MR6000

Thank you for purchasing this MR6000 Energizer.

As the world leader in Power Fencing, Gallagher is committed to providing leading products. The MR6000 Energizer is an example of this commitment, designed to make Power Fencing much simpler, more efficient and more reliable for you, our customer.

This MR6000 Energizer brings a new generation of performance to electric fencing - including 60 Joules of stored energy for maximum stock control, unique three channel energizer technology for optimum efficiency, reliability and power, compatibility with new Gallagher SmartPac integrated remote control and fault finder, and output voltage bar chart display.

If for any reason you are not happy with your purchase, please contact your Gallagher Agent, email us at sales@gallagher.co.nz, or return the Energizer to your dealer within 30 days of purchase and we will give you a full refund - guaranteed. If you have any questions regarding this product please email us at sales@gallagher.co.nz, or contact the agent from whom you purchased this Gallagher product.

To get the best from your MR6000 Energizer

The MR6000 Energizer is a commitment to a reliable, high performance Power Fence system. To gain optimum performance from your Energizer you may need to improve your earth system, the quality of your leadouts, fence design and construction. It is recommended that you consult a Gallagher representative to discuss the Energizer installation, to ensure you achieve the benefits this product is able to provide your business. Please read the "Understanding your MR6000 Energizer" sections of this manual to understand what the Energizer display information tells you. This information will help you achieve a very reliable, high performance Power Fence system.

Ensure you use Gallagher Power Fence™ products to gain maximum performance from your MR6000 Energizer.

Accessories

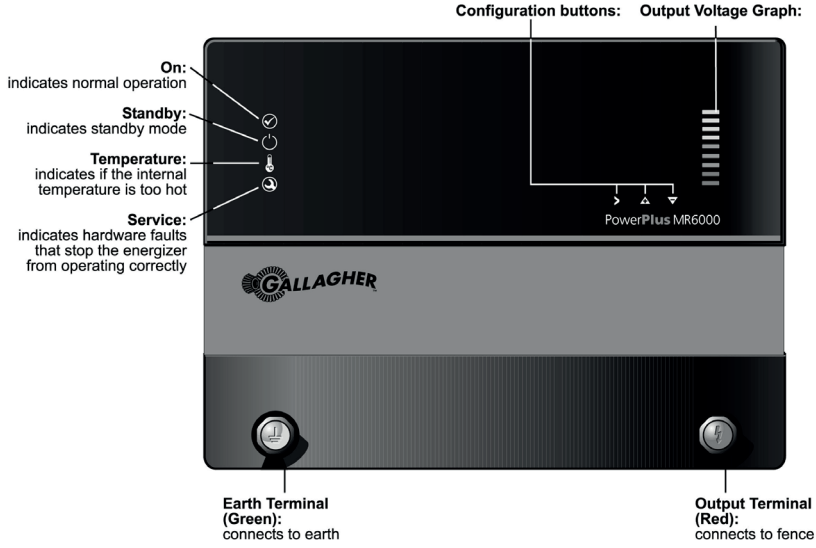
Your MR6000 Energizer is supplied with the following:

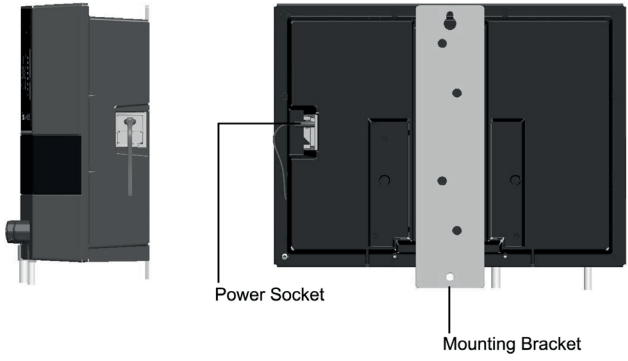
- 6 mounting screws
- Aluminium mounting bracket
- MR6000 operator's manual
- Gallagher Power Fence™ Manual

Contents

Your MR6000 Energizer . . .

