



ELECTRIC FENCING ENERGIZER

USER MANUAL

Model MGG EF-SRS6-150

For up to 5Km wire



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Foreword

Thank you for buying an MGG electric fence energizer. This Energizer has built-in RFI (Radio Frequency Interference) Suppressed Circuitry.

In the unlikely event that you are not happy with your purchase, please return the energizer in new condition to MGG within 14 days of purchase and we will give you a full refund (excluding freight). If you have any questions regarding this product please email us: info@mggproducts.co.nz or freephone us on 0800 449 669

Please read this manual carefully before using this product and keep it handy. If you have problems in the process of use you can read it again. Do not let children operate or play with an electric fence energizer.

1. Introduction

This manual describes the MGG electric fence energizer model :

MGG EF-SRS6-S150

2. Important safety introduction



WARNING: Please read all instructions

- Do not touch a live fence
- Do not drench with water.
- This product is for use in controlling livestock. Any other use is prohibited.
- Keep fence clear of weeds, branches etc to avoid electrical shorts resulting in battery drainage.
- 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.
- 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.
- Do not place combustible materials near the fence or energizer connections. In times of extreme fire risk, disconnect energizer.
- Don't dismantle. Don't make any changes to this energizer. Don't touch high voltage parts which can cause electric shock. This energizer is not user-servicable.
- Young children should be supervised to ensure that they do not play with the appliance.
- An electric animal fence shall not be supplied from two separate energizers or from independent fence circuits of the same energizer. That is very dangerous.
- For any two separate electric 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.
- Barbed wire or razor wire must 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.
- Where an electric animal fence crosses a public pathway, a non-electrified gate shall be incorporated in the electric fence at that point or a crossing by means of stiles. At any such crossing the adjacent electrified wires must carry warning signs.
- In areas of public access, use an electric fence warning sign every 10m (33ft) to identify the electrified wire(s).
- Crossing with overhead power lines should be avoided wherever possible. If such a crossing cannot be avoided, it should be made underneath the power line and as nearly as possible at right angles to the power line.
- If connecting leads and electric fence wires are installed near an over head power line, the clearances should be not less than those shown below:

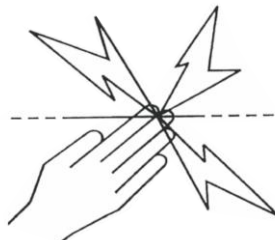
Power Line Voltage V	Clearance M
≤1000	3
>1000 ≤33000	4
>33000	8

- If connecting leads and electric fence wires are installed near an over head power line their height above the ground should not exceed 3m.

This height applies either side of the projection of the outermost conductors of the power line on the ground surface, for a distance of:

- 2 m for power lines operating at a nominal voltage not exceeding 1000V;
- 15 m for power lines operating at a nominal voltage exceeding 1000V.

- Electric animal fences intended for deterring birds, household pet containment need only be supplied from low output energizers to obtain satisfactory and safe performance.
- Fence wiring should be installed well away from any telephone or telegraph line or radio aerial.
- The size of the warning sign shall be at least 100mm x 200mm.
- The background colour of both sides of the warning sign shall be yellow.
The inscription on the sign shall be black and shall be either:
 - the substance of "CAUTION: Electric Animal Fence" or,
 - the symbol shown:



- The inscription shall be indelible, inscribed on both sides of the warning sign and have a height of at least 25mm.
- Ensure that all mains operated ancillary equipment connected to the electric animal fence circuit provides a degree of isolation between the fence circuit and the supply mains equivalent to that provided by the energizer.
- Protection from the weather shall be provided for the ancillary equipment unless this equipment is certified by the manufacturer as being suitable for use outdoors and is of a type with a minimum degree of protection IPX4.

This energizer complies with international safety regulations and is manufactured to international standards. MGG reserves the right to make changes without notice to any product specification to improve reliability, function or design.

3. Specification

Power source

6W 12V Solar Panel and/or optional 12V mains charger.

7.4V, 10AH, Lithium battery

Maximum output Voltage	up to 10 KV
Voltage under 500 ohm load	up to 2.7 KV
Stored energy	0.45 J
Delivered Energy	0.15 J

Unless otherwise stated values are typical and normal production tolerances of $\pm 10\%$ should be allowed for

4. Installation guide

Positioning the energizer

Install the energizer:

Adjacent to the electric fence

Preferably in the middle of the electric fence and where it will receive the most daily sun throughout the season

Where a good earth can be obtained

On firm ground away from flooding and out of reach of animals and children (inside a protective fence, if required). The solar panel should face true north in the southern hemisphere and true south in the northern hemisphere.

Mounting the energizer

The energizer can be mounted directly onto a 3cm x 2cm wooden batten using the post-mounting slot at the rear. To mount onto a wooden post screw the batten to the post. Also available from MGG are 3cm x 2cm plated steel stands.

Connecting to an electric fence

1 Push a 1m to 2m plated earth rod fully into firm ground. Must be plated as electricity will not pass through rust.

2 Connect the black lead from the Fence earth terminal on the energizer to the earthing system.

3 Connect the red lead from the Fence output terminal on the energizer to the fence. Make sure there is a good contact.

Caution! Make sure the connecting leads drop downwards from the energizer to prevent water from collecting at the terminals.

