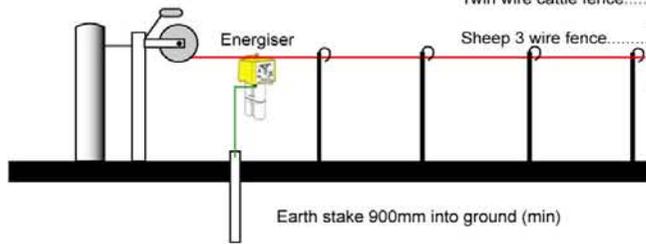


Strip Grazing



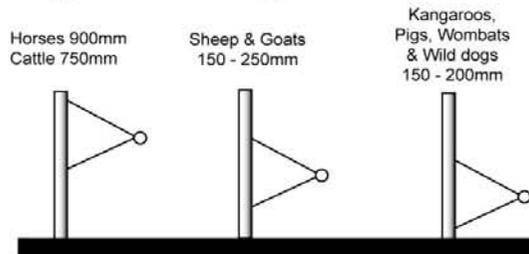
Strip Grazing Wire & Post Spacing

Post spacing	15 metres approx. (flat Ground)
Single wire cattle fence	Wire 800mm off ground
Twin wire cattle fence	Wire 1 450mm off ground
	Wire 2 900mm off ground
Sheep 3 wire fence	Wire 1 250mm off ground
	Wire 2 500mm off ground
	Wire 3 800mm off ground

Offset wires

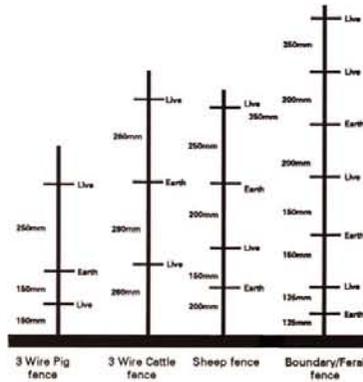
Offset wires are used to upgrade existing fences, extending fence life and reducing damage. Installed on one or both sides of fence, improves stock control.

Approx. wire height settings



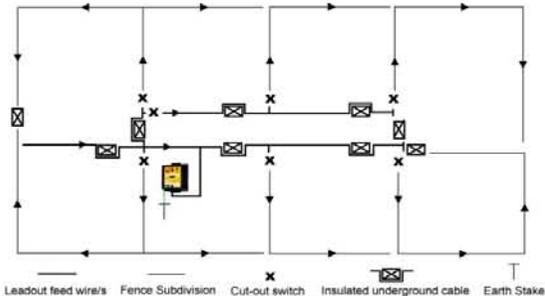
Space offsets approx 15 metres apart (MAX)
Always earth the existing fence by connecting it to earth stakes.

Wire Spacing

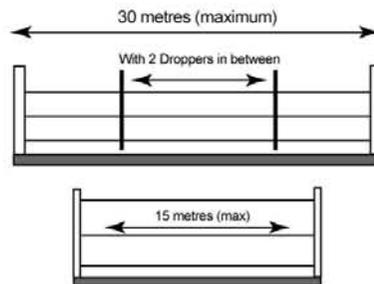


Layout Design

Suggested basic layout for area of operation.



Post Spacing



NSW
PH: (02) 6372 3600

VIC
PH: (03) 9796 2319

QLD
PH: (07) 3285 5711

TAS
PH: 0417 554 024



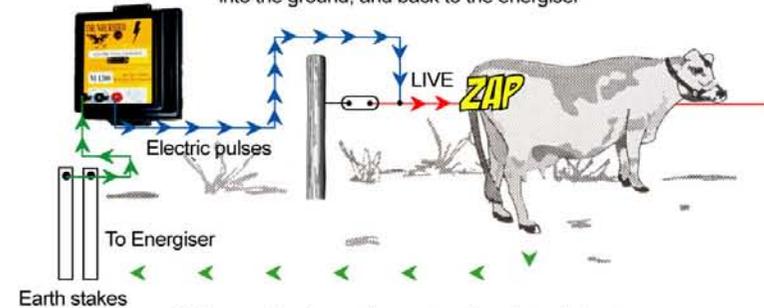
THUNDERBIRD Electric Fence System

Helpful Hints

How an electric fence works

Ground earth return system

The pulse travels from the live wire through the animal into the ground, and back to the energiser

