INSTALLATION GUIDE

Electric Fence Kit 11

150 Pinlock Insulators, 800m Polytape

Solar Energiser • 150 Pinlock Insulators • 800m Polytape • Gate Handles • Warning Signs

What's in your kit

Qty	Item
1 x	5-8km 0.4J Solar Power Electric Fence Energiser
1 x	Earthing Rod with Clamps (1m)
1 x	5m Lead-Out Wire (2.5mm)
1 x	800m Roll of Polytape (12mm, stainless steel)
10 x	Electric Fence Warning Signs
150 x	Pinlock Insulators (for your existing star pickets)
5 x	Insulated Gate Handles (with spring)

Your order arrives in two separate boxes. Check them all before starting.

THIS KIT IS FOR AN EXISTING FENCE LINE

This kit electrifies a fence line you already have standing. The pinlock insulators mount onto **standard star pickets** and carry the polytape clear of the steel, so no current passes into the pickets themselves — the pickets stay dead, the tape stays live.

Star pickets are not included. If you are starting from a bare paddock with no fence line in place, one of our tread-in post kits will suit you better.

You will also need

- A hammer or mallet to drive the earth rod
- An electric fence tester — the only reliable way to confirm your fence is live
- Gloves, and a helper if you are running the full 800m
- **Star pickets** — these are not included in this kit. If you do not already have a fence line standing, you will need to source them locally
- A post driver, if you are putting new pickets in

BEFORE YOU START — CHARGE THE ENERGISER

With the switch in the **OFF** position, place the energiser in full sunlight for **at least three days** before first use. This allows the internal battery to reach full charge.

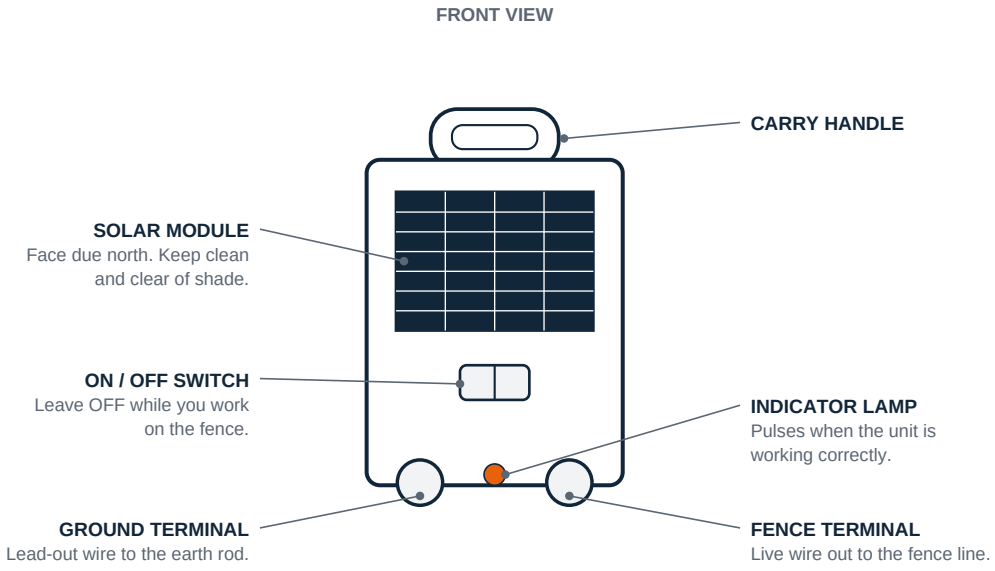
Skipping this step is the most common reason a new energiser appears not to work.

Energiser at a glance

Specification	Detail
Operating range	5–8km of single-strand fence, depending on fence load
Output	7.0kV, open circuit (intermittent)
Output energy	0.4 Joules
Stored energy	0.6 Joules
Input	4.0V DC, 0.02A, 0.08W
Battery	4V, 4.6Ah rechargeable lead acid (fitted inside the unit)
Dimensions	15cm W x 15cm D x 29cm H
Weight	1.35kg

A note on joules. Energisers are rated in two ways. **Stored energy** is what the unit holds internally; **output energy** is what actually reaches the fence. Stored is always the higher of the two, so when comparing energisers, output is the figure that matters.

The energiser has four features you need to identify before installing: the **solar module** on the front, the **ON/OFF switch**, the **fence terminal** and **ground terminal** on the underside, and the **output indicator lamp** between them. The lamp pulses when the unit is working correctly.



