

Where can I go for more information?

For more details on how to set up and maintain your electric fence, contact Gallagher for a copy of the Gallagher Power Fence Manual.

For any information you may need relating to lifestyle or small block farming, contact Gallagher on (toll free helpline) 0800 731 500, visit www.gallagher.co.nz or email sales@gallagher.co.nz.

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Introduction

Gallagher has been at the forefront of animal management for over 60 years. As the farming industry develops we have noted the growing demand for lifestyle and small block farming.

Different uses for electric fencing on your block

An electric fence is ideal for grazing or pasture management. However it is also effective for use in the following circumstances;

1. Protecting trees and gardens from getting damaged by animals.
2. Protecting environmental areas, such as wetlands.
3. Protecting equipment that may be in the field against animals.

Interference to your phone line

A common problem that has been identified with some electric fences is interference on a home phone line.

Signs of this interference include:

- You or your neighbours hearing 'clicks' on the telephone line.
- Your Internet connection is slow or unreliable.
- Fax reception is poor, difficult to read.

The problem is usually caused by induction from an electric fence that is running parallel to the Telecom lines or cables.

The electric fence that is causing the problem can be close by or kilometres away. It is common for the neighbours rather than the fence owner to get the interference.

Turning off your energizer or asking your neighbours to turn off theirs will, in most cases, identify the offending fence.

Once you find the fence that is causing the interference, there are a few simple things to check;

1. You should find out where the telecommunication cables or phone lines are in relation to the offending electric fence. Lines are most commonly found running alongside roadside fences and up long driveways. They can be either buried cable or overhead wires. To identify where the buried cables are located, a marker post or grey connection pillar should be nearby. If you can't locate the cables ring Telecom on 124 for help.

2. Identify all the electric fence wires and connecting leads that are within 100 metres of the phone lines and running parallel, or almost parallel, to them. You are more likely to get a problem from long sections that are running parallel close to phone lines, than from short sections that go nowhere else.

3. Check the current in these wires. The Gallagher Smartfix will effectively help you to do this. A well-maintained fence should have a current reading of less than two amps per kilometre of energized fence line. If it is higher than two, there could be a short on the fence caused by too much overgrowth, live wires contacting the ground or old deteriorating insulators. Use your Gallagher Smartfix to locate where these faults are and fix them by either removing undergrowth, fixing the live wires, or replacing old insulators.

4. If you find, after fixing all faults, that the current is still too high, find a way to feed the main supply through sections of the fence that are further away from the phone line.

5. Check that the earthing system meets the instructions outlined in the above section.

What type of energizer should I use?

The type and size of energizer best suited for your fence system depends on the following factors:

1. The availability of a mains power supply
2. The amount of fence to be powered
3. The type of stock to be fenced

The following chart shows the Gallagher energizers available, the amount of fence each one is suited for and the animals they are designed to contain. The shaded regions depict energizers most likely to suit your lifestyle or small block needs.

It is important to note the reference to vegetation in the chart. The level of vegetation, i.e. grass, shrubs e.t.c. that is in constant contact with the fence wire, will impact on the amount of power along the fence. The higher the level of vegetation interference, the more power that is lost off the fence.

Energizer Selection Chart – by Fence Distance - km					
Energizer	Stored Energy (Joules)	Maximum Distance of Fence - km		Animals Controlled	
		Gallagher recommendations (multi-wire fence) High	Average		
MAINS POWERED					
PowerPlus MR5000	50	20	30	120	
PowerPlus MR2500	25	12	20	80	
SmartPower MBX2500	25	12	20	80	
PowerPlus M1800	18	8	16	65	
SmartPower MBX1500	15	8	15	60	
PowerPlus M1000	9	6	12	48	
LIFESTYLE / SMALL BLOCK	PowerPlus M500	4.5	7	35	
	PowerPlus M250	2.5	4	25	
	PowerPlus M100	1	2	10	
	PetMaster	0.1	1	1.5	
BATTERY/SOLAR POWERED					
PowerPlus B1600	16	8	15	60	
PowerPlus B700	7	5	10	40	
LIFESTYLE / SMALL BLOCK	PowerBox B300	2.6	5	30	
	PowerPlus B260	2.6	5	30	
	PowerBox B200	1.45	3	20	
	PowerPlus B160	1.5	3	20	
	PowerBox B100	0.8	2.5	7 11	
	PowerPlus B75	0.7	2	10	
	PortaFence B45	0.45	1.25	5	
	PortaFence B20	0.2	1	1.5	
	Solar S17	0.17	1	1.5	
	Econo B14	0.15	1	1.5	
PortaFence B11	0.11	0.5	1		

● Not recommended. Insufficient power for this application.

What are the benefits of electric fencing?

Electric fencing is the most effective way to control your animals and maximise the effectiveness and efficiency of pasture management on your farm. It can be used for boundary fencing, subdivision or to protect eroding areas, trees and waterways.

Specific benefits of electric fencing include:

1. Easy to install

The most common types of electric fences are Insultimber, Fibreglass or light pine posts with insulators.

