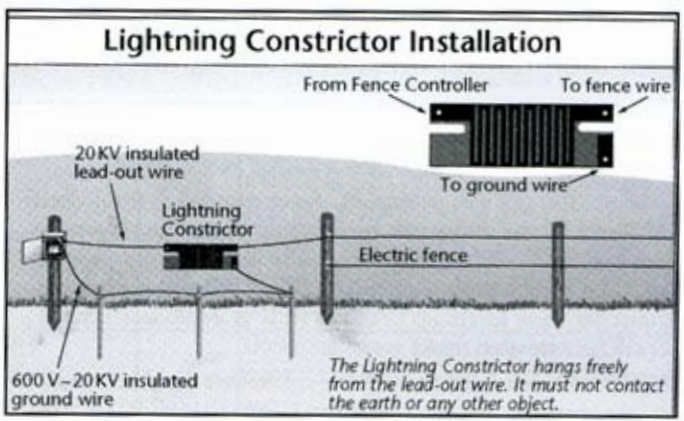
STEP 1: Disconnect the fence controller from the fence line and power source when storms are near.

▲ ***Warning: Risk of electric shock!** Do not connect an electric fence to any other device such as a cattle or poultry trainer, as lightning striking a fence will be conducted to other devices.*

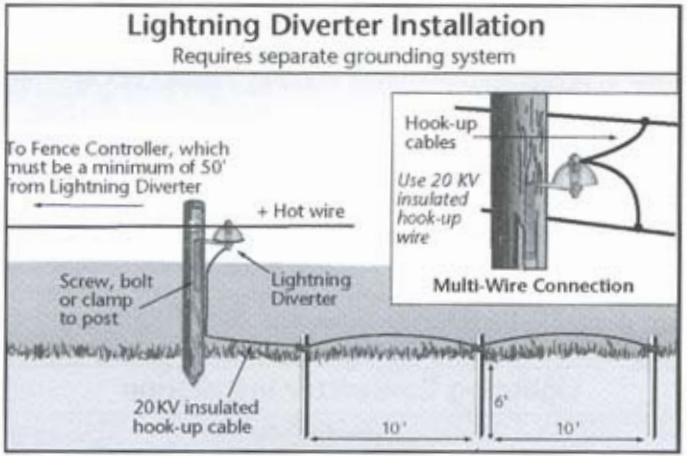
STEP 2: To quickly disconnect the fence from the controller prior to storms, we recommend installing Zareba Cut Off Switches (COS1) in convenient locations. These will also help to locate any short circuits in troubleshooting the fence.

▲ ***Warning:** Never disconnect a fence controller or approach an electric fence during a lightning storm.*

STEP 3: Install a lightning diverter (arrestor) between the fence and the fence controller. This will divert the electricity caused by lighting strikes from the fence to the earth before causing any damage to the fence controller. The Zareba® Lightning



Constrictor (LC1) is a combination lightning diverter and choke; while the Lightning Diverter (07106.96) and Lightning Arrestor (LA1) divert lightning surges to the ground through its separate grounding system. The lightning diverters should be installed 50 feet or more from the fence controller and require a separate grounding system with a minimum of two 6-foot ground rods spaced 10 feet apart. For multiple hot wires, use 20KV insulated hookup cable to attach to each of the wires using line clamps.



▲ ***Tip**: While lightning protection devices can reduce damage by 70 to 75%, no device provides 100% protection from lightning.*

STEP 4: You can also protect AC fence controllers from electrical surges on the utility side by plugging in a surge suppressor into the outlet and the fence controller into the surge suppressor. The Zareba surge suppressor (01549.96) will protect the controller from surges up to 6,000 volts in a response time of less than 5 nano seconds.

STEP 5: For low impedance fence controllers rated at 1 joule of energy output or greater, the Storm Guard (01667.92) is effective in protecting the fence controller from fence line lightning strikes. It attaches quickly and easily to the fence and ground terminals on the fence controller to reduce potential lightning damage.

▲ ***Tip**: If the fence controller quits working after any lightning storm, remove the Storm Guard and test the fence controller to see if it works. If it does, the Storm Guard succeeded in preventing damage to the controller. Replace the Storm Guard with a new unit (01667.92), to protect from future storms.*

STEP 6: The Zareba Spring Gate Assembly (SG1) is not only a convenient way to open and close gates, but also serves as a lightning choke by dissipating a lightning surge as it travels down a fence line. (See Gate Assembly, page 8.)

TESTING YOUR FENCE CONTROLLER AND FENCE

It is important to regularly test the voltage on your fence line and fence controller to be sure it's functioning properly. When installed correctly, there should be no power in the earth -- only on the fence line.

To measure the voltage on the fence line or the fencer, use a digital or light fence tester. Zareba Systems provides several types of testers.