Operation

Switching on and off

1 When switched on the pulse indicator light flashes once for each output pulse.

2 When switched off the pulse indicator light stops

Battery protection

An intelligent battery management feature puts the energizer into Battery protection mode when the battery charge falls below a 'safe operating level'. When in Battery protection mode the energizer is still on but it will not deliver a pulse to the electric fence.

The energizer will resume delivering pulses when the solar panel has charged the battery so that it is above the 'safe operating level'.

Alternatively, the battery can be recharged with a 12v battery charger connected to the charge port on the rear of the energizer. The correct chargers are available from MGG Products.

When fully charged, the battery should be able to power the energizer for up to two weeks with no sunlight.

Replacing the battery

If a replacement battery is required, use a 7.4V, 10Ah, rechargeable lithium battery. Do not use a non-rechargeable battery.

Do not dispose of the battery in a land-fill or in a fire.

Energizer maintenance

Clean the solar panel regularly with a soft cloth using glass cleaner or a mild solution of detergent and water. This ensures the solar panel functions efficiently.

When transporting the energizer protect the solar panel to prevent the glass surface from being damaged.

Energizer storage

If the energizer is stored for an extended period, the battery may self discharge and become damaged.

The energizer should be stored inside with power off, better next to a window, where sunlight can shine on the energizer each day.

If the energizer cannot be stored in a sunny position, it should be kept in a cool place. The battery should be fully charged and powered off. The battery should be recharged manually every three months using a suitable 12V battery charger.

Troubleshooting

Problem and action

1 The Pulse indicator light is flashing, but the electric shock delivered by the fence is weak.

Check that the energizer is adequate for the length of the fence. If necessary, reduce the length of the fence or reduce the number of fence wires. Alternatively, divide the fence-line into smaller zones, with each zone powered by a separate energizer. **NEVER EVER PUT MORE THAN ONE ENERGISER ON THE SAME WIRE. THAT IS VERY DANGEROUS.**

2 The Pulse indicator light is not flashing.

3 The battery needs frequent replacement.

Check that the solar panel is clean and is not damaged. Make sure the energizer is positioned to receive maximum sunlight. If necessary, remove any objects or vegetation

that might be casting a shadow on the energizer.

5. Maintenance

Warning: Other than changing batteries, there are no user-servicable parts. If repair is required please contact MGG.

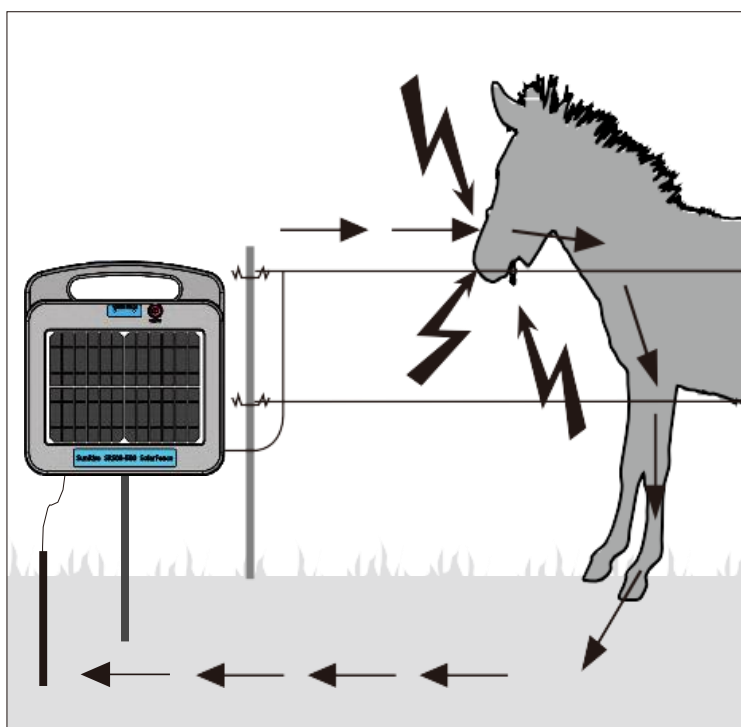
Fault	Solution
The Pulse indicator light is flashing, but the electric shock delivered by the fence is weak.	Check that all connections in the fence and earth system are firm and secure. If necessary, clean away any corrosion.
	Check that the earth rod is pushed firmly into firm ground and is not rusty.
	Check for faults in the fence-line caused by trees or vegetation. If necessary remove obstructions and mend the fence.
	Check that the energizer is adequate for the length of the fence. If necessary reduce the length of the fence or reduce the number of fence wires. Alternatively, divide the fence-line into smaller zones with each zone powered by a separate energizer.
The Pulse indicator light is not flashing.	Check that the energizer is switched on.
	If there has been insufficient sunlight to charge the battery the energizer may be in Battery protection mode. Charge the battery by placing the energizer in full sunlight with the solar panel facing true north in the southern hemisphere and true south in the northern hemisphere .
	Try charging the battery manually using a suitable battery charger. Replace the battery with a new battery. Before installing a new battery charge it fully using a suitable battery charger or leave in sun for 3 days with energizer turned off. If the pulse indicator light is still not flashing, return the energizer to the MGG for service
The battery needs frequent replacement.	Check that the solar panel is clean and is not damaged. Make sure the energizer is positioned to receive maximum sunlight. If necessary, remove any objects or vegetation that might be casting a shadow on the energizer.

