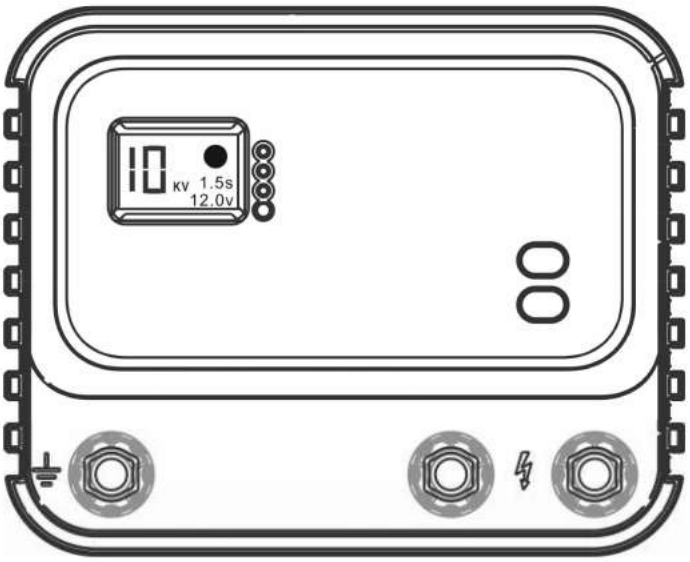
ELECTIRC FENCE ENERGIZER

INSTALLATION AND USER MANUAL



（TH-Mars 2/ES2，TH-Mars 5/ES5）

Thank you for purchasing this Energizer

WARNING

Please read all instructions before using the Energizer
DO NOT connect the fence to any other electric device.
• Lightning may strike your fence. A severe electric shock hazard exists to anything connected to the fence or in near proximity to the grounding system.
• If connecting Energizer to AC power source, only use the provided AC adapter. The Energizer connected to AC power shall be covered adequately to protect it from rain, snow or other moisture. Keep out of reach of children.
• DO NOT Charge the battery with a battery charger while the Energizer is connected. Disconnect and remove battery if re-charging is necessary.
• DO NOT connect more than one Energizer to the fence at one time.
• DO NOT connect two fences to the same Energizer.
• Keep fence at least 2 yards away from other fences with metal posts.
• DO NOT connect Energizer to barbed wire or razor wire.
• DO NOT install fence or grounding system within 10 yards of electrical power lines, telephone lines, or telecommunications equipment.
• If running leads underground, use insulated wire and conduit rated for a minimum of 12,000 volts. Prevent water from entering conduit.
• Keep young children away from the electric fence at all times.
• DO NOT touch the fence with head, neck or torso.
• DO NOT climb over, through or under a multi-wire electric fence. Use a gate or disconnect the fence wires to cross.
• DO NOT put electric fence in areas of public access.
• Clearly mark the electric fence in several locations if located where people unfamiliar with the fence may come into its proximity. Check your local and state laws regarding placement of electric fences.
• Keep fence clear of obstructions or other objects that could potentially cause a person or animal to become entangled in the fence.
• DO NOT use a water pipe, well, or your main power system ground as the ground for your Energizer. If lightning were to strike the fence, the current could travel through the system causing a severe electrical shock hazard.
• Place the grounding rod in a location that will not cause a person or animal to trip into fence or be trapped between the ground wire and the fence.
• Always mount the Energizer securely such that it will not fall if bumped by an animal or person.
• Disconnect Energizer if conditions are extremely dry and represent high risk of fire.
• Keep combustible materials away from fence, Energizer and battery.

Contents

Operator's Manual

This manual is designed to ensure you achieve optimum results from your Electric Fence Energizer. To ensure maximum output with minimum complications and optimum safety, we advise you to follow the guidelines carefully concerning the correct installation of your fence energizer and the required earthing system. Anything less will substantially affect the performance of the energizer and can result in unnecessary complications and installation expense.

About the electric fence energizer

This Electric Fence Energizer is a comprehensive perimeter or strip fencing energizer and is an ideal solution for those who want a simple, efficient and cost-effective system to power their fences.
It is easy to install and can be operated using either AC mains power, 12 volt (v) deep cycle lead-acid/gel battery or in conjunction with a 30/40/50 or other watt (w) solar panel, making this a suitable system for larger scale settings where no mains power is available. As a combination, fixed or portable system, the Electric Fence Energizer provides flexibility with pasture management and is the ideal solution for short or long-term animal control or rotational crop grazing

How does an electric fencing system work?

An electric current, generated from an energizer which is earthed, travels along a fence wire as a pulse. The circuit between the fence and the ground is completed when an animal touches the fence wire and consequently receives a short, sharp but safe shock. This provides enough of a deterrent to an animal, making the electric fence a psychological barrier rather than a physical one.

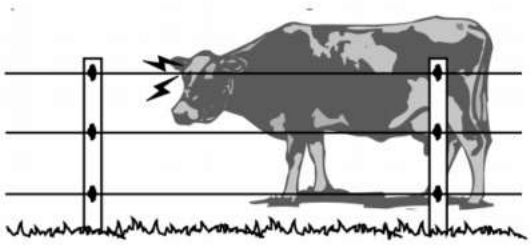


Fig 2.1

TH-MARS SERIES PRODUCT SPECIFICATIONS

	TH-MARS 2	TH-MARS ES2	TH-MARS 5	TH-MARS ES5
Power supply	12V（110-240V 50HZ/60HZ）			
Interval Period	1.2 / 2.0 s	1.2 / 2.0 s	1.2 / 2.0 s	1.2 / 2.0 s
LCD shows working	Yes	NO	Yes	NO
Consumption using a power adaptor	1.92W	1.92W	2.4W	2.4W
Timer	Option	NO	Option	NO
Intelligent fault self-detection	YES	YES	YES	YES
Output voltage adjustment	Yes	NO	Yes	NO
Input current	160mA	160mA	200mA	200mA
Peak output voltage（NO LOAD）	10 kV	10 kV	10 kV	10 kV
Output voltage（500Ω）	4.5kv	4.5kv	4.5kv	4.5kv
Stored energy	2.9 J	2.9 J	5.4 J	5.4 J
Km Multi Wire Fence	25km	25km	35km	35km
Tongher Recommends	8km	8km	10km	10km

