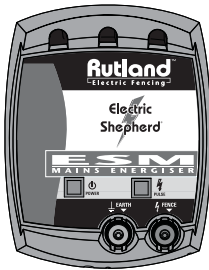




## Energiser Installation Guide

### For Mains Powered Energisers

*Thank you for purchasing a Rutland mains powered electric fence energiser. We believe this unit is the best of its kind for ease of use, reliability and durability. This guide provides instruction to properly install, operate and maintain your unit, ensuring the most effective performance.*



**ESM401, ESM402,  
ESM602 & ESM902**



**ESM2500, ESM3500i  
ESM4500i & ESM5500i**

## Before You Start

### Installation of Energiser and Fence

Electric fences should be installed and operated so that they cause no danger to persons, animals or surroundings and as far as is reasonably practicable, they are out of reach of children and not subject to mechanical damage. Never connect more than one energiser to the same single or multi-wire fence. Any other fence systems powered by a different energiser should be at least 2.5 metres apart. If this gap is to be closed, use non-conductive material or an isolated metal barrier. Any electric fence or part thereof installed along a public road or pathway should be identified by warning signs at regular intervals.



The warning sign should have a yellow background and be at least 100 mm x 200 mm. The words "Caution Electric Fence" or symbol should appear in black, permanent marking on both sides of the sign and be at least 25mm in height.

- Barbed wire must not be electrified.
- If an electric fence has to be installed in the vicinity of overhead power lines it should not cross above it or run in parallel to it for any great distance. If it is necessary to pass under overhead powerlines it should be done at right angles and the vertical distance between any fence wire and the surface of the earth should not exceed two metres.
- If an electric fence has to be installed near any communication lines, the distance from the lines and the fence or any part of it should be more than two metres.
- If the energiser is installed in the vicinity of any building, care must be taken to ensure that the earth for the electric fence is more than 10 metres away from any domestic electricity board earth or telecommunications system earth.
- Follow the manufacturer's directions for proper earthing of your electric fence.
- Use insulated cable for connecting leads that run inside buildings or underground. Take care to avoid damage from animal hooves or vehicle wheels and use a conduit of insulating material if needed.
- Do not install connecting leads in the same conduit as the mains supply wiring, communication cables or data cables.
- Low output energisers provide satisfactory and safe performance for deterring birds, household pets and training animals such as cows.

- If the electric fence is intended to deter birds from roosting on buildings, do not connect the fence wire to the earth terminal. Use a warning sign at any point where a person may access the fence wire.

**Manufacture Standard**

Built to Comply with CE, IPX4, EN60355-2-76 Health & Safety Standards and EN55014, EMC

**Safety**

- Keep combustibile materials away from the connection to the fence energiser.
- Mains energisers are for indoor use only.
- For mains energisers, ensure that all electric fence components provide adequate insulation between the fence circuit and the supply mains.
- Unless certified as being suited for outdoor use, protect the energiser from the weather.
- If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified person in order to avoid a hazard.

**Warning:** Avoid touching electric fence wires, especially with the head, neck or torso. Do not climb over, through or under multi-wire electric fence. Use a gate or a specially designed crossing point. Incorporate a non-electrified gate or crossing stile where an electric fence crosses a public pathway. At any such crossing the adjacent electric fence should carry warning signs.

**Tools Required**

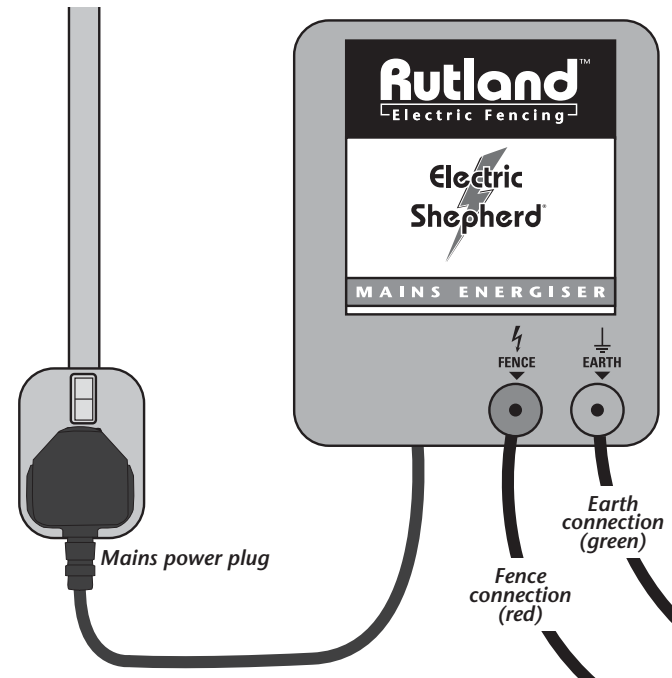
- Wire cutter/stripper (recommend part no. 24-909 or 24-809)
- Flathead screwdriver
- Adjustable spanner