Insultimber does not require insulators. Made from a non-rainforest hardwood and a natural renewable resource, Insultimber is milled from durable high-density timber that does not conduct electricity. Posts are simply driven into the ground with an Insultimber Driver and the wires are then attached through predrilled holes using Insultimber Clips and the Wire Twisting tool.

Fibreglass posts are quick to install and are relatively flexible and lightweight. Fibreglass posts are simply driven into the ground using a hammer and Driver Cap. The wires are then attached using Quick Clips placed at the appropriate height.

All fences need strong end support posts (strainers) and angle posts. Wire tension is about half that used on a traditional fence.

2. Durable

Electric fences are durable because they encounter low physical contact, as opposed to traditional forms of fencing which encounter high levels of animal contact and challenging.

3. Effective deterrent

The electric fence not only contains your animals, it also acts as an effective deterrent to trespassers and predators, helping to ensure animal safety.

4. Lower level of stock damage.

Due to the absence of physical contact between the animal and the fence, your animals will encounter less hide and pelt damage than if you used traditional non-electric fencing methods, particularly barbed wire.

5. Economical.

There is less material in an electric fence because it is a psychological barrier rather than a physical barrier. As electric fences are not subject to physical pressure from animals they have a longer life than traditional fences and are less costly to maintain.

The cost of running an electric fence energizer varies depending on the type (i.e. mains, battery, solar). Mains power should always be the preferred option over battery power. A small to medium mains powered energizer would cost less than two cents a day to run.

Battery consumption varies depending on the power output of the battery powered energizer. Gallagher energizers have power setting options designed into them to enable you to maximise battery efficiency.

What is an electric fence and how does it work?

An electric fence is a barrier to manage animal and pasture. It differs from traditional non electric or barbed wire fencing because as well as being a physical fence, it creates a psychological barrier that deters the animals from wanting to challenge it.

This obviously means your animals are less likely to get injured by trying to get through the fence and it also makes your fence more durable as it does not have to deal with constant animal pressure.

There are four main important components to an electric fence. These are:

1. An energizer
2. An earthing system
3. A well insulated fence
4. A lead-out (connection between the energizer and the fence)

The effectiveness of your fence depends on the correct combination of these four factors for your particular situation.

THE ENERGIZER

It is important to choose the right energizer to ensure it is powerful enough for the amount of fencing you want to power. A guide to choosing the most suitable energizer is given in section 2.

Energizers can either be battery powered, mains powered or solar powered.

THE EARTHING SYSTEM

The earthing system refers to the galvanized metal stakes that are placed in the earth near the energizer. The metal stakes in the ground are part of the circuit that is completed when the animal touches the wire (see diagram 1 below). The completion of the circuit is what allows the animal to get a shock. It is therefore essential to have an effective earthing system. Important factors to remember are:

1. Soil conditions

Soil that is very dry, sandy or pumice will not conduct the electric current as effectively as clay or slightly moist soil. In these less than ideal conditions, it is more difficult to get an adequate earth system to ensure the animal receives the maximum shock.

2. The 3.3.2.1. earthing rule

This general rule suggests you use a minimum of THREE galvanized stakes such as Kiwitah earth stakes placed THREE metres apart from each other, each TWO metres long (underground) and connected by ONE continuous wire.

It is also important to place the earthing system as close as possible to the energizer and at least 10 metres from any power supply earth stake, underground telephone or power cable.

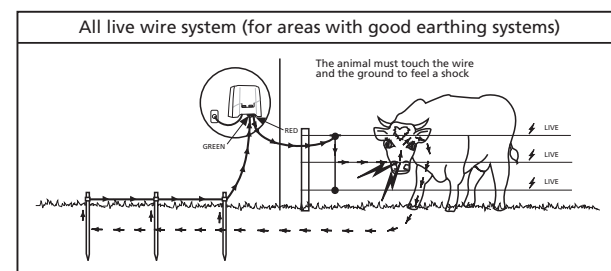


Diagram 1

THE WELL INSULATED FENCE

It is important for your fence to be well insulated to ensure the voltage remains constant along your entire fence system.

Insulators, which are attached to the fence posts, provide protection from losing voltage as a result of the wire coming into contact with the wooden post and being lost to the ground, i.e. 'shorting out'.

All Gallagher insulators feature long leakage paths and protective shields to achieve optimum performance from today's high power energizers (excluding G6830 and G6840). The plastic insulators are made from UV stabilised polymers for sun resistance, toughness and durability.

THE LEAD OUT

The lead out is the high conductive insulated cable or wire that connects the energizer to the fence. It is important to have a lead out that is able to deliver the full power of the energizer to the fence. If the fence is several hundred metres from the building where the energizer is installed cable should be used to get the power to the outside of the building. From there to the fence can be 2.5mm HT wire on offset brackets mounted on a non electrified fence. This has the additional advantage of protecting this latter fence from stock pressure. Where children could be exposed to this wire, cable such as Gallagher G62703 or G62793 should be used. This can be buried where necessary.