2. TH-Mars 2 Mars 5

2.1 Main features :

- ✓ Powered by: AC mains power or, 12v deep cycle lead-acid/gel battery (not included) 30-60w solar panel (not included) in conjunction with a 12v battery as above
- ✓ 6 operating modes including a cost-efficient day/night full/half power save
- ✓ 2 different pulse intervals of 1.5 seconds and 2.5 seconds
- ✓ 2 different max output of full and half energy
- ✓ LCD shows the energizer working state, voltage , interval time, setting etc.
- ✓ LED display the energizer working states, power/on/shock
- ✓ Waterproof and dustproof IP44
- ✓ Timer（Option）

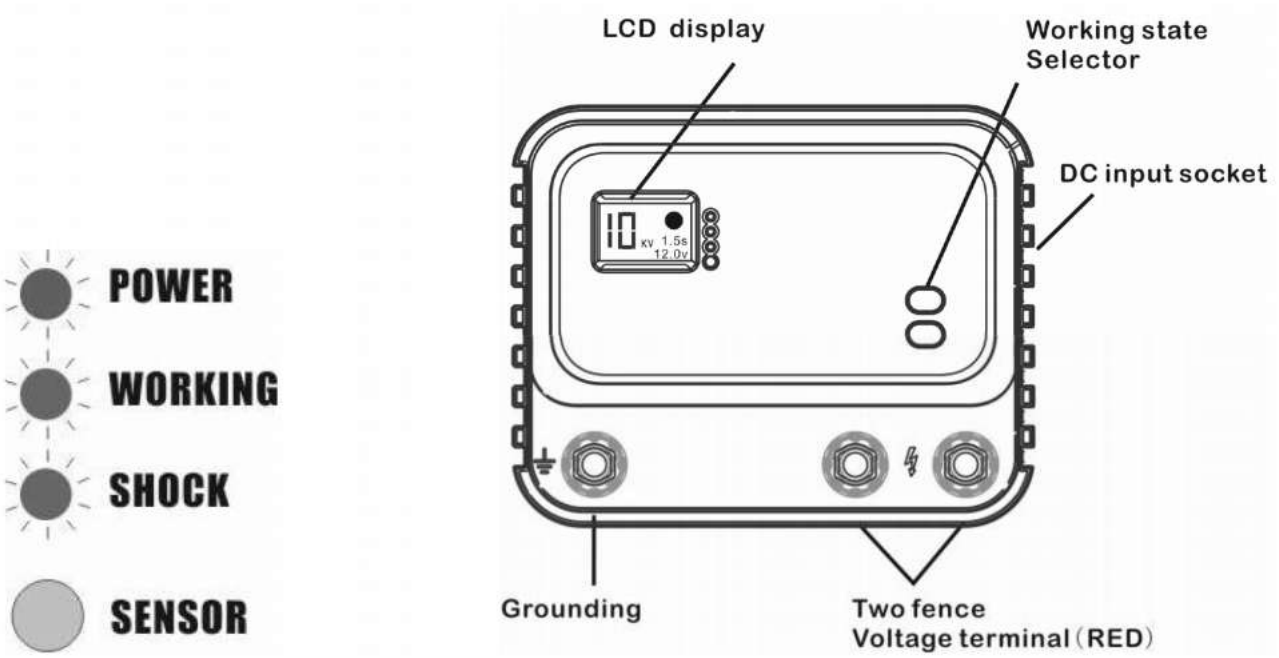
Performance Characteristics

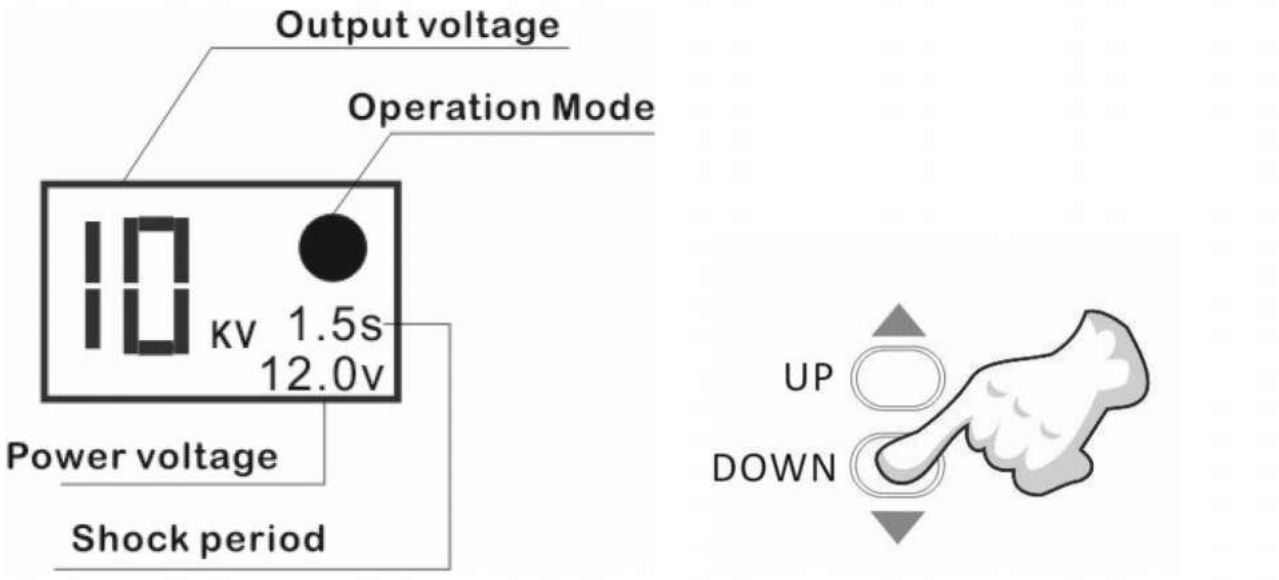
- ✓ output voltage: 7-10 kv
- ✓ pulse width: 100 us (1/1000 second)
- ✓ Stored energy: 2 / 5 joules
- ✓ Consumption(Max):
  Mars 2 : 1.92 watt
  Mars 5 : 2.4 watt