**Other Required Components**

- Two lengths of lead-out cable (one long enough to connect energiser to earth system and one long enough to connect energiser to fence line) (part no. 17-125)
- Fence line connector (part no. 18-172 for steel or poly wire; 30-125 for poly rope; or 30-158 for poly tape)
- Earth stake(s) (part no. 18-179M; includes line clamp)

## Energiser Installation

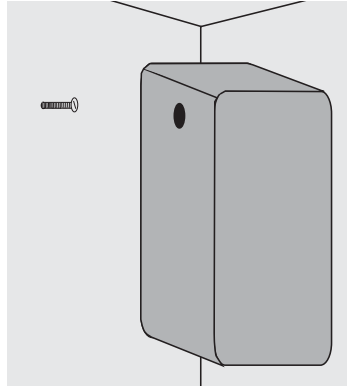
### Overview of Installed Energiser



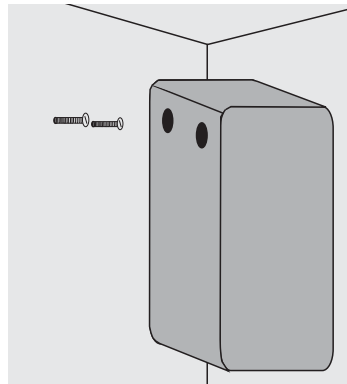
### STEP 1: Mount Energiser

**IMPORTANT:** Mount in an inside location or in a waterproof enclosure

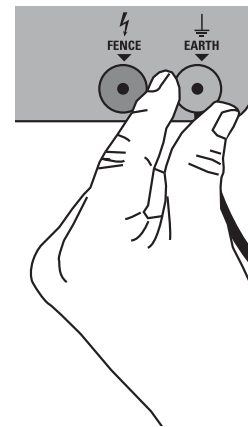
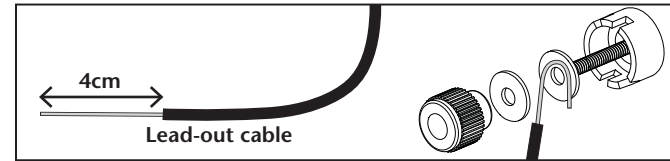
*Single screw mounting*