6. Guarantee

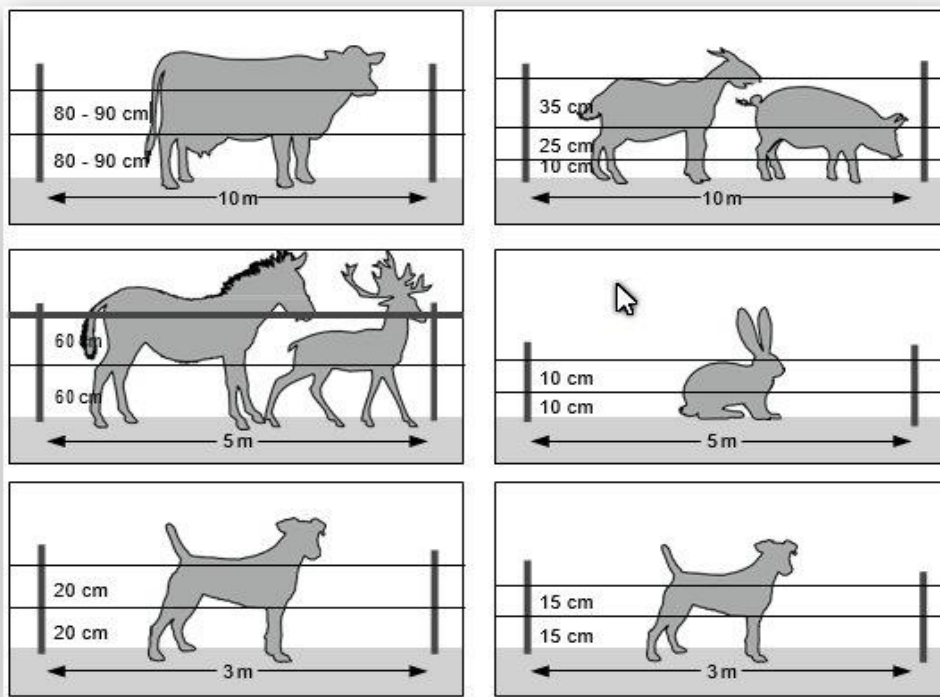
We grant a warranty of 24 months as standard starting from the date of the purchase invoice. We will only perform warranty services when the faulty unit is returned to us together with a copy of the original invoice. The unit should be returned in its original or equivalent packaging, please preserve the original packing. Warranty claims are excluded for direct or indirect damages due to:

- 1) Beyond warranty date
- 2) Transport damage
- 3) Improper use, operation and refitting
- 4) Non-observance to the relevant safety instructions and work in the severe environment out of the recommended ones in this manual
- 5) Beyond installation and use areas of the relevant international standards
- 7) Influence of foreign objects and force majeure (lightning strike, overvoltage, severe weather, fire etc)

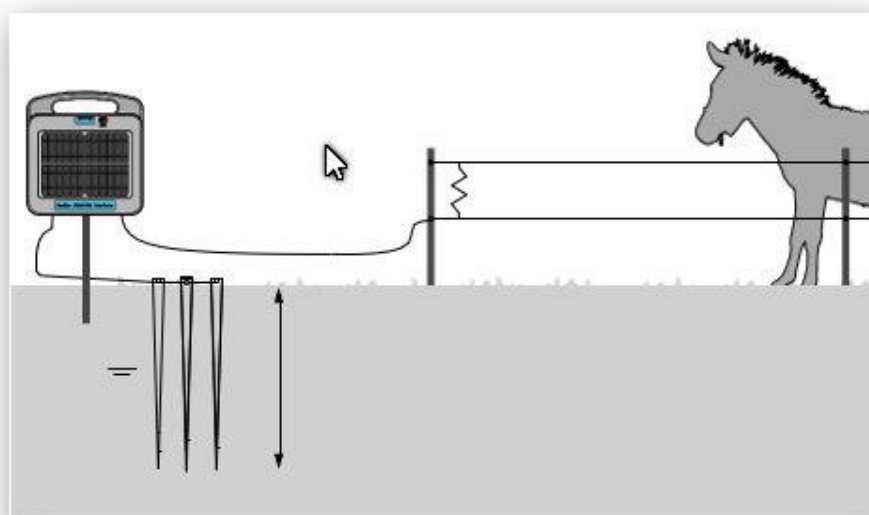
The animal completes the circuit and receives a shock.



Fence wire spacing guidelines



3 earth rods recommended. 1m to 2m long and each 1m apart





MGG Products,
Kerikeri 0230, New Zealand
www.mggproducts.co.nz
email: info@mggproducts.co.nz

The design and specification shall be subject to changes without prior notice. The final interpretation right of this event is reserved by our company.