Package Contents

- ✓ 1 x Electric Fence Energizer
- ✓ 1 x Mains power adaptor
- ✓ 1 x Lead-out cable (red) to connect Energizer to fence
- ✓ 1 x Earthing cable (green) to connect Energizer to earthing system
- ✓ 1 x Set of leads to connect Energizer to 12 v deep cycle lead-acid/gel battery option (red and black clips)
- ✓ 1 x user manual
- ✓ 1 x box packaging

2.2 Parts of the energizer





• Power light (Green)
Power supply is connected from mains power or battery
•working states(Red)
On: high voltage is generated
Off: stand by, no high voltage output
•shock indication
Flashing indicate the shock from energizer
• Light sensor
Detects either daylight or night-time and will automatically adjust to the appropriate pre-selected mode

2.3 operation mode:

The working state can be controlled by these two buttons(UP/DOWN)

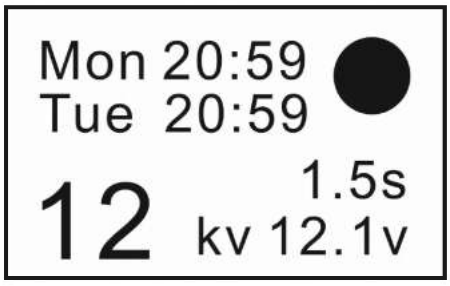
⏻	**Hold-on mode:** the green led indicator is on, off; Lcd shows the battery voltage and right number is 00.0. Under hold-on mode, the energizer does not generate pulse.
●	**Full energy mode:** energizer generates full output energy pulse periodically and the interval is 1.5 second. The green led indicator is on and all red led indicators are on; LCD shows the real output voltage
◒	**Half energy mode:** energizer generates half output pulse periodically and the interval is 1.5 second. The green led indicator is on and all red led indicators are on; LCD shows the real output voltage
☼	**Short-day, long-night mode :** In the daytime, pulse will be generated each 1.5 seconds ; while at night, pulse will be released by energizer each 2.5 seconds.
☾	**Long-day, short-night mode :** In the daytime, pulse will be generated each 2.5 seconds ; while at night, pulse will be released by energizer each 1.5 seconds.
▭	**Battery mode:** the energizer generates half pulse with 2.5 seconds. The green led indicator is on and red led indicators are on. When battery is running out, all the indicators will be off and energizer will do not work.

2.4 Timer

There is extra function for some customer – timer

This timer is base on weekly , we can set the timer using the buttons “UP” “DOWN”.

1. Timer without setting : None stop working
2. Start and stop in the same day but different time, means repeat daily working
3. Start and stop in different day , means repeat weekly working
   (More setting operation please refer to our technology support and Reseller)



Setting

1. Push “UP” to Hold-on mode
2. Push “DOWN” 5 Seconds,and enter setting interface.
3. Push “UP” to modify the value, and DOWN to move to next setting bit.
4. “Y” submit the setting ,”N” cancel the setting

Top two rows is the current time

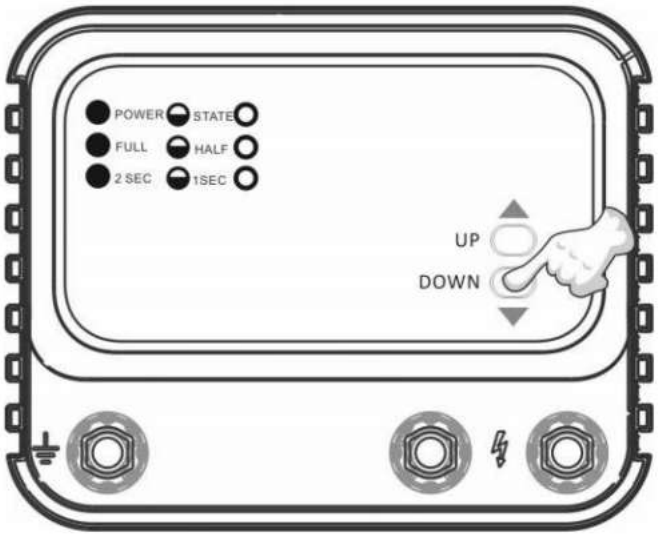
3. TH-Mars ES2 and TH-Mars ES5

3.1 Main features:

- ✓ Powered by: AC mains power or, 12 v deep cycle lead-acid/gel battery (not included) 30-60 w solar panel (not included) in conjunction with a 12 v battery as above
- ✓ 5 operating modes
- ✓ 2 different pulse intervals of 1.5 seconds and 2.5 seconds
- ✓ 2 different max output of full and half energy
- ✓ LED display the energizer working states, power/on/shock
- ✓ Waterproof and dustproof

Performance Characteristics

- ✓ output voltage: 7-10 kv
- ✓ pulse width: 100 us(1/1000 second)
- ✓ Output energy: 2 / 5 joules
- ✓ Consumption(Max):
  Mars ES 2 : 1.92 watt
  Mars ES 5 : 2.4 watt



3.2 Indication and setting

- Power light/state (Green)
  Power supply is connected from mains power or battery
  On: power input is good
  1 Hz flash : power is low , energizer will be deactivated
  E1 inner error
  0.5 Hz flash: E2 inner error
- working states(Red) :output energy

On: full power output
Flash : half power output

- working states(Red) : interval time

On: 2 second
Flash : 1 second

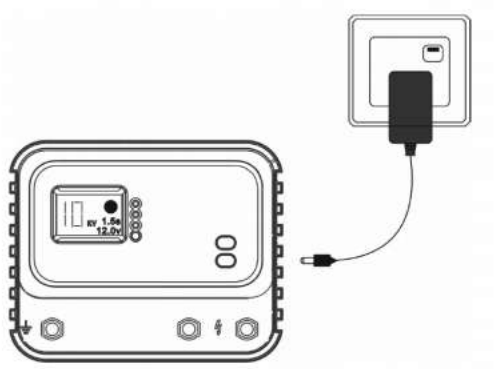
Change the working state by pushing "UP" and "DOWN"