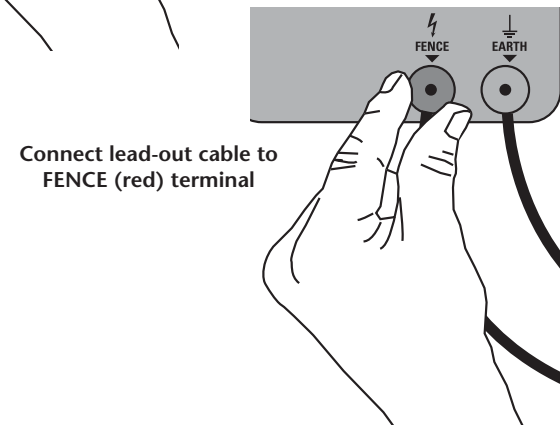
*Double screw mounting*



### STEP 2: Connect Earth and Fence Terminals

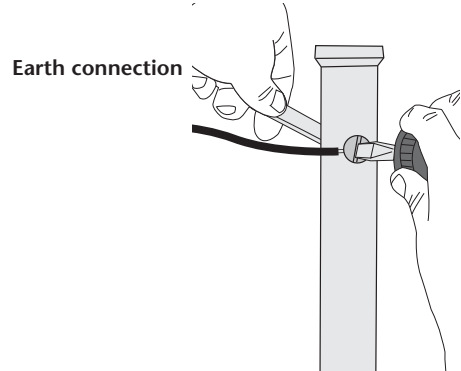


Connect lead-out cable to  
EARTH (green) terminal



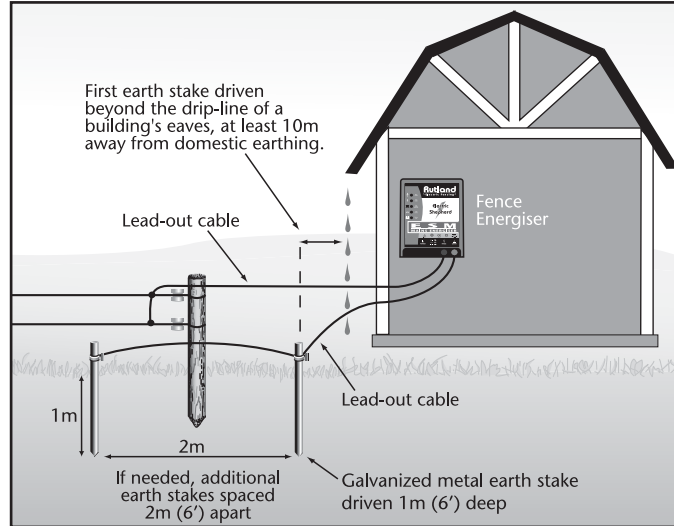
Connect lead-out cable to  
FENCE (red) terminal

### STEP 3: Connect Earth System



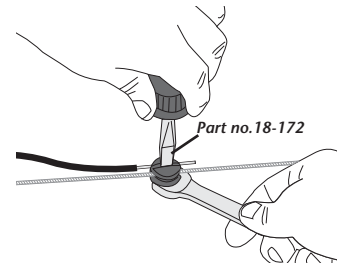
NOTE: Connect additional earth stakes with lead-out cable if required

### Ensure Earth System is Sound

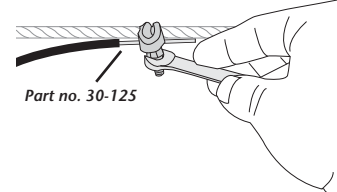


### STEP 4: Connect Lead-Out Cable to Fence Line

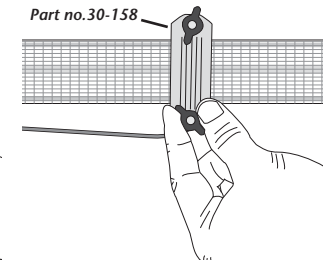
Poly wire connection



Poly rope connection



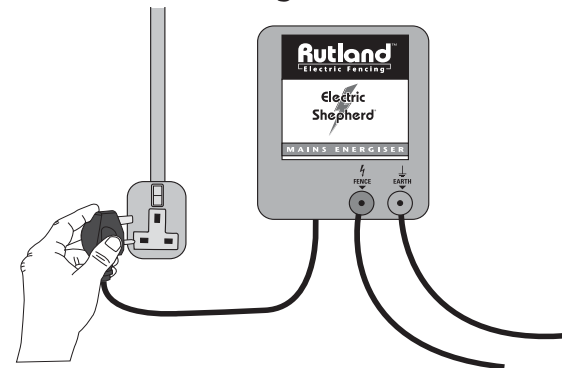
Poly tape connection



### Ensure Fence System is Sound

- Ensure all connection points such as joiners and insulators are sound and secure
- IMPROPER CONNECTION POINTS WILL AFFECT THE PERFORMANCE OF YOUR ENERGISER

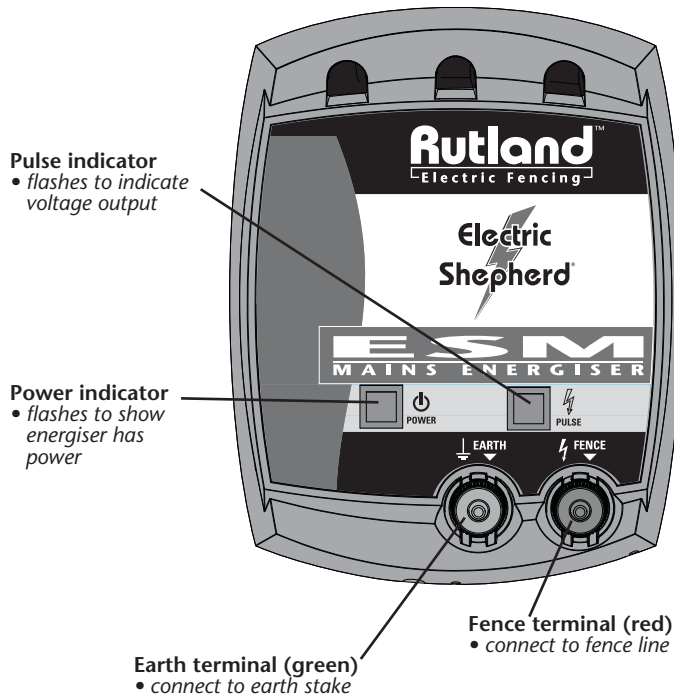
### STEP 5: Power Energiser



NOTE: When connected and switched on do not touch fence terminal or fence wire.