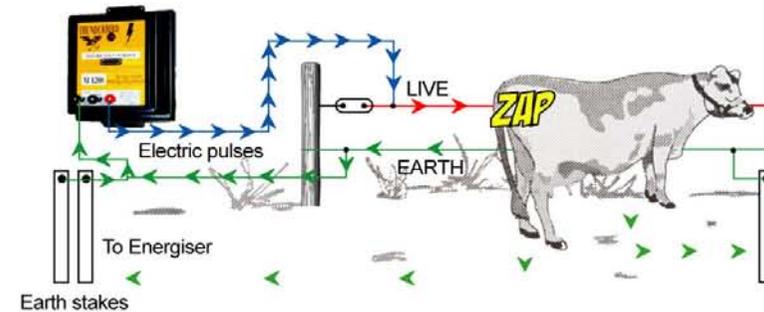


This method requires good soil moisture
(Recommended for strip grazing only)

Earth wire return system

(The preferred method)

When the animal pushes against both the live wire and earth return wire a strong pulse is passed directly through the animal. This method overcomes the problem of reduced or no pulse transmission due to poor electrical conductivity in the soil. (Eg. dry weather, drought)



- The pulse must return back to the energiser for a shock to be received
- Use a bentonite earth kit in dry soil areas.
- Earth wires are recommended for long fence or dry soil areas.



**WARRANTY
THUNDERBIRD
Electric Fence Systems.**

Thunderbird warrants all electric fence systems against defective workmanship and faulty materials for 2 years from the date of purchase.

We undertake, at our option to replace or repair free of charge each product, or part thereof, on condition that it is returned to our factory freight pre paid, and found on examination to be suffering from material or constructional defect.

We can not be held responsible for any repair other than those carried out by us or our authorised agents.

A photocopy of your proof of purchase, and a request for warranty must be supplied.

No warranty claim will be accepted without this information.

This warranty is void if the product is subjected to improper use or handling, incorrect power input voltage, damage through contact with chemicals, flooding, fire, explosion, excessive heat, lightning strikes, insect damage, or damage to external wiring.

Country Electronics Pty Ltd
ABN 38 003 806 040

11 Industrial Avenue
Mudgee NSW 2850
PHONE 02 63723600
FAX 02 63722597

P.O. Box 391,
Mudgee NSW 2850

Email : enquiries@thunderbird.au.com

For your records.

Model
Serial No
Date of purchase.....
Place of purchase
Receipt No



THUNDERBIRD
Electric Fence Energisers.
Models B-12 & B-6/12



NOTE: READ ALL INSTRUCTIONS INCLUDING HELPFUL HINTS BROCHURE BEFORE USING FENCE ENERGISER.

Thunderbird's B-12 & B-6/12 energisers are highly efficient, low power electrical appliances. Installed and used correctly, these products should provide years of reliable service.

WARNING:-

1. Regular inspections of electric fences must be undertaken to ensure continued operational safety and compliance. See - 'INSTRUCTIONS FOR INSTALLATION AND CONNECTION OF ELECTRIC FENCES FOR ANIMALS' detailed over the page.
2. Persons coming into contact with high voltage pulses on a high output connection may have their normal physiological functions interrupted.
3. Young children and infirm persons should not be left unsupervised in the vicinity of an electric fence energiser or fence.
4. Do not connect to mains operated equipment.

INSTRUCTIONS

The stainless steel fence clip at the top of the plastic case is designed to connect directly to the live wire or tape. Connect the earth wire with the green nico clip (supplied) to the earth terminal at the base of the case, and then to a galvanised steel stake driven 1 metre into the ground. The B-12 operates from an external 12 volt battery, while the B-6/12 can operate from 4 X D cells (internally) or a 12 volt external battery. Connect the **positive** of the external battery (if used) to the **red** terminal at the base of the energiser, and the **negative** terminal to the **black** terminal. The B-12 has a low voltage cut out when the battery voltage falls below 11.0V (nominal). The B-6/12 has 2 low voltage cut outs. If it senses a 6V input when turned on, the low voltage cut out is 5.5V. If it senses a 12V input when turned on, the low voltage cut out is 11.0V. These cutouts are intended to protect your battery.

These energisers have built in self testing. If the battery is low, you will hear a constant beep. If there is a problem with the unit you will hear multiple beeps with each pulse. If the energiser beeps normally, and there is low or no output, assume a problem with the fence.

These energisers can take a few pulses to achieve correct output after turning on, or after changing levels, due to the processor reconfiguring the capacitor charging.

Do not use copper wire or copper stakes. Electrolysis will cause poor joints. In dry soil areas use earth wire in the fence connected to the earth stake.

INSTRUCTIONS FOR INSTALLATION AND CONNECTION OF ELECTRIC FENCES FOR ANIMALS.

The following safety information is part of the Australian standard 3350.2.76:1998 amendment 2. Refer to this standard for full details on electric fencing.

