# ENERGIZERS AND ACCESSORIES







**JVA Technologies (Australia)**, in partnership with **JVA (South Africa)**, has drawn on over 50 years' experience in some of the world's most testing international and local security markets, to produce a product range to satisfy the needs of the world security electric fencing markets ranging from simple domestic requirements, to high security installations. JVA products and expertise have become trusted choices for local and international customers as they meet the strict specifications required to secure important government contracts for prisons, airports, power stations, banks, housing estates, defence facilities and municipalities.

JVA's global partnerships enable it to combine award winning Australian engineering design expertise with South African, cost effective, assembly and accessory manufacture. From lessons learnt in challenging African, South American, Asian and other world markets, combined with the high tech demands of Australia and countries such as America, Africa and Europe, JVA engineers have succeeded in producing a robust product range that continuously sets international standards of quality, innovation and cost effectiveness.



July 2023 Edition

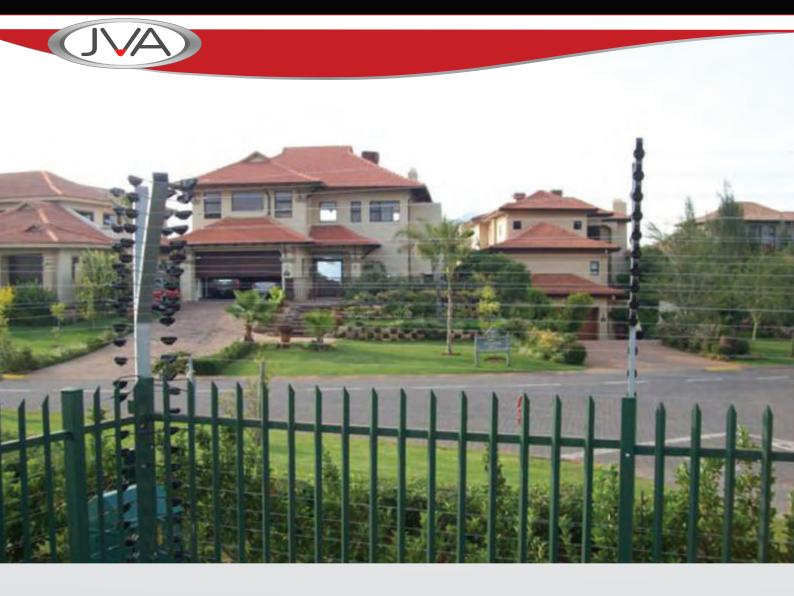




### CONTENTS

Introduction	2
JVA Z11 & Z13 Economy Security Energizers	3
JVA Z14, Z18 & Z114 Energizers	4
What is Bi-Polar Fencing?	4
JVA Z25 & Z28 Energizers	5
JVA Keypad	6
JVA Android Keypad	7
JVA Specifications	8
JVA Jumbo Energizer	10
JVA Agricultural Mid-Range LED Energizers	12
JVA Agricultural High Powered LCD Energizer Range	.12
JVA Portable Energizer Range	13
JVA Pet100 Kit	13
JVA BM1 High Voltage Fence Monitor	14
JVA IPM High Voltage Fence Monitor and Switch	14
JVA ZM1 Intelligent Monitoring System	.15
JVA ZLM1 & ZLM4 Low Voltage Monitoring Systems	16
JVA VM2 Vibration Detection Monitor	17
JVA ZM20 & ZM50 Sector Fence Monitoring Systems.	18
JVA ZM20 & ZM50 Multi-Zone, Multi-Sector Systems.	19
Pulse Synchronization	20
JVA Wireless System	22
JVA Perimeter Patrol	
JVA Site Monitor with High Level Interface	25