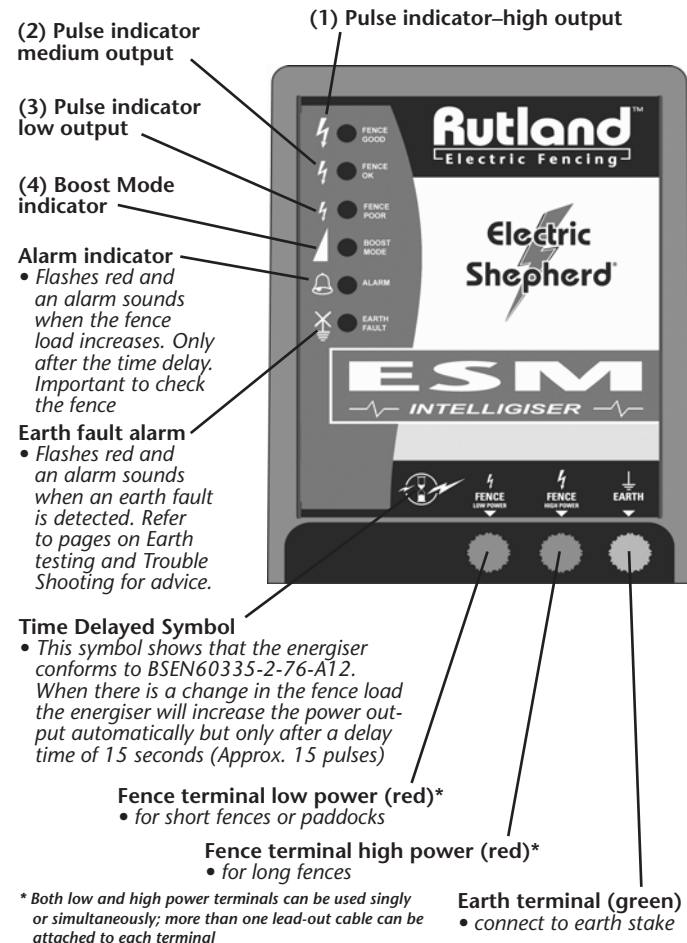
## Energiser Operation

For Models: ESM401, ESM402, ESM602, ESM902



## Intelligiser® Operation

For Models: ESM3500i, ESM4500i, ESM5500i



## Intelligiser® Operation

For Models: ESM3500i, ESM4500i, ESM5500i

### Intelligiser® Features

The Intelligiser® is a new type of electric fence energiser that conforms to the latest European safety standards. The standard sets out to improve the performance and safety of an electric fence energiser. The Intelligiser® uses a microprocessor which continually monitors the fence output and reacts in different ways depending on what it finds. In the unlikely event that the Intelligiser® fails it also has in built diagnostics which will enable you to decide what the problem is.

#### (1) Pulse indicator–high output

- flashes green if over 5,000 volts output. Fence in good condition. A good fence can have 8,000 volts or more on it.

#### (2) Pulse indicator–medium output

- flashes yellow if between 3,000 & 5,000 volts output. The energiser might have gone into boost mode due to heavy vegetation on the fence line. However it is a good idea to check the fence as it might be another problem.

#### (3) Warning low output

- flashes red and alarm sounds if output drops below 3,000 volts. The alarm will continue to sound until the voltage goes above 3,000 volts. **The fence must be checked for faults.**

#### (4) Boost Mode

- Blue indicator is on when the output power increases. This is a safety feature. When the energiser detects a heavy load on the fence (usually caused by wet vegetation) The energiser will attempt to increase the output power so that the voltage on the fence can be maintained. However this will only happen after a delay time and the alarm has sounded (the alarm will stop after 10 minutes) During the delay time the energiser will pulse slowly (approximately every 3 seconds) then return to normal speed.