4. Installing the Electric Fence Energizer

4.1 Connecting to the power source

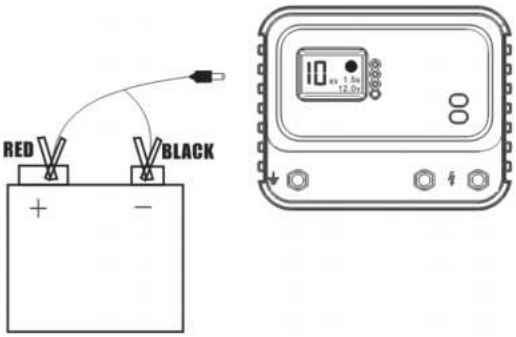
The Electric Fence Energizer can operate using mains power, 12 v deep cycle lead-acid/gel battery or solar and lead-acid/gel battery.

Mains power



1. Attach the mains power adaptor to the Energizer – insertion point on reverse side of unit – and plug into the mains power socket
2. DO NOT turn the mains power on until the powered fence system is fully constructed and you are ready to use it

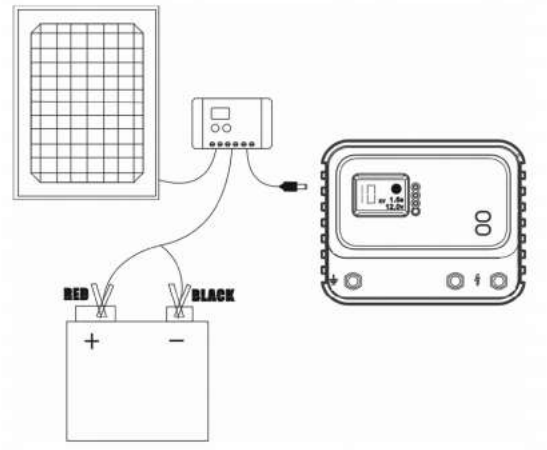
Battery (not included)



1. Always use a 12 v deep cycle lead-acid/gel battery
2. Site the battery in a well-ventilated area
3. Attach the battery cable to the Energizer – insertion point on the reverse of the unit
4. Connect the RED clip to the POSITIVE (+) terminal of the external battery
5. Connect the BLACK clip to the NEGATIVE (-) terminal of the external battery

Battery: Lead-acid or other kind of battery with voltage more than 12 v.

Solar/battery (not included)



1. The Electric Fence Energizer is compatible with a minimum 40 w solar fence panel and a 12 v deep cycle lead-acid/gel battery
2. Set up the solar panel as per the instructions enclosed with it using the appropriate regulator. If you bought your solar panel it will include the correct charging regulator.
3. Set up the 12 v deep cycle lead-acid/gel battery as per above instructions for Battery

Solar panel: voltage more than 12 v solar controller or battery is necessary)

The best place to site the Electric Fence Energizer depends upon which of the three power supplies you choose; mains power, battery or solar/battery. See table 1

Power supply	Benefits	Energizer best positioned
Mains power	• Cost-effective • Reliable	• Mount out of reach of children & animals • Position near to a power point either inside or outdoors • Avoid long lead-outs running adjacent to power or telecommunications cables or other earthing systems • Site at least 10 metres (m) away from any other electric or telecommunications cables or earth systems • If possible, site the Energizer in the middle of the fencing system
Battery	• Practical choice in areas of inaccessible mains power • Electric Fence Energizer can be fitted with a 12 v deep cycle lead-acid/gel battery* (80 Ah is recommended)	• Mount out of reach of children & animals • Position near a power point if using combination mains power/battery and follow guidelines as for mains power • Keep Energizer off the ground if siting outside to protect electrical components from insect and moisture damage • If necessary, build a protective box/fence around the Energizer • If possible, site the Energizer in the middle of the fencing system
Solar	• Logical choice for remote areas where no mains power available • For the Electric Fence Energizer a 12-volt deep cycle lead-acid/gel battery (50-80 Ah is recommended) plus a 30-50 w solar panel(depend on the sunlight intensity)	• Mount out of reach of children & animals • Keep Energizer off the ground to protect electrical components from insect, livestock and moisture damage • If necessary, build a protective box/fence around the Energizer • If possible, site the Energizer & solar panel in the middle of the fencing system • Position the solar panel to face north in the southern hemisphere and south in the northern hemisphere. Protect from possible damage by livestock • Some adjustment of the panel may be required to accommodate the midday, winter sun

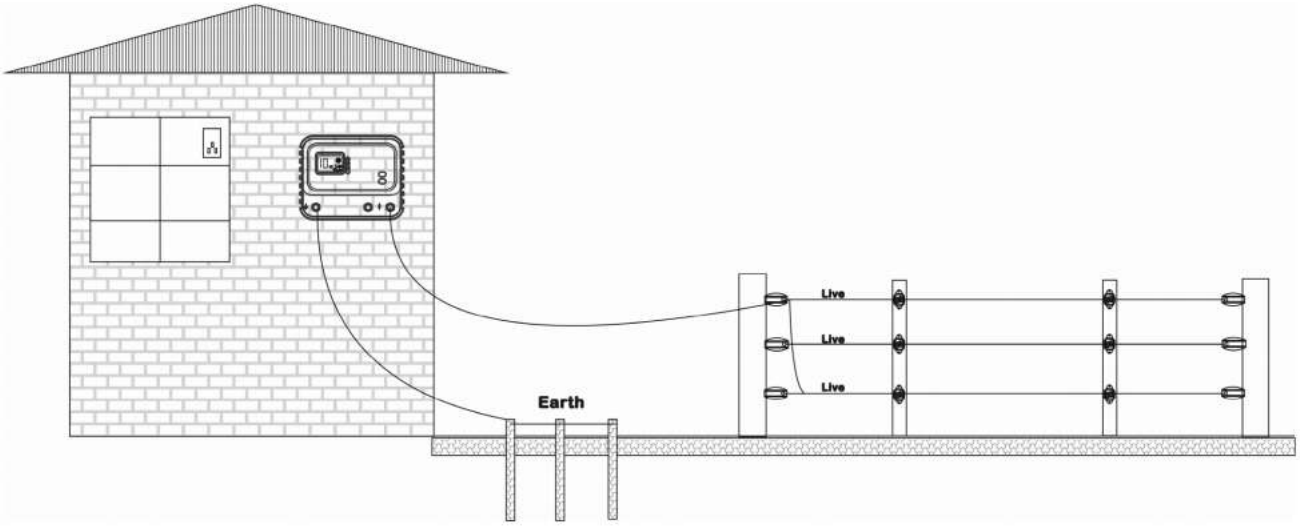
Table : Siting the energizer depending on the choice of power supply