The battery cover is on the back of the unit.

Read this before you begin

SAFETY REQUIREMENTS

The energiser must be earthed. An internal fault on an unearthed energiser can put a dangerous shock onto the fence line.

Fit the warning signs. Required by law wherever the fence borders a public road, footpath or shared boundary, and at every gate. See step 7.

Tell people about the fence — especially children — and show everyone on the property how to switch the energiser off in an emergency.

Never climb through or over a live fence. Switch it off first.

Never run two energisers on the same fence line.

Never connect the fence to another device such as a cattle or poultry trainer. A lightning strike would be carried through to every connected device.

Never electrify barbed wire. An animal or person caught on an electrified barb cannot pull away from it. Barbed wire must never form part of an electric fence. If you are running a live line alongside existing barbed wire, keep it **at least 150mm clear** and earth the barbed wire at regular intervals.

Switch the energiser off before doing any work on the fence — installing, repairing, clearing vegetation or moving the line.

Never design a fence that could trap an animal or a person. Always leave a way out.

Do not modify the energiser. Any alteration voids the warranty and may cause serious electric shock.

Clearances from power and telephone lines

Never run a fence line directly beneath high-voltage transmission lines. Where a fence must pass near an overhead power line, keep the clearances below, and keep the fence no more than 3m above ground level in that area. Keep at least 2m from telephone lines.

Power line voltage	Minimum clearance
Up to 1,000V	3 metres
1,000V to 33,000V	4 metres
Above 33,000V	8 metres

Crossing a public pathway

Where your fence line crosses a public pathway, you must provide a way through that is not electrified — either a non-electrified gate or a stile. Fit warning signs on the live wires either side of that crossing.

Cable run underground or under a gateway

Any live cable run below ground — under a gateway, track or roadway — must be high-voltage rated or run inside solid insulating conduit. **Never use ordinary electrical cable.** Bury it deep enough that hooves and tractor tyres cannot reach it.

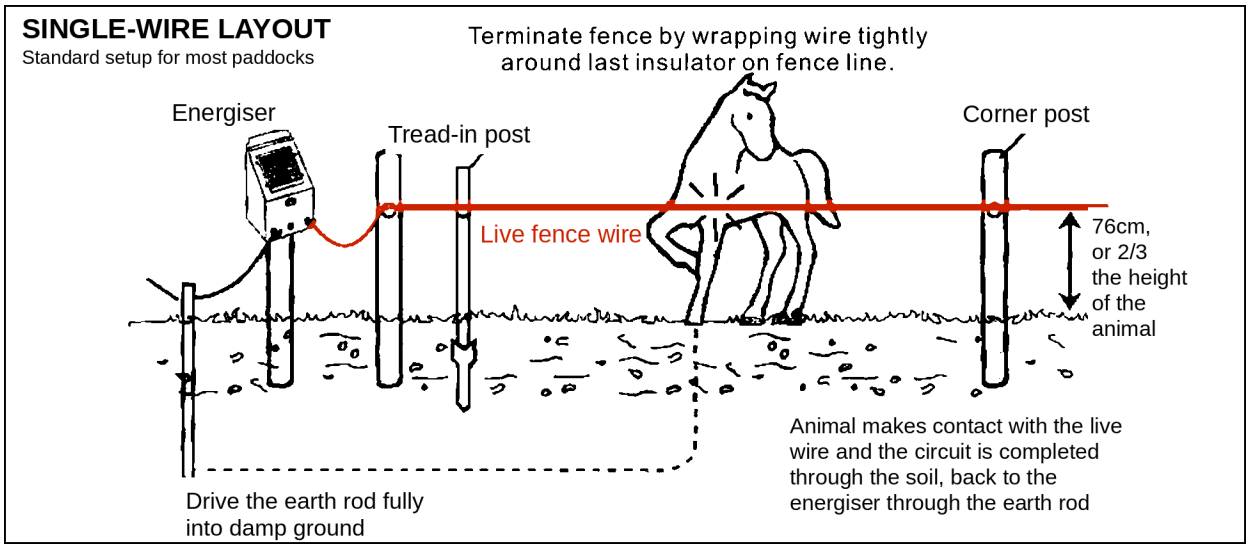
Neighbouring fences

If there is another electric fence nearby running off a different energiser, keep at least 2.5m between the two fence lines, or separate them with non-conductive material.