### Energiser Fault indication

- If the high voltage & medium voltage indicators are flashing at the same time and the energiser is not giving an output, switch the energiser off for a short period of time, then switch it back on again. If the high voltage & medium voltage indicators continue to flash the energiser needs repairing. **DO NOT ATTEMPT REPAIRS.** Take the energiser to your dealer or return to the manufacturer.

## Energiser Operation

For Models: ESM2500

### Pulse indicator–high output

- flashes if over 5,000 volts output

### Pulse indicator–medium output

- flashes if over 3,000 volts are being output

### Warning low output

- flashes and alarm sounds if output drops below 3,000 volts

### Earth fault alarm

- flashes if an earth fault is detected. Refer to pages on Earth testing and Trouble Shooting for advice.

### Power indicator

- continuous light shows energiser has power

### Fence terminal low power (yellow)\*

- for short fences or paddocks

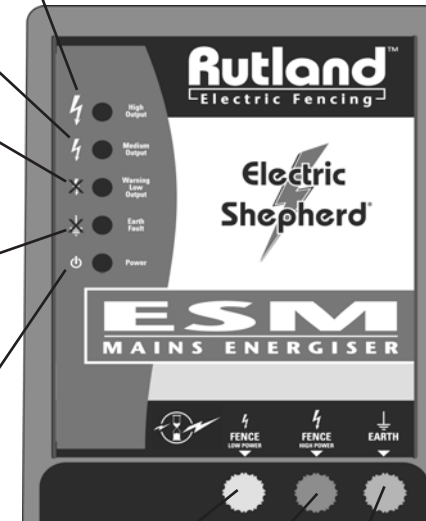
### Fence terminal high power (red)\*

- for long fences

### Earth terminal (green)

- connect to earth stake

\* Both low and high power terminals can be used singly or simultaneously; more than one lead-out cable can be attached to each terminal

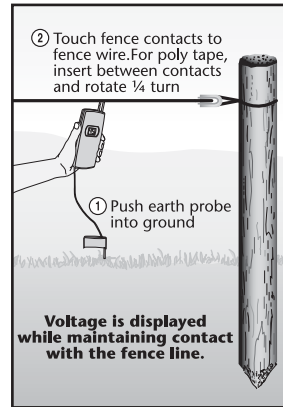


## Maintenance/Testing

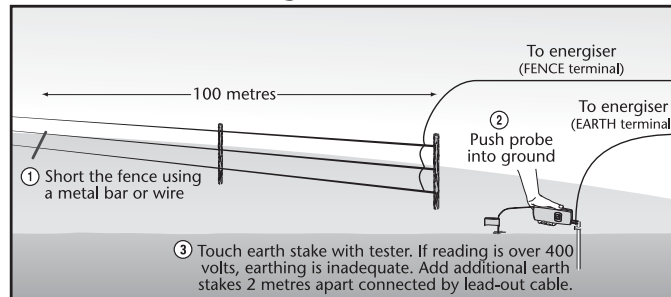
### Fence Line Maintenance

- Regularly test voltage at the furthest point on the fence line from the energiser – we recommend Rutland Digital Tester 14-172 or 8-Light Tester 14-173
- Routinely check all fence and earth connections to ensure they are sound
- For best performance, keep fence line free of vegetation
- Keep insulators free from dirt, dust and cobwebs