Zareba Fence Testers:

Part No.		Description
DEFT1		Digital electric fence tester accurately measures 500 - 9,900 volts on fencers and fence line
RSVT8		8-light voltage tester uses neon lights to measure 600 - 7,000 volts on fencers and fence line
UFT		Universal fence tester indicates with a light if there is a current on the fence line

Since fence testers can vary in accuracy up to plus or minus 50%, we recommend referring to the Zareba reference guide that compares voltage measurements of the most popular fence testers. The reference guide is located on our website www.zarebasystems.com or call us and request a copy.

Zareba Electric Fence Alarm (EFA-1)

To be alerted when voltage on the fence drops below a preset level, we recommend installing the Zareba Electric Fence Alarm (EFA-1). It will set off a siren or light when the voltage drops below 2,000 or 4,000 volts. The EFA-1 is operated using a 12-volt battery.

Cost of Operation

Zareba fence controllers are inexpensive to operate, costing only pennies per day. The following chart shows the power consumption and cost based on $0.085 per kwH:

Fencer Rating	Watts Consumed	Cost per Month
20 miles	3.5	$0.22
50 miles	5.0	$0.31
100 miles	15.0	$0.94
200 miles	30.0	$1.89

To calculate amperage (current) draw, divide watts by voltage. (i.e. 30 watts , 120 volts = .25 amps) A 15-amp service will operate any Zareba® fence controller.

TROUBLESHOOTING

We recommend testing the fence every day to be sure the fence is working properly and that the animals are not getting out (or predators in). It is a good idea to keep an extra fence controller on hand for backup. The following lists the most common reasons an electric fence doesn't work properly:

1. Low voltage on the fence due to the fence controller not being strong enough for the length of the fence, amount of vegetation, rusty wire, or an insufficient ground system.

2. Radio/TV interference caused by the ground rod located within 50 feet of a utility ground, buried metal water pipe or buried telephone wire; electrical current leaking through damaged insulators or vegetation touching the fence; or a defective fence controller.
3. Inferior connections and splices.
4. Improper fence wire insulation, including inadequate insulation in the lead-out and jumper wires.
5. Cracked or poor quality insulators, using water hose or plastic tubing as insulators, or using wood posts without insulators.

Fence Controller Doesn't Work

STEP 1: (For fence controllers with fuses.) Unplug the AC fence controller. Check to see if the fuses are blown, and if so, replace only with 1-amp/250v fuses. Plug the fence controller back in. If the new fuse blows instantly, the fence controller needs to be serviced. If the fence controller operates for several hours before blowing a fuse again, the problem is likely with your fence installation.

STEP 2: Check the power source. Unplug the fence controller or disconnect the battery clamps from the battery before checking. When testing it,

1. The 115VAC fence controller must have a power source between 105VAC and 125VAC.
2. The 12-volt battery fence controller should have a minimum power source of 12 volts.
3. The 6-volt and 6/12-volt battery fence controllers should have a minimum power source of 6 volts.

▲ ***Tip:*** *For best results on DC controllers, use a deep cycle marine battery rated at 85 amp hours or higher.*

STEP 3: Check the fence controller for output. Use a voltage tester designed to test electric fence controller output. We recommend the Zareba DEFT1 digital tester or RSVT8 8-light

fence tester.

Note: For the A5, 10 and 20 acre AC solid state fence controllers, if the fence OK light flashes less than 35 times per minute, the fence voltage has fallen below desired levels. Check the fence controller with the lead-out wire disconnected. If the light continues flashing slow (normal is 40 to 60 flashes per minute), the controller is likely defective.

STEP 4: If the fence controller output and power source are normal, check the fence installation.

1. With the hot lead-out wire to the fence terminal connected, disconnect the lead-out wire at the fence and check for voltage with a tester. If the voltage is low, replace the lead-out wire using 20KV insulated hookup wire.
2. Reconnect the lead-out wire to the fence; disconnect all fences that run off the main fence and then check for voltage on the main fence. If the voltage is low, the problem lies in the main fence. If the voltage is OK, reconnect the fences, checking voltage as each fence is added. The voltage will drop drastically or short out completely when you connect any fence with a problem.
3. Once you determine the section of fence causing the problem, walk the fence line looking for shorts. Typically problems occur at corners, gates, insulators or connections. A snapping sound may indicate an electrical shorting.
4. Vegetation and rust on the fence are the most common causes of voltage loss. Even high-powered, low impedance fence controllers (recommended for fences with vegetation) will lose voltage if enough weeds and grass touch the fence - especially when wet. It is highly recommended to spray herbicide under any type of fence to minimize vegetation problems. If a wire is rusty, it should be replaced, as the rust insulates and may not transfer the electric shock to the animal.