Important: If using a rechargeable battery, choose one that withstands regular, charge and discharge cycles without damage, such as a marine or deep cycle type. Do not use automotive batteries because they supply high current for short periods and may not provide the continual output you require.

4.2 Install the energizer

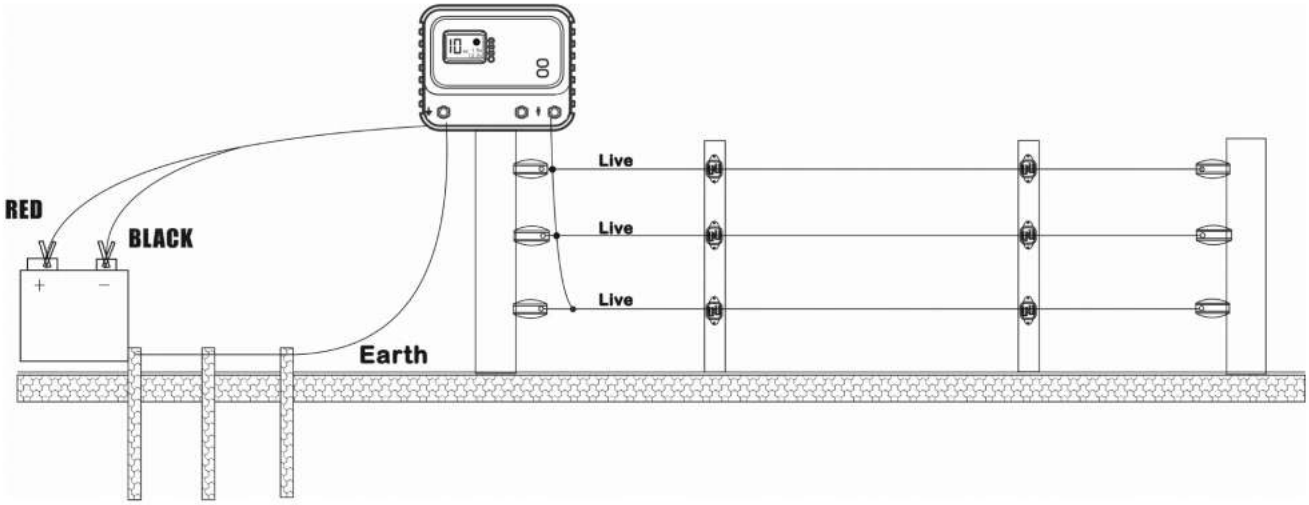
1. Mount the energizer on a wall ,under cover ,out of reach of children .install where there is no risk of the energizer incurring fire ,mechanical , or water damage and if possible away from heavy electrical equipment,(e.g. pumps or other item that may cause electrical interference). Noted: install the energizer in a frequently accessed place, the output bar graph gives valuable information that can save time and help prevent costly problems.
2. Choose a mounting surface of sufficient strength,(e.g. stud , dwang or plywood panel). Mounting surface needs to be robust and of sufficient thickness to properly contain the 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 the tek fixing screws and check the clearance for the mounting bracket to slide over the screw head.
3. Carefully hang the energizer over the screw

Permanent inside installation



Drill 2 holes on the horizontal. Fix the screws (not supplied) leaving a 4mm gap between the head of the screw and the wall. Once in place, line the back of the energizer with the mounting screws and slide down into place.

Temporary outdoor installation



Mount to a wooden fence post using 1 central screw (not supplied), leaving a 4mm gap between the head of the screw and the post. Once in place, line the back of the energizer with the mounting screw and slide down into place. Alternatively, the handle of the energizer can be hung over a tread-in at the end of the fence, away from animals and children and high enough to avoid vegetation.

4.3 Install the earthing system

Poor earthing is the most common reason for poor electric fence performance.

It is very important to have a high quality earth system.

This is a vital component of any powered fence system. Electrons travelling from the Energizer must complete a circuit in order to give the animal an electric shock. From the Energizer, electrons travel along the insulated fence wires, through the animal's body, through the soil to the earthing system – a number of connected earth stakes that absorb electrons in the soil - then return to the Energizer.

If an electric fence is not earthed correctly, it will be much less effective – see table bellow.