- >Electric fences must be installed and operated so that they do not cause an electrical hazard to persons, animals or their surroundings.
- >Construction of electric fences that is likely to lead to the entanglement of animals or persons is to be avoided.
- >An electric fence must not be supplied from two separate energisers or from independent fence circuits of the same energiser.
- >For any two separate electric fences that are each supplied from a separate independently timed energiser, the distance between the wires of the two fences must be at least 2 metres. If this gap is to be closer, it must be effected by means of electrically non-conductive (insulating) material or and isolated metal barrier.
- >Barbed wire or razor wire must not be electrified by an energiser.
- >A non-electrified fence incorporating barbed or razor wire may be used to support one or more off-set electrified wires of an electric fence. The supporting devices for the electrified wires must be constructed so as to ensure that these wires are positioned at a minimum distance of 150mm from the vertical plane of the non-electrified wires. The barb or razor wire is to be earthed at regular intervals in accordance with Thunderbird's earthing recommendations.
- >A distance of a least 10 metres must be maintained between the energiser's earth electrode and any other earthing system connected parts—for example mains power protective earth or telecommunication system earth.
- >Electric fence connecting leads located inside buildings must be effectively insulated from the earthed structural parts of the building, for example, use suitable high voltage insulated cable.
Important: always ensure metal parts of the building are effectively earthed.
- >Electric fence connecting leads located underground must be run in suitable conduit of insulating material or high voltage cable to be used. Care must be taken to ensure that the effects of animal hooves or vehicle wheels (e.g. tractor) sinking into ground cannot damage connecting leads.
- >Electric fence connecting leads must not be installed in the same conduit as the mains power supply wiring, communication cables or data cables.
- >Crossing with overhead power lines must be avoided wherever possible. If such a crossing cannot be avoided it must be made underneath the power line and as near as possible at right angles to it.
- >If electric fence connecting leads and wires are installed near an overhead power line, the clearances must not be less than indicated in the table below.

Power line voltage - V	Clearances - Metres
Up to 1,000 V	3
1,000 V - 33,000 V	4
Greater than 33,000 V	8

>If electric fence connecting leads and wires are installed near an overhead power line, their height above the ground must not exceed 3 metres. This height applies either side of the orthogonal projection

INSTRUCTIONS FOR INSTALLATION AND CONNECTION OF ELECTRIC FENCES FOR ANIMALS.

- of the outermost conductors of the power line on the ground surface, for a distance of :-
 - 2 metres for power lines operating at nominal voltage not exceeding 1000V.
 - 15 metres for power lines operating at a nominal voltage exceeding 1000V.
- >Electric fences intended for deterring birds, household pet containment or training animals such as cows need only be supplied from a low output energiser to obtain satisfactory and safe performance.
- >For electric fences intended for deterring birds from roosting on buildings, no electric fence wire shall be connected to an earth electrode. A warning sign must be fitted to every point where a person or persons may gain access to the conductors.
- >Where an electric fence crosses a public pathway, a non-electrified gate must be incorporated in the electric fence at that point or a crossing by means of stiles must be provided. At any such crossing, the adjacent electrified wires must carry warning signs.
- >Any part of an electric fence that is installed along a public road or pathway must be identified at frequent intervals by warning signs securely fastened to the fence posts or firmly clamped to the fence wires.
- >The size of the warning sign must be at least 100mm x 200mm. The background colour of both sides of the warning sign is to be yellow. The inscription on the sign is to be black and shall be either the symbol shown (Fig. 1) or the words - "WARNING - ELECTRIC FENCE"
- >The lettering must be indelible, be on both sides of the sign and in letters not less than 25mm in height.

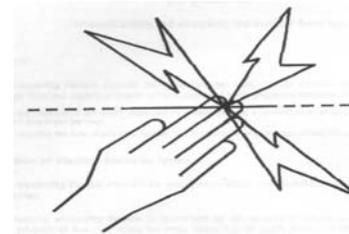


Fig. 1



>Ensure at all times that a mains operated, ancillary equipment connected to the electric fence circuit provides a degree of isolation between the fence circuit and the supply mains equivalent to that provided by the fence energiser.

>**This energiser must be installed in accordance with the Australian standard.**

SPECIFICATIONS

Input Voltage	12.7V nominal (6.35V alternate for B-6/12) - Maximum 20.0V
Input Current	12V - 18mA on High, 13mA on Low (nominal) 6V - 27mA on High, 19mA on Low (nominal)
Output Voltage	7.2kV on High, 6.1kV on Low (nominal)
Stored Energy	0.13 joules

Hot tape and poly wire can be used effectively up to 500 metres. Super hot tape and super polywire can be used on runs up to 1500 metres. For longer runs use gal fencing wire.