. . . operates from Mains Power only





Important Information

WARNING: Read all instructions

- **Do NOT touch the fence with the head, mouth, neck or torso.** 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.
- In areas of public access, use an electric fence warning sign (G6020) every 10 m (33 ft) to identify the electrified wire(s).
- Where an electric animal fence crosses a public pathway, a non-electrified gate shall be incorporated in the electric animal fence at that point or a crossing by means of stiles shall be provided. At any such crossing, the adjacent electrified wires shall carry warning signs.
- The appliance is not intended for use by young children or infirm persons without supervision.
- Young children should be supervised to ensure that they do not play with the appliance.
- Do not place combustible materials near the fence or energizer connections. In times of extreme fire risk, disconnect energizer.
- Regularly inspect the supply cord and energizer for any damage. If found damaged in any way, immediately cease use of the energizer and return it to a Gallagher Authorised Service Centre for repair in order to avoid a hazard.
- Refer servicing to a Gallagher Authorised Service Centre.
- Check your local council for specific regulations.
- An electric animal fence shall not be supplied from two separate energizers or from independent fence circuits of the same energizer.
- For any two separate electric animal 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 m. If this gap is to be closed, this shall be effected by means of electrically nonconductive material or an isolated metal barrier.
- Barbed wire or razor wire shall 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.
- Follow the energizer manufacturer's recommendations regarding earthing.

- The energizer earth electrode should penetrate the ground to a depth of at least 1 m (3 ft) and not be within 10 m (33 ft) of any power, telecommunications or other system.
- Use high voltage lead-out cable in buildings to effectively insulate from the earthed structural parts of the building and where soil could corrode exposed galvanised wire. Do not use household electrical cable.
- Connecting leads that are run underground shall be run in conduit of insulating material or else insulated high voltage lead-out cable shall be used. Care must be taken to avoid damage to the connecting leads due to the effects of animal hooves or tractor wheels sinking into the ground.
- Connecting leads shall not be installed in the same conduit as the mains supply wiring, communication cables or data cables.
- Connecting leads and electric animal fence wires shall not cross above overhead power or communication lines.
- Crossings with overhead power lines shall be avoided wherever possible. If such a crossing cannot be avoided it shall be made underneath the power line and as nearly as possible at right angles to it.
- If connecting leads and electric animal fence wires are installed near an overhead power line, the clearances shall not be less than those shown in the table below.

  Minimum clearances from power lines for electric animal fences

Power line voltage V	Clearance m
Less than or equal to 1 000	3
Greater than 1 000 and less than or equal to 33 000	4
Greater than 33 000	8

- If connecting leads and electric animal fence wires are installed near an overhead power line, their height above the ground shall not exceed 3 m

  This height applies either side of the orthogonal 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 1 000 V;
  - 15 m for power lines operating at a nominal voltage exceeding 1 000 V.
- Electric animal fences intended for deterring birds, household pet containment or training animals such as cows need only be supplied from low output energizers to obtain satisfactory and safe performance.
- In electric animal fences intended for deterring birds from roosting on buildings, no electric fence wire shall be connected to the energizer earth electrode. A warning sign shall be fitted to every point where persons may gain ready access to the conductors.
- Fence wiring should be installed well away from any telephone or telegraph line or radio aerial.
- 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.

WARNING: Risk of Electric Shock. Do not connect the energizer simultaneously to a fence and to any other device such as a cattle trainer or a poultry trainer. Otherwise, lightning striking your fence will be conducted to all other devices.

This energizer complies with international safety regulations and is manufactured to international standards.

Gallagher reserves the right to make changes without notice to any product specification to improve reliability, function or design. E & OE.

Save these instructions

SERVICE OF DOUBLE-INSULATED APPLIANCES

In a double-insulated controller, two systems of insulation are provided instead of grounding. No equipment grounding means is provided in the supply cord of a double-insulated controller, nor should a means for equipment grounding be added to the controller. Servicing a double-insulated controller requires extreme care and knowledge of the system, and should be done only by qualified service personnel. Replacement parts of a double insulated controller must be identical to the parts they replace.

Mains Operation only

Step 1: Install the Energizer

a) Mount the Energizer on a wall, under cover, out of reach of children. Install where there is no risk of the Energizer incurring fire, mechanical, or water damage and if possible away from heavy electrical equipment, (e.g. pumps or other items that may cause electrical interference).
Note: Install the Energizer in a frequently accessed place. The output bar graph gives valuable information that can save time and help prevent costly problems.

b) Choose a mounting surface of sufficient strength, (e.g. stud, dwang or plywood panel). Note that the Energizer weighs approximately 15kg, therefore the mounting surface needs to be robust and of sufficient thickness to properly contain the supplied mounting screws. On the mounting surface, mark where the screw for the top keyhole of the mounting bracket is to be fixed. Ensure this is at the correct mounting height you require for the Energizer. Drill a small pilot fixing hole. Install one of the supplied Tek fixing screws and check the clearance for the mounting bracket to slide over the screw head.

c) Fit the mounting bracket into the recess of the back cover of the Energizer. Line the four holes of the bracket up with the four holes in the recess. Fix the supplied screws into the bracket until tight.

d) Carefully hang the Energizer over the screw and slide down into the recess of the bracket.

e) Drill another fixing hole for a screw through the bottom hole of the mounting bracket, and fix the screw into place to keep the Energizer steady.
Note: Do not plug into the mains at this point. Wait until the Energizer is connected to the fence.