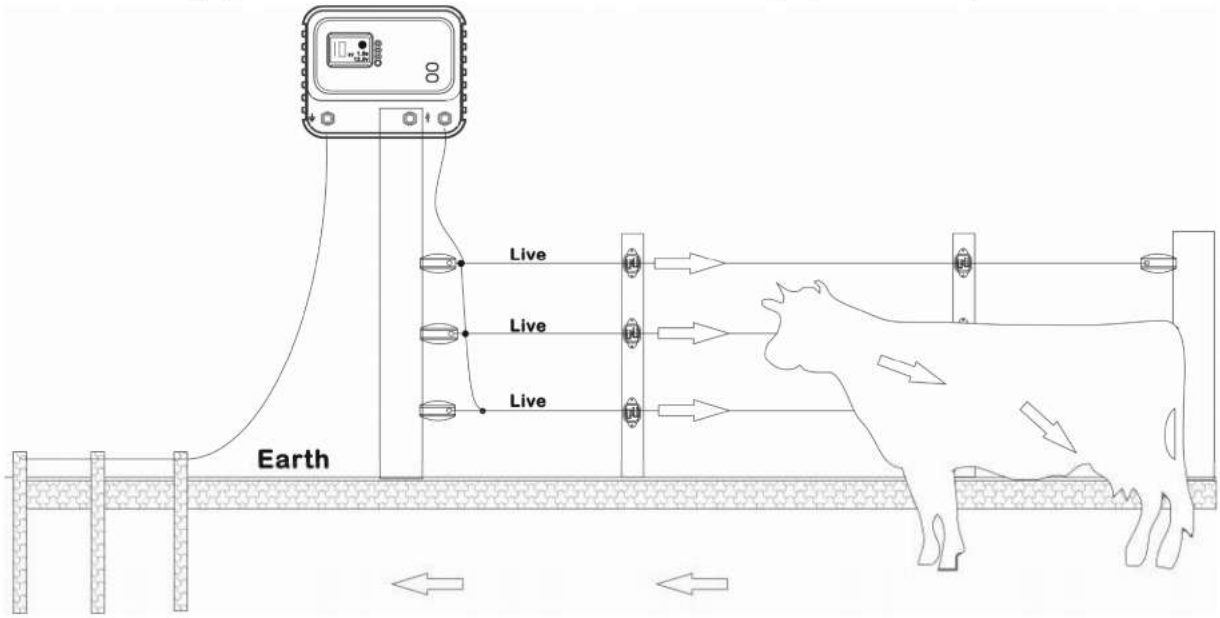
Known factors	What happens?	What's the solution?
Dry, sandy pumice soil types	Allows electrons to disperse rather than be absorbed completely by earthing stakes. Reduces effectiveness.	• If possible, choose a better location or an alternative method of earthing such as a bentonite salt earth system • Consider additional earthing stakes • Water earthing system to improve soil conductivity
Weeds/vegetation touching live fence wires	Electrons leak causing fence circuit to ,"short" and voltage to drop	• Check entire fence lines regularly •Weed/grass management to ensure nothing touches the fence wires • Trim back over-hanging tree branches which may also touch the fence wires
Rusty or corroded earthing stakes	Do not conduct electrons	• Use clean, GALVANISED or copper coasted earth stakes
Animal urine and manure	Long term exposure corrodes earth stakes	• Site earthing system away from animal excreta
Interference Ensure the earthing system is sited at least 10	Interference	• Ensure the earthing system is sited at least 10 m away from any mains earth system and 20 m from any dairy-shed pipework
Steel or iron-clad buildings	Interference	• Do not connect earthing system to metal buildings
Machinery or livestock	Can damage components of earthing system	• Position earthing system away from livestock or other traffic thoroughfares
Mixed metals within the earthing system	Electrolysis , causing some components of the earthing system to corrode	• Do not mix metals of differing conductivity e.g. never use copper wire directly onto galvanized earth stakes

Table 2: Factors known to affect an earthing system

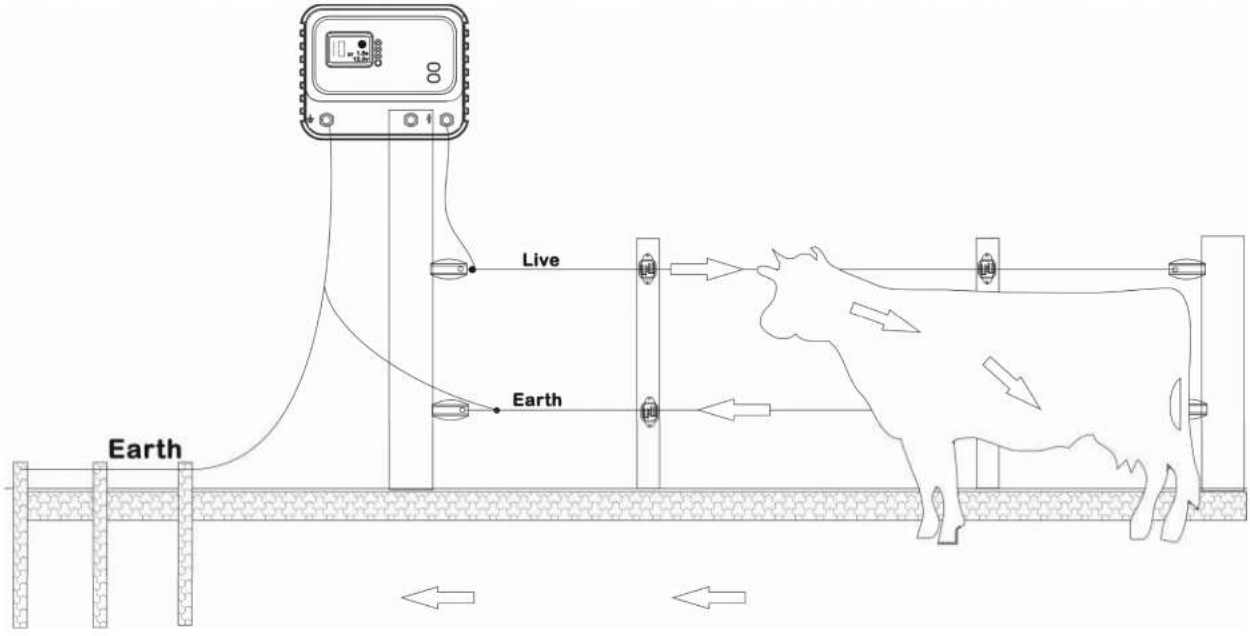
Location of the earthing system

The following examples are to help you locate a suitable position for your earthing system given a variety of conditions:

1. All live earthing system: Recommended where the soil is highly conductive, i.e. most moist soils.



2. Earth-wire return earthing system: Where soils are not conductive e.g. dry, sandy, pumice soils as well as frozen soils or snow conditions, an earth-return wire should be used in conjunction with the earthing system – as per diagram



3. Bentonite salt earthing system: A known alternative for extremely dry soil conditions. A mixture of bentonite and coarse salt (10 lbs bentonite : 5 lbs coarse salt, mixed into a slurry) is placed in and around each earth stake. The salt attracts moisture making it highly conductive, while the bentonite retains moisture over prolonged periods.
   Note: For this particular application stainless steel earth stakes are required to prevent salt corrosion and should be spaced 10 m apart.

