



# **WIZORD (2 & 4)** Electric Fence Energizers

## Installer Manual



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## Introduction

The WIZORD 2 and WIZORD 4 are battery (12V 7AH nominal) operated energizers suitable for connection to mains (220-240Vac, 50-60Hz).

The batteries to be used are rechargeable lead-acid batteries. Non-rechargeable batteries must not be used. The lead-acid batteries require venting and it is imperative that the energizer be situated in a well-ventilated area.

A new fully charged battery will typically provide in excess of 24 hours backup. Backup time will vary with fence condition though.

**Electric fencing can be lethal. Please avoid entanglement\entrapment hazards and warn the user to avoid head contact with the fence.**

## Disclaimer

NEMTEK Holdings (Pty) Ltd or any of its subsidiary companies does not guarantee that the operation of the product will be uninterrupted or totally error free.

Energizer specifications may be altered without prior notification.

The installer is referred to the Installation Notes on page 10.

The installer must take into consideration the applicable municipal laws concerning the installation of electric fences. General guidelines are available, or refer to the website: <http://www.nemtek.com>. International standards can be viewed at <http://www.iec.ch> and South African standards on <http://www.sabs.co.za>

## Company Profile

The NEMTEK Group of Companies manufacture and distribute intelligent electronic agricultural fencing systems, security and perimeter control systems and have been involved in the security industry since 1990.

We have our own research and development team, designing and manufacturing a full range of globally competitive electric fence energizers and related products.

NEMTEK is continually updating its products according to South African and international standards in order to ensure the highest quality products and continuous customer satisfaction.

**Electric fencing can be lethal. Avoid head contact with the fence. When installing please take careful note of the options available for current limiting resistors, the programmable output energy levels as well as the low-voltage operation of the energizer.**

## Nemtek Contact Details

### AFRICA

[www.nemtek.co.za](http://www.nemtek.co.za)  
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### EUROPE

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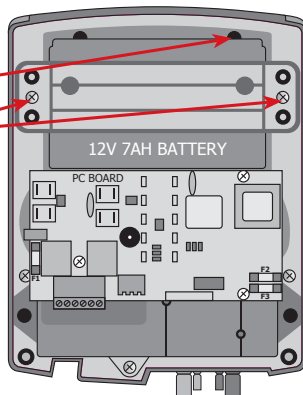
## Mounting and Battery Replacement

**STEP 1:** Disconnect mains. Open the lid after removing the two cap screws. Unplug the battery terminals if connected.

**STEP 2:** Remove screws and battery bracket.

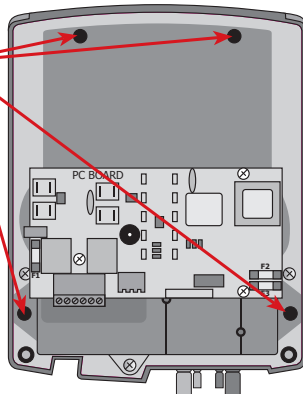
**STEP 3:** Remove battery.

**Note:** Dispose of old battery according to legal requirements. Do not replace with a non-rechargeable battery!



**STEP 4:** Use a drilling template and drill 4 x 8mm holes in the wall for mounting the unit. Four nail-in anchors are supplied with the unit. Insert the plastic sleeve of the nail in anchor into the wall then hammer the screw in with a screwdriver and hammer.

**Note:** Always insert the plastic sleeve from the inside of the box.

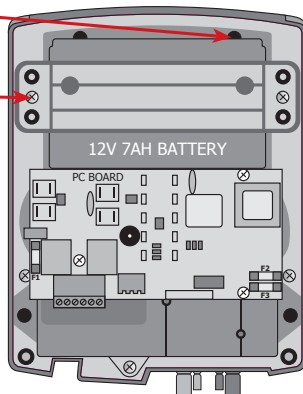


**STEP 5:** Insert battery with the positive terminal to the top.

**STEP 6:** Place the battery bracket back (with plastic offsets at the top) and fasten the screws into place.

**STEP 7:** Connect battery wires. Close the lid by hooking the top of the lid in first and then fasten the bottom down with the two cap screws. Apply mains power to the unit.