JVA Perimeter Patrol Integration Functionality	26
JVA Multi-Zone Methods	28
JVA Network Interface Boards	29
JVA GSM and Wi-Fi Cloud Router Gateways	30
JVA Electric Fence Management Devices	31
Electric Fence Applications	32
Around the world with JVA	35
Free-Standing Poles, Posts & Standards	38
Wall-Top Brackets	40
JVA Coastal Range of Plastic Brackets	42
Options available to Strain a Wall-Top fence	44
Tensioners	45
JVA Electric Fence Tamper Switch	46
Insulators	47
JVA Taut Wire Monitoring Solutions	48
JVA Genius Taut Wire Tensioner	49
Gate In-line Series Circuit	51
Accessories	52
Lightning & Surge Protection	55
Wireless, Outdoor, Double, Wide-Angled Beams	57
JVA RFI Interface Module	59
After Sales Service, Repairs & Consultancy	60
Training	60
Do's & Don'ts of Electric Fencing	61



### Introduction

Welcome to the world of JVA monitored electric security fences. The proliferation of non-lethal, monitored, electric security fences in our towns and cities is indicative of the confidence the public has in this form of perimeter security. The reason for this popularity is simple – monitored electric security fences are effective, economical, relatively simple to install, and the JVA Electric Security Fence offers more Ds of security than any other perimeter system:

Demarcation – The JVA fence around your property shows you mean business.
Deflection – Would-be intruders will be deflected to softer targets.
Deterrence – The safe, powerful JVA shock is a strong deterrent to intruders.
Delay – The physical barrier will delay an intruder; something they do not like.
Detection – The JVA's voltage monitor warns you of any tampering with the fence.
Deny – A well-erected electric security fence will deny entry.
Dependable – 60 seconds a minute, 60 minutes an hour, 24 hours a day, 365 days a year, your JVA electric security fence is monitored by an alert, sober, electronic watchman.

Every second the JVA energizer discharges a very short duration, safe, high voltage impulse down the fence live wire. The JVA security energizer then monitors the voltage at the end of this live wire, thereby checking that the voltage is being maintained along the entire fence line. In the event of a voltage drop caused by either shorting, cutting or poor maintenance, the monitor will trigger an alarm, thus alerting you.

Manufactured to meet the most stringent international safety standards, the JVA Range is in a class of its own when it comes to features and benefits at an affordable price.

# JVA Z11 & Z13 Economy Security Energizers



The JVA Z11 and Z13 Single-Zone Security Energizers are the entry level energizers in the Z-Range. They are manufactured to meet customer demand for a simple, nofrills, economical unit for small, domestic, commercial and industrial sites. The units are fully compatible with the Z-Range keypad and when wired up to a keypad are fully programmable. All Z-Range energizers, with the addition of a Wi-Fi Board can be fully controlled from a mobile phone.

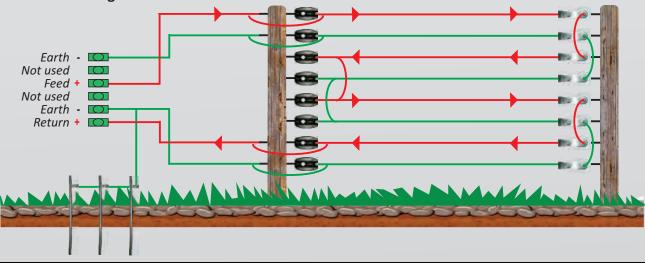




- High Voltage, Single-Zone Fence Monitor triggers alarm when the live wires are tampered with
- Earth Wire Monitor triggers alarm when the earth wires are tampered with
- > Gate Monitor input, to monitor the gate
- > 1.8 joules and 3 joules maximum output energy, respectively
- Compliant with IEC60335-2-76
- Built-in Lightning and Surge Protection
- Internal Battery Backup in case of power failure
- Up to 24-Hour Monitoring in the event of a power failure
- Low Power Option Ideal for locations where monitoring is required but high voltage is not required 24 hours on the fence
- Energizer supplied with secure Key-Switch Operation
- Diagnostic Mode
- Keypad Compatible Use optional Z-Range Keypad
- Dynamic Voltage Monitoring minimizing arcing and false alarms while maximizing power and battery life



3



#### **Basic Fence Design**

# JVA Z14, Z18 and Z114 Energizers



The JVA Z-Range of Single-Zone Security Energizers with LCD displays are top-of-the-range energizers meeting all requirements from the basic home security fence to fully integrated high profile installations. These energizers have LCD displays showing out and return voltages, battery condition and fence programming settings. The units are fully compatible with the Z-Range keypad and, when wired up to a keypad, are fully programmable. The energizers can be networked with other Z-Range energizers to synchronize pulses and become a multi zone group for larger sites where many zones are required. These energizers can be controlled by a PC or up to 3 keypads, or 1 keypad can control up to 14 Z-Range energizers.