Earth stakes

1. For normal earthing use clean, GALVANISED / copper plating earth stakes.
2. The Electric Fence Energizer output capacity is 2-5 joules. A minimum of 3 earth stakes is recommended, each 1-2 m in length. Depending on the location and conditions of the earthing system, additional stakes may be required.
3. Space the earth stakes at least 3 m apart (10 m apart if using the bentonite salt earthing system) then drive them deeply into the soil leaving a minimum of 10 centimetres (cms) above ground level for the single connecting cable Join the earth stakes in a continuous series using clamps and insulated connecting cable
4. If using the bentonite salt earthing system, use stainless steel earth stakes and space them at least 10 m apart

Connecting the earthing system to the Energizer

The Electric Fence Energizer comes with an earthing cable suitable for portable powered fencing which can be connected as follows:

1. Unscrew the BLACK cap on the Energizer unit
2. Insert the rod of the GREEN earthing cable through the hole of the screw
3. Replace the BLACK cap, tighten to secure the rod in place
4. Attach the GREEN clip at the other end of the cable to one of the EARTH STAKES
5. Test the earthing system

Testing the earthing system

Ideally, you should perform this test at least ONCE each year and also during any dry season. This ensures the earthing capacity is sufficient to meet the demands of the Electric Fence Energizer. To perform the test you will need:

Several steel rods or lengths of pipe Fence tester, galvanised metal stake at least 200 mm in length

1. Turn OFF the Energizer.
2. Using several steel rods or lengths of pipe, short circuit the fence by laying these against the fence at least 100 m away from the Energizer. In dry or sandy soil conditions, drive the rods up to 30 cms into the soil.
3. Turn ON the Energizer.
4. Measure the fence voltage using the fence tester. The reading should be 2kv or less. If not, put more steel rods against the fence.
5. Now, check the earthing system by fully inserting the earth probe of the fence tester into the surrounding soil and attach the clip to the last earth stake. The reading should be no more than 0.2 kv. If the reading is higher, the earthing system is insufficient and you should recheck the entire system thoroughly.

4.4 Lead-out from the energizer

The lead-out cable/wire, which can be installed overhead or underground, carries the electric current from the Energizer to the fence. In order to maintain the full level of power, the lead-out cable/wire should have as little resistance as possible.

Connecting the lead-out cable from the Energizer to the fence

The Electric Fence Energizer comes with a short length, low resistance lead-out cable which can be connected as follows:

- Unscrew the RED cap on the Energizer unit
- Insert the rod of the RED lead-out cable through the hole of the screw
- Replace the RED cap, tighten to secure the rod in place
- Attach the RED clip at the other end of the cable, to the FENCE WIRE

Longer length lead-out cable/wire

Should you require a longer length lead-out cable/wire than the one supplied then you must consider the following:

- Choose lead-out cable/wire with low resistance i.e. the larger the diameter, the lower the resistance
- Table shows that a 2.5 mm or 12 gauge (g) wire has 2½ times the resistance than 4.0 mm or 8 g wire. Remember, the lower the resistance, the better
- Longer length lead-out cable/wire increases resistance leading to voltage loss
- DO NOT use household electrical cable. It is intended for low voltage use only
- NEVER use copper wire. Where copper joins galvanized wire, electrolysis occurs, destroying the wire
- NEVER use barbed wire
- Use insulated cable, particularly if there is a possibility of contact with any earthing point

Wire size		Resistance of wire (ohms/km)
Gauge（g）	Wire diameter(mm)	
8 g	4.0 mm	14 ohms/km
10 g	3.15 mm	22 ohms/km
12.5 g	2.5 mm	35 ohms/km
14 g	2.0 mm	54 ohms/km
16 g	1.6 mm	85 ohms/km

Table 3: DC resistance in ohms of a single galvanized steel fence wire over 1 km

Other helpful hints:

- If running lead-out cable underground, feed it through a piece of plastic hose or pipe before burying. This not only gives the lead-out cable protection but acts as a warning to anyone who may dig in the area in the future
- DO NOT install lead-out wire close to the ground where potential "leakage" through vegetation will result in voltage loss
- Keep stray wires well away from the lead-out cable/wire

4.5 Post and wire spacings

Ideally, plan the fence line, avoiding rough, stony or steep areas. Build the fence with all wires electrified to control your animal type. As a guide, the smaller the animal the more wires required, for example; cattle 1-3 wires, sheep 4-5 wires and for goats and sheep, ensure the bottom wire is 150 mm above ground level to prevent them escaping beneath the fence line. The following are some suggestions for post and wire spacings :

For more information on fence construction, please refer to our after sales department for tips on Permanent Powered Fencing and Temporary Powered Fencing

4.6 Warning sign

A warning sign shall be fitted to every point where persons may gain ready access to the conductors .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.

Any part of an electric animal fence that is installed along a public road or pathway shall be identified at frequent intervals by warning signs securely fastened to the fence posts or firmly clamped to the fence wires.

The inscription shall be indelible, inscribed on both sides of the warning sign and have a height of at least 1" (25 mm).