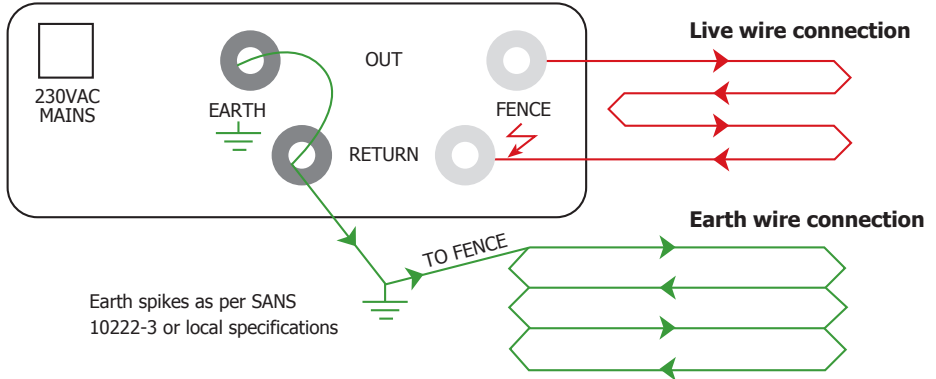
**Note:** Energizer to be mounted vertically against a flat surface, in a well ventilated area. Avoid prolonged exposure to direct sunlight.



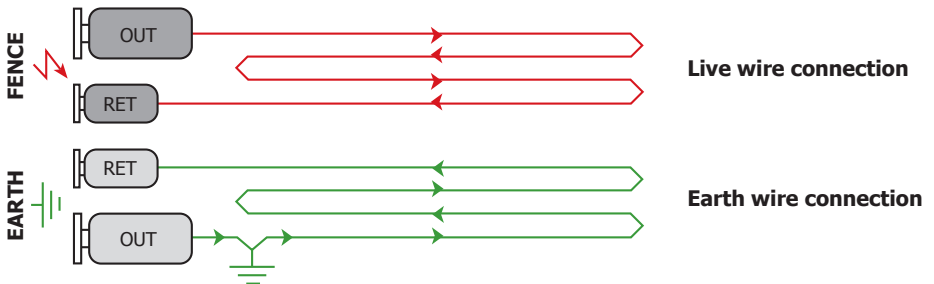
## Connection to the Fence

## Option 1: No earth loop monitoring

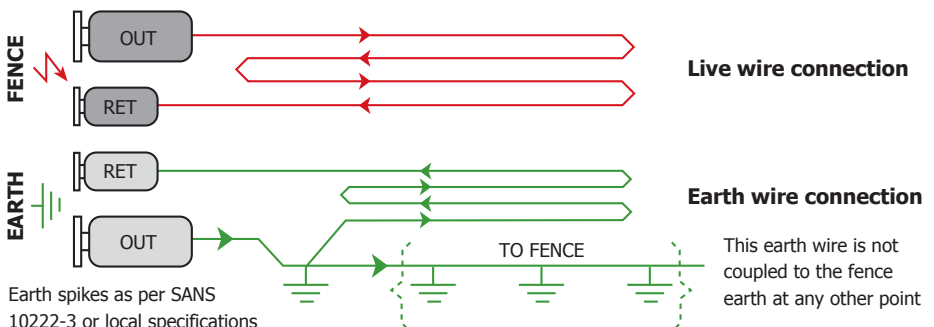
Bridge the earth OUT terminal to earth RETURN terminal.



