

# Sureguard Electric Fencing

## Portable Electric Fence Energiser – Model #160



### Features:

- ✓ Compact, lightweight, rugged design.
- ✓ Very high output voltage for ultimate deterrence.
- ✓ High output energy, good for large muscled animals.
- ✓ Low battery detection.
- ✓ Batteries do not deplete when switched OFF.
- ✓ Includes indicator light and piezo buzzer.
- ✓ Bump-proof ON/OFF Switch



### Specifications:

- **Case Dimensions:** 88mm\*146mm\*26mm (3.4" \* 5.7" \* 1.0").
- **Weight:** Excluding batteries - 0.3kg (10.6oz).
- **Ingress Protection:** IP67 – Dust tight and protected from water to a depth of 1m.
- **Output Cables:** 1.25m (4ft) long high voltage silicone with premium rust-resistant end clips.
- **Output Voltage:** 9500 volts.
- **Output Energy:** 0.16 Joules maximum.
- **Stored Energy:** 0.19 Joules.
- **Output Pulse Rate:** Constant 40 pulse per minute. (Slows when battery exhausted).
- **Output Pulse Duration:** Typically, 0.48 milliseconds into 10,000 ohm load.
- **Maximum Fence Length:** 660m (2100ft) @ 5,600 volts
- **Battery Power:** Install two "AA" or 14500 sized batteries. (Batteries not included).
  - Alkaline non-rechargeable 1.5 volt.
    - Total running time 22 hours.
  - Lithium non-rechargeable 1.5 volt (maximum voltage).
    - Total running time 54 hours.
  - NiMH rechargeable 1.2 volt and capacity at least 2300mah.
    - Total running time 23 hours.
  - Other battery types must not be installed.

## How Does the Electric Fence Work?

The purpose of an electric fence is to keep animals within an area or prevent undesired animals from entering. When the animal touches the Electric Fence Wire it completes an electrical circuit. The impulse passes from the wire, through the animal's body, down into the moist ground and back to the earthing electrode. The electrical impulse produces a brief muscle contraction sufficiently unpleasant to cause the animal to back off. The animal will have the strongest reaction when the ground is moist. In dry ground the electrical impulse can't travel efficiently and the reaction may be less.

## How do I Use the Energiser?

- Install 2 AA batteries into the rear battery holder. Screw back the battery door to seal against water ingress.
- Install the Electric Fence Wire at a height suitable for the animal so it will easily touch it.
- Use commercially available Electric Fence Insulators or Posts to support the Electric Fence Wire.
- Install an Earthing Electrode next to the Energiser into moist ground. This is a metal peg with a large conductive surface placed **at least** 30cm / 1ft deep.
- Connect the GREEN Cable to the Earthing Electrode.
- Connect the RED Cable to the Electric Fence Wire.
- Switch ON the Energiser by momentarily pressing the rubber side panel (location illustration below).
- The Indicator Light flashes with each high voltage impulse to the fence together with a pulse-tone.
- There is an option to switch off the pulse-tone. Hold the power switch down while installing the batteries. When the start-up tone finishes, release the switch.
- Place Energiser out of reach of animals.
- Replace batteries when the pulse rate slows, or you occasionally hear the long buzzer tone.
- **SHOCK RISK: Always Switch Energiser OFF before replacing batteries.**

## Problem Solving:

### Device won't switch on.

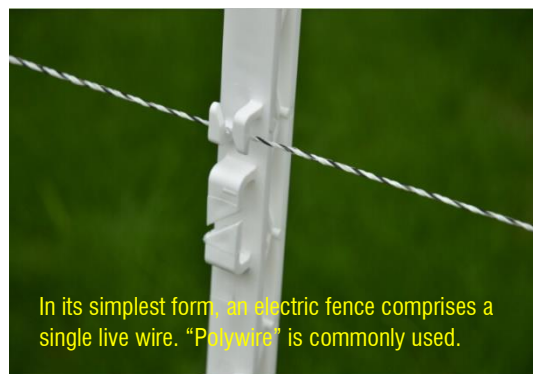
- Try NEW Alkaline batteries.
- Rechargeable batteries need charging before use.
- Check the orientation of batteries.
- Clean the battery terminals.
- Press the ON/OFF switch in the location illustrated.

### Why do I hear a sparking noise?

- Make sure your Electric Fence Wire is not touching anything conductive. E.g. Plants, grass, soil, etc.
- Only use properly designed insulating electric fence posts.

### I don't feel anything when I touch the wire.

- Best not to touch the wire. Use a 2 Digit digital electric fence tester.
- Unless you have bare feet like the animal you will only feel a weak electrical pulse or nothing.
- Make sure the Live Electric Fence Wire is not short-circuiting to anything conductive.



In its simplest form, an electric fence comprises a single live wire. "Polywire" is commonly used.

Electric Fence Mesh with multiple horizontal wires can provide better security.