4.7 Safety requirements

4.7.1. NEVER use more than ONE Energizer on one fence at any given time

4.7.2. The earthing system must be at least 10 m from the mains electrical earth

4.7.3. Try to avoid electric fence wires passing under or parallel to overhead power lines, telephone lines or cables

4.7.4. If the crossing is unavoidable, make it as close to a right angle as possible

4.7.5. Electric fences near or under power lines should be no higher than 2 m (6 ft 8 ins)

4.7.6. All wires should be at least 5.5 m (18 ft) above ground when crossing a public road

4.7.7. Don't use power poles to support electric fence or lead-out cable/wire

4.7.8. Electric fences bordering public walkways require regulation warning signs Regulation is 200 mm x 100 mm with 25 mm lettering

4.7.9. Signs should be located within 20 m of each end of the fence. Additional signs need to be 100 m apart on an electric fence which is adjacent to a public road or thoroughfare and 50 m in urban areas

4.7.10. Under no circumstances should barbed or razor wire be electrified

4.7.11. Lightning Protection - If lightning strikes your electric fence it will damage your Energizer. In areas prone to severe lightning, installing an earthing system to include a lightning diverter is essential. These are generally available from your local Farm Supply Company. The lightning diverter has its own earthing system which provides an alternative path for the lightning that strikes the fence to reach the ground. It consists of separate earthing stakes from the Energizers earthing system, (minimum of 3), and should be installed at least 20 m away from it. However, incorporating a lightning diverter is not a guarantee for total protection, particularly when there is a direct lightning strike to the fence or the energizer itself. Alternatively, completely disconnect the energizer from the power source and earthing system during lightning storms.

5. Trouble-shooting

A fence tester, is an essential piece of equipment required to monitor the electrical output along the fence line, perform regular maintenance checks along the fence-lines as well as assisting to find faults quickly and easily, should they occur. If your fence-line is registering less than the recommended 3000 v on your fence tester then check the following:

Possible cause	Action
Energizer itself	• If you require the energizer to power up greater distances, you will need to try a more powerful Energizer. Alternatively, re-plan your powered fence system to within the maximum capacity of the Energizer. Additional fence requirements will require a second unit • Check the power supply: Mains power - check the system is plugged in and switched on -ensure all leads/cables are properly connected Battery -check battery life and amount of stored energy -revert to mains power if battery level below 10.8 v Solar/Battery -check battery life and amount of stored energy -change to back-up battery if level low or mains power if possible or charge the battery on mains power
Earthing System	• Ensure there are a minimum of 3 earth stakes, more if soil conditions warrant it • Earth stakes must be at least 2 m long • Check that earth stakes are spaced 3 m apart and buried deeply in the soil • Check all connections to the earth stakes are secure • It is vital that all components of the earthing system are made of the same metal • Ensure the position for the earthing system is damp, preferably shaded and high-mineral content soil, if not, resite the earthing system • If there is a severe dry period, you may need to water the earthing system or consider alternatives such as re-siting your earthing system or using a bentonite/salt mixture – refer to page 6
Lead-out cable/wire	• Check the connection to the Energizer is secure • If using a longer length lead-out cable/wire to the one supplied, ensure a large diameter,low resistance, cable/wire. Do not use household electrical cable, copper wire or barbed wire • Ensure the wire is sufficiently insulated, particularly if sited underground • Check there are no stray wires and no vegetation touching the lead-out wire • Check all cable joins to ensure connections are insulated and secure

Fence line	• Walk the entire fence perimeter tracing a fence tester along the line, checking about every 100 m. If the short is serious the voltage will continue to drop until the fault is reached • Check all joins in the wire to ensure they are secure • Check the fence wire itself for any signs of corrosion • Vegetation touching the fence line is the greatest cause of voltage loss. Maintain fence lines, ensuring weeds, low hanging branches and other vegetation growth are kept away from the fence lines. Ensure the wire position and tension is adequate to keep the lines above any vegetative growth
Radio interference	• Ensure the earthing system is highly conductive • Install the Energizer away from any mains power earthing system • Make certain the Energizer earth wire does not touch a building or anything which could act as an aerial • Keep all radios and similar equipment away from the Energizer • Ensure the mains power supply is properly earthed and all components are in good condition • Keep vegetation away from the Energizer itself
Telecommunication interference can be detected by either: i) Clicking noises on the telephone line ii) Slow or variable internet connection	• Know where the telecommunications cables are. This includes buried and overhead lines. You may need assistance here from your local telecommunications company • DO NOT run the lead-out cable/wire or the fence wires, for any distance in parallel with telecommunications wires • Lead-out cable/wire and fence wire must be sited at least 100m away from telecommunications lines • Ensure the earthing system is sited at least 10m from telecommunications lines and other earthing systems • Check all wires and connections along the entire perimeter of the powered fence system and ensure they are in good condition • If the fault persists, find an alternate route for the lead-out cable/wire and fence wire so that it runs away from the telecommunications lines rather than alongside them

6 . Maintenance

For a safe reliable electric fencing system, we recommend you follow these helpful tips:

6.1. Regularly wipe down the unit with a soft damp cloth to ensure that there is no build-up of mould etc.

6.2. Do not use any abrasives which may damage the coating of the Energizer

6.3. Clean any connections and terminals which may be showing signs of corrosion

6.4. Perform a thorough test of the earthing system at least ONCE each year and also during any dry season

6.5. Inspect fence lines regularly, clearing any weeds, low hanging branches or other vegetation in direct contact with the wire

6.6. Check fence wire positions and tensions to ensure they are adequate to keep the fence lines above vegetative growth

6.7. Ensure all fence wire insulators are intact and in good condition

7. Manufacturer Warranty

Our products are warranted to be free from defects in materials or workmanship for 1 year from the date of purchase. Within this period, Manufacturer will, at its sole option, repair or replace any components that fail in normal use. Such repairs or replacement will be made at no charge to the customer for parts or labor, provided the customer shall be responsible for any transportation cost.

This warranty does not apply to: (i) cosmetic damage, such as scratches, nicks and dents; (ii) consumable parts, such as batteries, unless product damage has occurred due to a defect in materials or workmanship; (iii) damage caused by accident, abuse, misuse, water, flood, fire, or other acts of nature or external causes; (iv) damage caused by service performed by anyone who is not an authorized service provider of Manufacturer; (v) damage to a product that has been modified or altered without the written permission of Manufacturer; or (vi) damage to a product that has been connected to power cables that are not supplied by Manufacturer.In addition, Manufacturer reserves the right to refuse warranty claims against products or services that are obtained and/or used in contravention of the laws of any country.

Repairs have a 90 day warranty. If the unit sent in is still under its original warranty, then the new warranty is 90 days or to the end of the original 1 year warranty, depending upon which is longer.

Contact information

Should you have any questions or concerns
please do not hesitate to contact the team at:

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