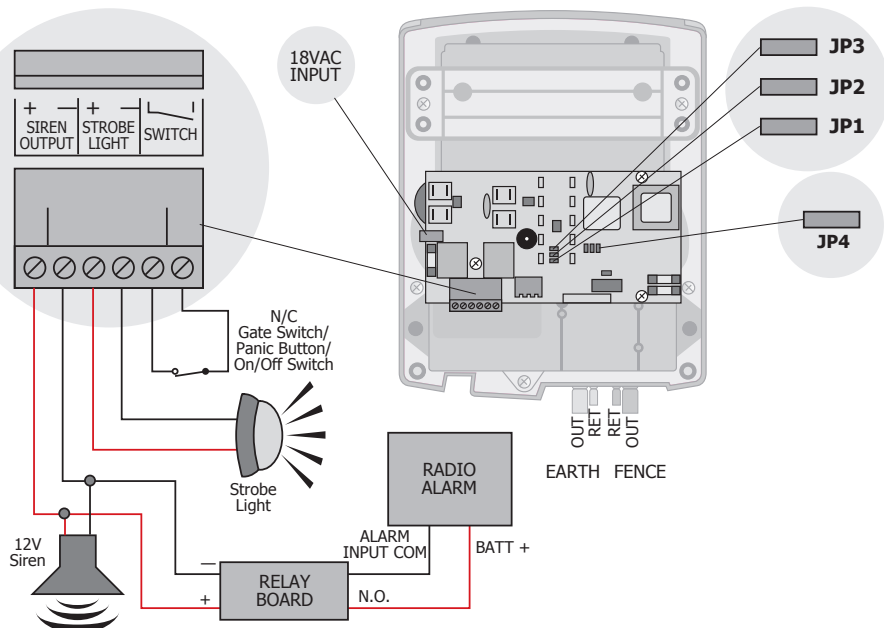
## Option 2: Earth loop monitoring with good soil earthing



### Option 3: Earth loop monitoring with poor soil earthing



# Connections and Configuration



## Jumper operation for WIZORD 2

Function	JP1	JP2	JP3	Energizer Operation
Gate Alarm	Out	In	Out	Switched Input delayed for 4 minutes with energizer On only
Gate Alarm	In	Out	Out	Switched Input delayed for 1 minute with energizer On only
Panic Alarm	Out	Out	Out	Switched Input instantaneous (panic alarm) with energizer On or Off
High/Low Voltage Mode	In	In	Out	Switched Input toggles the energizer between High Voltage and Low Voltage mode
Remote On/Off	Out	Out	In	Switched Input acts as remote On\Off switch
Remote On/Off indication and alarm	In	Out	In	Strobe indicates fence is On or Off, Switched Gate Input delayed for 4 minutes with energizer On only
Not yet available	Out	In	In	Service Alarm disabled, Switch Input delayed for 4 minutes with energizer On only
	In	In	In	Reserved for factory use

\*JP4 - Bypass Safety Switch. Not to be installed during normal use.

**All other Jumpers are reserved for factory use only**

# Connections and Configuration

## Jumper operation for WIZORD 4

JP1	JP2	
Out	Out	Remote On/Off Enabled Plastic Tab Disabled
In	Out	Switch Input Enabled Switch Input Instantaneous
Out	In	Plastic Tab Enabled Remote On/Off Enabled
In	In	Switch Input Enabled Switch Input Delayed (4 min)

\*JP3 - Reserved for future use.

\*JP4 - Bypass Safety Switch. Not to be installed during normal use.

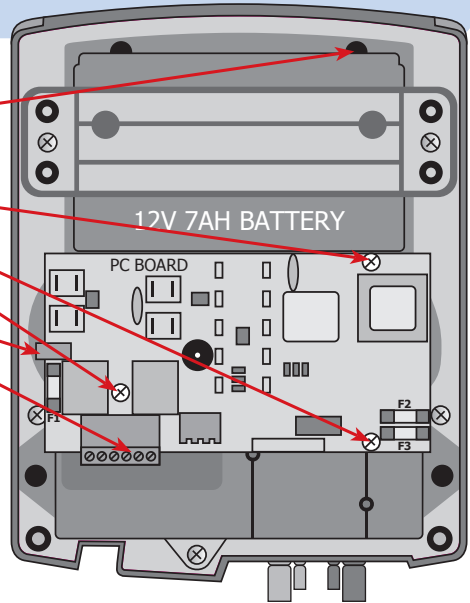
**All other Jumpers are reserved for factory use only**