### How To Test Fence

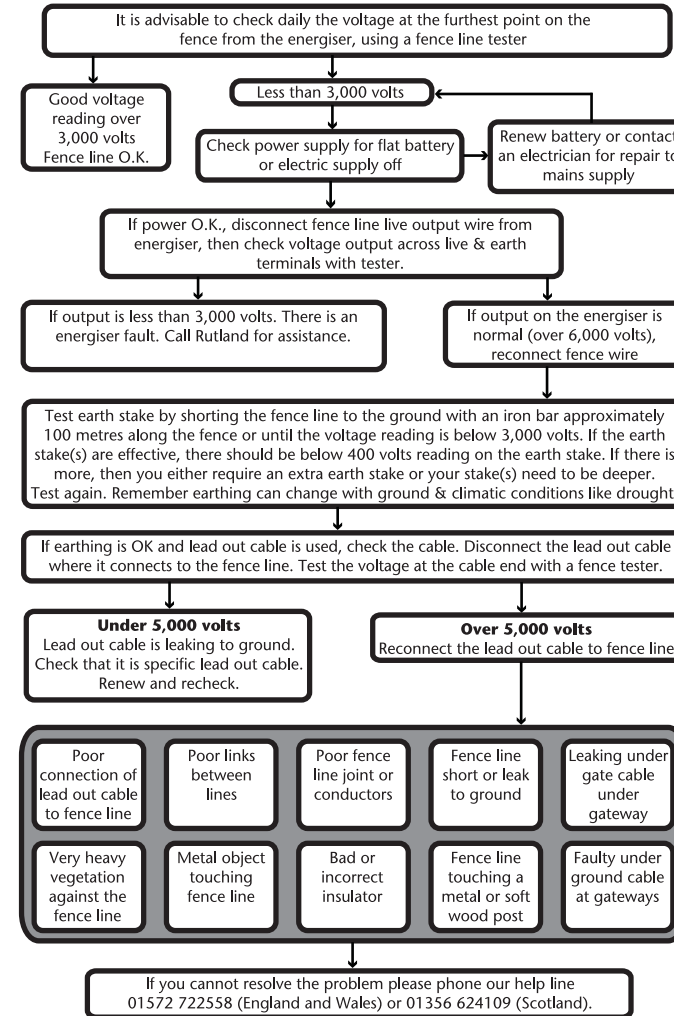


### How To Test Earthing



- 12 -

### Energiser Troubleshooting



## Warranty

This energiser is warranted to be free from manufacturing defects for two years from the date of purchase by the end user. Proof of purchase is required for warranty consideration. If no sales receipt is available, the date of manufacture will be used to determine the warranty period.

The warranty does not apply to any defect in the product caused by improper installation, misuse, tampering, neglect, moisture or any other reason not related to defects in material or workmanship of the product.

Warranties are not assignable or transferable. It is for the benefit of and given only to the first consumer purchaser of the product, and shall not be for the benefit of nor given to any subsequent owners or any other user or to any person.

The obligation of Rutland Electric Fencing Co. Ltd. under warranty is limited only to repairing or replacing, at its discretion, any part of the product that is defective and is covered by the terms of this warranty. If any covered defect occurs during the warranty, return the product to the retailer for rectification who will either undertake the repair or forward the energiser to ourselves. In no case shall Rutland Electric Fencing Co. Ltd. be liable for incidental, consequential, third party, special or indirect damages of any kind.

## LIMITATION OF DAMAGES

The directions for use of this product should be followed carefully. It is impossible to eliminate all risk inherently associated with use of the product. The effectiveness of Rutland brands of fence energisers may depend on the effectiveness of connections, interruption of power source, accidental shorting of wires, weather conditions, or the manner of use or application, all of which are beyond the control of Rutland Electric Fencing Co. Ltd. or the seller. The buyer shall assume all such risks.

Rutland Electric Fencing Co. Ltd. warrants that this product is fit for the purposes for which it was designed and referred to in the directions for use, subject to the inherent risks referred to above. Rutland Electric Fencing Co. Ltd. makes no other expressed or implied warranty of fitness or merchantability or any other expressed or implied warranty. IN NO CASE SHALL RUTLAND ELECTRIC FENCING CO. LTD., OR THE SELLER, BE LIABLE FOR CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT. RUTLAND ELECTRIC FENCING CO. LTD. AND THE RETAILER OFFER THIS PRODUCT, AND THE BUYER AND USER ACCEPT IT, SUBJECT TO THE FOREGOING CONDITIONS OF SALE AND WARRANTY WHICH MAY BE VARIED ONLY BY AGREEMENT IN WRITING SIGNED BY AN AUTHORISED OFFICER OF RUTLAND ELECTRIC FENCING CO. LTD.

## SAVE THIS INSTALLATION AND USERS MANUAL



**WEEE (Waste Electrical & Electronic Equipment directive)** This instruction applies to any product which displays the bin symbol on it or its packaging. If your electrical product is beyond repair and you wish to dispose of it please **DO NOT** dispose of it with your normal household waste. Either return it to your point of purchase (retailer) for collection by Rutland Electric Fencing Co. Ltd. or take to any authorised recycling centre. Your local council/authority will have information available. This notice refers only to products manufactured or distributed by Rutland Electric Fencing Co. Ltd.

**Rutland**<sup>TM</sup>  
Electric Fencing

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