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Zareba ESP2M-Z

Zareba ESP2M-Z Solar Powered Low Impedance Electric Fence Charger Instruction Manual

Model: ESP2M-Z

INTRODUCTION

The Zareba ESP2M-Z Solar Powered Low Impedance Electric Fence Charger is designed to energize electric fencing for containing small animals and deterring predators. This solar-powered unit offers portability and does not require proximity to an AC outlet. It is suitable for use with steel or aluminum wire, polywire, polyrope, and polytape in weed-free or light weed conditions.

IMPORTANT SAFETY INFORMATION

WARNING: ELECTRIC FENCE

Always exercise caution when working with electric fences. Ensure all components are installed correctly to prevent unintended shocks. This charger is designed to deliver a safe, yet effective, psychological deterrent to animals. Look for third-party approved safety labels (e.g., UL, ETL Intertek) on your charger to ensure all safety evaluations have been completed.

Do not connect more than one fence energizer to the same fence system. Do not connect the fence energizer to any other device such as a cattle trainer or a poultry trainer. This will cause lightning to be conducted to all other devices.

SETUP

1. Power Source

The ESP2M-Z is a solar-powered unit, featuring a built-in 4-volt battery (included) that charges via the integrated solar panel. Ensure the solar panel is positioned to receive maximum direct sunlight throughout the day for optimal charging performance. The charger can operate for up to 2 weeks without sun once fully charged.

2. Mounting the Charger

The charger includes a built-in mount that is versatile for various post types:

- T-posts
- Round and wood posts
- Y-posts
- Flat surfaces

Securely mount the charger in a location that allows the solar panel to face the sun and is easily accessible for connections.

3. Fence Line Connection

Connect the 'hot' fence terminal (typically red) on the charger to your electric fence wire. Ensure a secure connection using appropriate connectors.

4. Grounding System

A robust grounding system is critical for the effective operation of your electric fence. Connect the 'ground' terminal (typically green or black) on the charger to a ground rod. For optimal performance, use multiple ground rods spaced appropriately, especially in dry soil conditions. The fence's shocking power is directly related to the effectiveness of its grounding system.

The image below illustrates the 2-mile rating and energy output of the charger:



Image: Zareba ESP2M-Z charger specifications showing 2 miles, 0.04 output joules, and 0.07 stored joules.

5. Insulators

Use appropriate insulators to attach fence wires to posts. Insulators prevent the electric current from shorting to the ground through the posts, ensuring the current remains on the fence line until an animal touches it. Insulated wire should be used for any underground connections.

6. Fence Type Compatibility

This charger is designed for use with steel or aluminum wire, polywire, polyrope, and polytape. It is not recommended for use in heavy weed conditions.

The charger is ideal for containing small animals and keeping out predators, such as rabbits, chickens, and

sheep, as shown in the image below:



Image: Animals suitable for containment with the Zareba ESP2M-Z electric fence, including rabbits, chickens, and sheep.

Video: How an Electric Fence Works

Your browser does not support the video tag.

Video: An animated explanation of how an electric fence system operates, detailing the flow of electric current, the role of the charger and grounding system, and how animals receive a shock. This video is provided by Woodstream Corporation, the manufacturer.

OPERATING THE ELECTRIC FENCE CHARGER

Once the charger is properly installed and connected to the fence line and grounding system, it will begin to energize the fence. The charger features an 'OK light' to indicate that it is functioning correctly and delivering pulses to the fence.

The electric fence operates by creating a circuit. When an animal (or any conductive object) touches the 'hot' fence wire and is simultaneously in contact with the ground, the circuit is completed, and the animal receives a brief, unpleasant shock. This shock serves as a psychological deterrent, teaching animals to avoid the fence.

MAINTENANCE

- **Weed Control:** Regularly clear weeds and tall grass from around the fence line. Weeds can draw power from the fence, reducing its effectiveness. The ESP2M-Z is designed for weed-free or light weed conditions.
- **Solar Panel Cleaning:** Keep the solar panel clean and free of dirt, dust, and debris to ensure maximum sun exposure and efficient battery charging.
- **Battery Check:** Although the battery is included and solar-charged, periodically check the 'OK light' to confirm the charger is operating. If the light is off or dim, ensure the solar panel is clean and receiving adequate sunlight.
- **Connection Inspection:** Periodically inspect all fence and ground connections for corrosion or looseness. Tighten or clean as necessary to maintain optimal conductivity.
- **Wire Integrity:** Check fence wires for breaks, sagging, or damage. Repair any issues promptly to

maintain the fence's integrity and shocking power.

TROUBLESHOOTING

- **No or Weak Shock:**

- Check the solar panel for obstructions or dirt.
- Verify all fence and ground connections are secure and free of corrosion.
- Inspect the grounding system. A poor ground can significantly reduce shock strength. Ensure ground rods are properly installed and sufficient for your soil type.
- Clear any weeds or vegetation touching the fence line.
- Check for breaks in the fence wire or faulty insulators.

- **'OK Light' Not On:**

- Ensure the solar panel is receiving direct sunlight.
- Allow time for the internal battery to charge, especially after extended periods without sun.
- Check for any physical damage to the charger or its components.

SPECIFICATIONS

Feature	Detail
Model Number	ESP2M-Z
Rating	Energizes up to 2 miles of electric fencing (ideal conditions) / 1 mile (light weeds)
Power Source	Solar Powered (4-volt battery included)
Charging Time	Up to 14 days operation without sun (after full charge)
Product Dimensions	6.41 x 9.97 x 11.14 inches
Item Weight	3.42 pounds
Manufacturer	Woodstream Corporation
Safety Certification	UL Listed

WARRANTY AND SUPPORT

Warranty Information

The Zareba ESP2M-Z Solar Powered Low Impedance Electric Fence Charger includes a 1-Year Limited Warranty, which covers lightning damage.

Customer Support

For additional questions or support regarding your Zareba electric fence charger, please contact customer service at:

855-592-7322