# PC Board Replacement

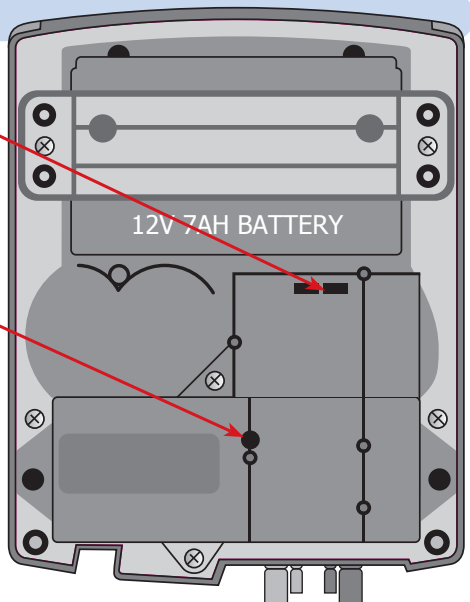
## Removal

- STEP 1:** Disconnect mains power and the battery terminals if connected.
- STEP 2:** Remove screws.
- STEP 3:** Remove all connectors from PC Board.
- STEP 4:** Gently pull PC Board vertically upwards to remove (connections are on the back side of the PC Board).



## Replacement

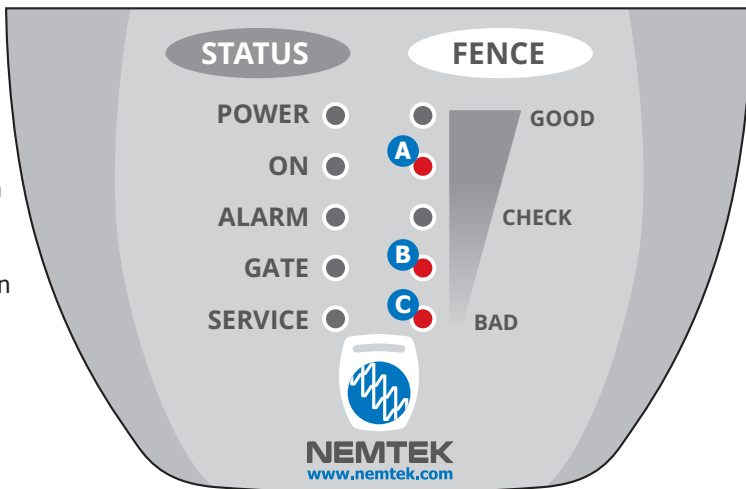
- STEP 5:** Gently push PC Board back into place. Take care that the spade connectors are correctly positioned before pushing the PC Board into place. Also ensure that the opto-coupler (looks like an LED) is correctly positioned before pushing the PC Board into place.
- STEP 6:** Reconnect all connectors to the PC Board.
- STEP 8:** Reconnect the battery terminals and apply mains power.



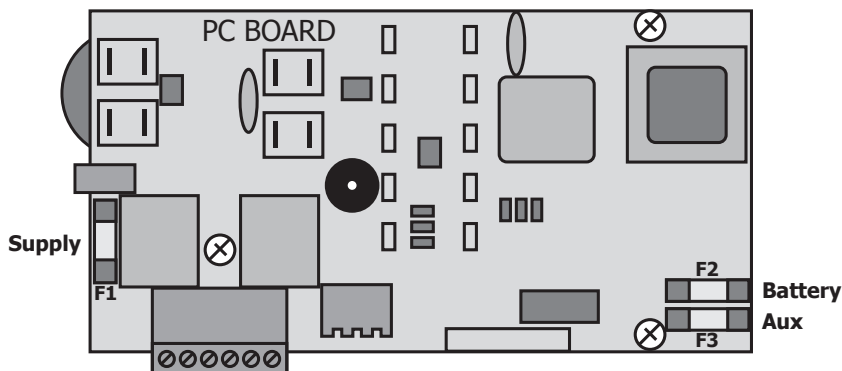
## Service Conditions

On removing the energizer lid and disconnecting JP4, one or more of the following service conditions may be displayed (Wizord 2 only):