Step 2: Install an earth (ground) system

Poor earthing is the most common reason for poor electric fence performance.
It is very important to have a high quality earth system. For an all live wire fence system save time by installing at least 10 Earth Stakes (G8790) before you start.

Find a location for your earth system that is permanently damp, has high fertility or salinity and is away from dairy sheds. Install the earth system at least 10m (33ft) from any power supply earth peg, underground telephone or power cable. The best construction is 2m (6ft) long galvanised stakes (G8790) 5m (16.4ft) apart, or Super Earth Kits (G8800) 10m apart, connected to the Energizer by a single high conductive Aluminium coated XL wire cable (G62793). Do not use materials that rust.

Stakes should be installed at least 2.5 x the depth of the stake from any other stake, (e.g. 2.0m stakes should be 5m apart).

Step 3: Connect the Energizer to the earth system

Using the High Conductive Cable (G62793) remove 5cm (2") of insulation from one end of the cable and connect to the green (⏚) terminal on the Energizer. Attach the cable to the earth system by removing 10cm (4") of insulation from the cable at each Earth Stake (G8790), then clamp the exposed wire to each stake using an Earth Clamp (G8760). Tighten the clamp.

For further instructions on the earth (ground) system see the Gallagher Power Fence™ Manual enclosed.

Step 4: Connect the Energizer output to the fence

Connect the Energizer's red Output () terminal to the fence using Super Conductive Aluminium Cable (G62793). Attach the other end of the cable to the fence using a Joint Clamp (G6030). It is important that the power distribution system has sufficient capacity for energy to reach all parts of the connected fence network. For leadouts that are greater than 1km in length, it is recommended that multiple leadouts be run in parallel, and that the system installation is designed in consultation with a Gallagher representative. For instructions on fence installation see the Gallagher Power Fence™ Manual enclosed.

Step 5: Turn the Energizer on

a) Plug the Energizer into a power outlet and switch ON.

b) Allow one minute for the Energizer to adapt to the fence system.
The Energizer has stopped adapting once the output voltage has stabilised.

IMPORTANT!

The output bar graph will change as your MR6000 Energizer responds to fence conditions. This is the Energizer monitoring the fence and adapting its power output accordingly. Read "*Understanding your MR6000 Energizer* (on page 9)" for a complete understanding of the bar graph display.

We recommend the earth system is tested after installation as described in the Gallagher Power Fence™ Manual enclosed.

Understanding your MR6000 Energizer

ON Light (blue)

Normal operation
This light is always on when the Energizer is powered up.

Standby Light (red)

The Energizer is powered up, but in Standby mode, (i.e. it is not ticking).
The Standby light is activated by using a SmartPac remote control unit to switch the Energizer off. (The Gallagher SmartPac remote control can be purchased separately from your local Gallagher dealer.)

Warning: When in Standby, mains power is still supplied to internal wiring of the Energizer, but the fence is not live.

Temperature Light (red)

The internal temperature of the Energizer is too hot.
Check the Energizer is in a well ventilated area and ambient temperature is below 40°C. The Energizer will tick at a slower rate when this light is on, or if the temperature becomes excessively high, the Energizer will shut down until the temperature drops to an acceptable level.

Service Light (red)

Although the Energizer may still be ticking, an internal fault has caused it to stop running correctly. Contact your Service Agent

Output Voltage Graph

The Output Voltage graph is a quick indication of fence performance. It can also be used to indicate reduced power setting when in configuration mode. See *Adjusting the Energizer output voltage* (on page 10).

The graph pulses full, then decays down with each output pulse. It has nine colour coded segments for rapid assessment, (i.e. green means that the output voltage is good, yellow means that the output voltage is acceptable but fence maintenance is likely to be required, red means the voltage has dropped below 3kV and we recommend that the fence load is reduced through repair or the distance of fence supplied is reduced immediately). Each segment represents approximately 1.0kV.