This energiser is intended for livestock containment. It is not recommended for containing dogs or other small animals. Some local council areas restrict electric fencing or require a permit — check your local requirements before installing.

Installation

The whole system in one picture — energiser, earth rod and fence line. The live wire is shown in red, the earth in black. Work through the steps below in order.



1 Choose a position for the energiser

The solar module needs as much direct sunlight as it can get. In Australia, **face the module due north** — true north, not magnetic north.

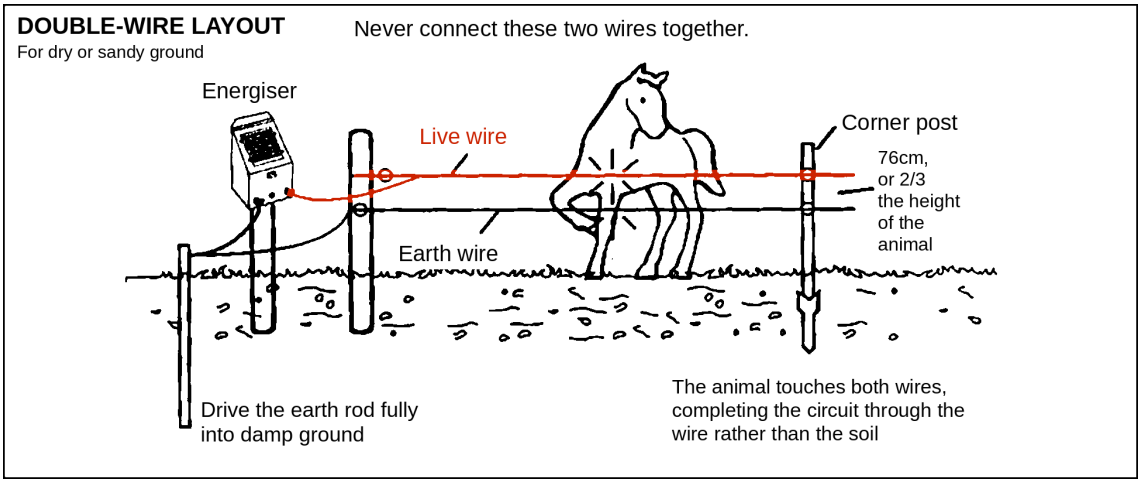
- Keep it clear of trees, sheds, eaves and anything that casts a shadow across the day
- Mount it upright and secure, high enough to stay clear of stock
- Position it near the start of your fence line so the lead-out wire reaches comfortably

2 Install the earth rod

Good earthing is the single most important part of an electric fence. As the saying goes, **the earth is half your fence** — if the earth is poor, the fence will feel weak no matter how good the energiser is.

- Drive the supplied 1m earth rod fully into the ground, leaving just enough exposed for the clamp
- Choose the **dampest ground you can find** — a low spot that stays moist year-round is ideal. Dry, sandy or rocky ground conducts poorly
- Keep the rod **at least 10m away** from any other earthing system, including house earths, power poles and water pipes
- The rod does not have to sit right beside the energiser — damp ground matters more than distance

In very dry or sandy country, a single 1m rod may not give you the earth return you need. If your fence tests weak and the fence line itself is clear of shorts, adding a second earth rod — or driving a longer one — will usually fix it. The other option is a double-wire layout, which completes the circuit through the wires instead of relying on the soil:



3 Connect the earth and the fence

- Fit the clamp to the earth rod and tighten it down mechanically — a loose clamp is a common cause of a weak fence
- Run the 5m lead-out wire from the clamp to the **ground terminal** on the energiser
- Connect your fence line to the **fence terminal**
- Leave the energiser switched **OFF** until the fence line is finished

4 Fit the pinlock insulators

The insulators mount onto your star pickets and hold the polytape away from the steel. The pickets themselves never carry current.

- Fit an insulator to **every picket** along the run you are electrifying — a gap leaves the tape resting against bare steel, which will short the fence to earth
- Set them all at the same height so the line runs level
- Check each one is seated firmly before you run the tape
- This kit includes 150 insulators. Count the pickets on your run before you start so you know you have enough

Do not run the tape directly against a star picket. Steel conducts, so any contact between the live tape and a picket will earth the fence out and leave the line dead.