- A** Fence interference
- B** Energizer Fault or tampered with
- C** Battery flat or Aux fuse blown



## Fuse description and fault symptoms



**How to check: (All fuses are 2 Ampere fast blow)**

- SUPPLY:** The power LED does not illuminate when the mains power is present
- AUX:** The siren and strobe does not function
- BATTERY:** The energizer switches off in the absence of mains power

## Installation notes

- Keep the wires to the fence separate from the keypad, gate, siren, strobe and mains wiring.
- Do not try and modify the energizer. Any unauthorized modifications will null and void the warranty and possibly render the unit illegal.
- If the external On/Off facility is used, the wire between the remote switch and the energizer can be up to a 100m in length. The switch contact must be open for the fence to be energized.
- A remote receiver can obtain 12VDC from the keypad bus. Current consumption must not exceed 0.1 Amps. This is not sufficient to supply power for an armed response transmitter.
- The siren and strobe lights together must not draw more than 1.8Amps.
- Never use the energizer battery to power a radio alarm transmitter or alarm panel.
- The wire between the magnetic gate switch and the energizer can be up to a 100m in length, but must not run parallel with any fence wires. The gate switch must be open circuit if the gate is open.
- Use HT (high voltage) wire between the fence and energizer, including the earth wire. Never run these wires in the same conduit or through the same hole as the low voltage wiring.
- Always use ferrules or line clamps to connect two high voltage wires together. Avoid using dissimilar materials for connections like copper on steel.
- The fence must be earthed properly with three earth electrodes close to the energizer. The distance between the fence earth electrode and any other earth systems shall be not less than 2m for a security fence installation (typically a suburban property installation) and 10m for an agricultural fence installation (typically a rural property installation).
- When replacing the front of the energizer, hook the top in first while holding it at an angle and then push it closed at the bottom. Fasten the lid down with the two cap screws.
- Always test the fence after installation for correct short and open-circuit alarming at various points along the fence.
- Do not use the energizer with non-rechargeable batteries.
- The energizer contains a sealed lead-acid battery that will vent to the atmosphere under certain conditions. For this reason it is imperative that the energizer be installed in a well ventilated area.
- Refer to the applicable laws and regulations concerning the installation of electric fences in your country and area.

## IEC Safety Information

There are no user serviceable parts inside the energizer.

If the supply cord is damaged, it must be replaced by the manufacturer, its service agent, or similar qualified persons in order to avoid a hazard.

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

Electric fencing can be lethal. Avoid head contact with the fence.  
Ask the installer to explain the options of current limiting resistors.

Please dispose of this energizer in an eco-friendly way at the end of its life.

## WARRANTY

Unless otherwise specified all Nemtek energizers have a 2 year warranty and all other fencing components have a 1 year warranty from date of sale against defects due to faulty workmanship or materials. Nemtek (Pty) Ltd will, at its discretion, either repair or replace a product that proves to be defective.

Nemtek (Pty) Ltd does not guarantee that the operation of the product will be uninterrupted and totally error free. Faulty products must be returned to one of the Nemtek Group outlets. The buyer shall pay all shipping and other charges for the return of the product to Nemtek (Pty) Ltd.

## LIMITATION OF WARRANTY

The warranty does not apply to defects resulting from acts of God, modifications made by the buyer or any third party, misuse, neglect, abuse, accident or mishandling.

## EXCLUSIVE REMEDIES

The remedies provided herein are Nemtek (Pty) Ltd's sole liability and the buyers sole and exclusive remedies for breach of warranty. Nemtek (Pty) Ltd shall not be liable for any special, incidental, consequential, direct or indirect damages, whether based on contract, tort, or any other legal theory. The foregoing warranty is in lieu of any and all other warranties, whether expressed, implied, or statutory, including but not limited to warranties of merchantability and suitability for a particular purpose.



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Combined Wizard 2 & 4 manual