5 Run the polytape

- Set the line height at roughly **two-thirds of the height of the animal** you are containing, measured at the shoulder
- Keep the tape taut. A sagging line is more likely to short against grass and harder for stock to respect
- Where you need to join lengths, use a proper splice or a splice connector — a loose twist will add resistance and weaken the whole line
- Terminate the run by wrapping the tape tightly around the last post

6 Fit the gate handles

Each gate handle lets you open a section of the live line safely by the insulated grip. Fit the handle so it is under spring tension when closed, and always take hold of the insulated part.

7 Mount the warning signs

A pack of 10 warning signs is included in the package contents. Warning signs are a legal requirement, not an optional extra. Where they must go depends on who can reach the fence.

Where signs are required

- **Alongside public roads and footpaths** — signs at intervals of no more than **10 metres** along that section
- **At every gate and access point** where someone could enter the property or cross the fence line, whether or not it is near a road
- **Along shared boundaries** where a neighbour or member of the public could reasonably come into contact with the fence

Internal fence lines

Where the fence runs strictly inside your own property and the public cannot access it, the 10 metre spacing does not apply. We still recommend a sign at internal gates and at major crossing points, so visitors and workers know the line is live.

Sign requirements

- At least **100mm x 200mm**
- Yellow background with black text or symbol, printed on **both sides**
- Securely fastened to a post or clamped to the fence wire

The signs supplied in this kit are bright yellow, UV protected and printed on both sides, so they meet these requirements.

Work out how much of your fence runs along roads, footpaths or shared boundaries, and make sure you have enough signs to cover it at 10 metre spacing plus one at every gate. Spare signs are available from us in packs of 10.

These requirements come from Australian Standard AS/NZS 60335.2.76 (Annex BB). Some councils apply additional local rules to electric fencing, particularly on suburban boundaries, so it is worth a quick check with your local council before you install.

8 Switch on and test

- Walk the line first and clear anything touching it — grass, weeds, fallen branches, vines
- Check every connection is tight
- Switch the energiser **ON**. The output indicator lamp should pulse
- Test the line with a fence tester. **Do not touch the fence to test it**

A tester does more than tell you the fence is on. Take a reading close to the energiser, then again at intervals along the line. Where the reading drops away sharply, you have found the section that is leaking — usually vegetation touching the wire, a damaged post, or a poor join.

9 Introduce your stock to the fence

An electric fence works as much on memory as on pain. Animals that have learned what the line means will keep well clear of it; animals that have not may run straight through before they register anything.

- Set up a short live line inside a small yard or holding pen
- Let stock investigate it in their own time — most will touch it once and remember
- Give them a day or two before you rely on the fence in an open paddock

It takes very little time and it is the difference between a fence that holds and one that gets walked through. Even experienced stock benefit from it when moved onto a new property.

Keeping it working

Solar module

- Wipe the module clean when it gets dusty. Use a damp cloth — never an abrasive cleaner or pad
- If the fence will be out of use for more than three days, **cover the solar module** with something dark to stop the battery overcharging
- Keep vegetation and overhanging branches clear of the module

Fence line

- Walk the line regularly and clear vegetation, especially through spring growth
- Check the line tension and re-tighten where it has sagged
- Replace damaged posts and worn gate handles

Battery

- The 4V 4.6Ah battery is replaceable — remove the single screw on the battery cover at the rear
- Note the polarity of the two leads before disconnecting them
- Replace only with a battery of the same rating. Keep it away from flame and dispose of it properly
- Do not charge the battery from anything other than the solar module or a 4V DC 0.45A constant-potential current-limited charger

Troubleshooting

Symptom	What to check
Indicator lamp is not pulsing	Disconnect the fence wire from the energiser and switch it on again. If the lamp now pulses, the problem is in the fence line. If it still does not pulse, the problem is the energiser or the battery.
Fence tests weak or dead	Walk the line and clear anything touching it. Check every connection, particularly the earth clamp. Confirm the earth rod is in damp ground and at least 10m from other earthing systems.
Fence works, but stock get through	Check the line height suits the animal — roughly two-thirds of shoulder height. Stock unfamiliar with electric fencing may need to be introduced to it in a small yard first.
Weak after a dry spell	Dry ground conducts poorly. Consider adding a second earth rod, or run an earth wire below the live wire so the animal completes the circuit between the two.
Energiser not holding charge	Confirm the module is getting full sun and facing true north, and that it is clean and unshaded. Check the three-day initial charge was carried out.

NEED A HAND?

Give us a call on **(03) 5303 0263** or email **sales@jonoandjohno.com.au**. If your fence is not behaving, have your kit details and a description of what the indicator lamp is doing ready — it usually tells us straight away where to look.