#### Features

4 3

- High Voltage, Single-Zone Fence Monitor triggers alarm when live wires are tampered with
- Earth Wire Monitor triggers alarm when the earth wires are tampered with
- LCD Voltage Feed and Return Display
- > Gate Monitor input to monitor the gate
- Dynamic Voltage Monitoring minimizing arcing and false alarms while maximizing power and battery life
- > 5, 8 and 14 joules maximum output energy respectively
- Compliant with IEC60335-2-76
- > Built-in Lightning and Surge Protection

### What is Bi-Polar fencing?

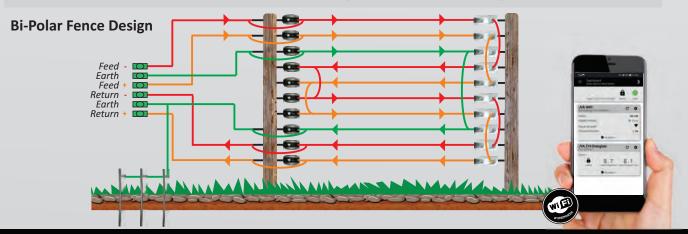
The JVA Z14, Z18 and Z114 Energizers can be programmed to Bi-Polar mode. This gives rise to the question: What is Bi-Polar Fencing and what exactly are the benefits of this wiring configuration? A Bi-Polar fence is an all-live wire fence.

A Bi-Polar Energizer has the ability to pulse synchronized positive and negative pulses down alternate wires of the same fence line. So, instead of having alternate live and earth wires on the same fence line, one now has one wire with a positive pulse and one wire with a negative pulse.

- Up to 24-Hour Monitoring in the event of a power failure
- > High and low power options
- Energizer supplied with secure Key-Switch Operation
- Diagnostic Mode
- 2 Standard Fully Programmable Relays plus option for 3 more on request
- Keypad Compatible Use a Z-Range Keypad
- Programmable to Bi-Polar or Standard
- Pulse Synchronization in group mode
- Anti-Tamper option programmable on request
- Internal Battery Backup in case of power failure

This means that all the wires on the security fence are live, with the exception of the open true-earth wire in the fence grid, should one be included. A reading taken between the positive pulsing or negative pulsing live wires and the earth, will give half the voltage of a normal live/earth configuration. However, when one touches both the positive and negative pulsing wires, one will receive the 'full monty'.

The big plus factor of this configuration is that, by reducing the voltages to each wire, one helps eliminate the annoying and often difficult-to-eliminate arcing experienced in coastal or dusty areas.



# JVA Z25 and Z28 Energizers



The JVA Z25 and Z28 Dual-Zone Security Energizers with LCD displays are topof-the-range high power energizers, ideal for installations where better zone identification is required. The Z25 and Z28 can meet all requirements from longer wall-top fences to industrial and high profile installations. The energizer has an LCD display showing return voltages for each zone, battery condition and fence programming settings. The unit is fully compatible with the optional Z-Range Keypad and when wired up to a keypad is fully programmable. The energizer can be linked with other Z-Range Energizers to synchronize pulses and become a multi zone group for larger multi zone sites. The Z25 and Z28 can be controlled by a PC or up to 3 keypads, or 1 keypad can control up to 14 Z-Range Energizers.

The Z25 and Z28 are unique in that each zone is individually controllable, allowing each to be individually operated and programmed via the keypad. Unlike many other energizers available in the market, a short on one zone on the Z28 will have no effect on the voltage on the other zone. The Z28 is in essence two Z14 Energizers in one. This means that each zone, powered by one Z28, can be individually armed or disarmed in high or low voltage mode – an excellent safety feature.

#### **Features**

- High Voltage, Dual-Zone Fence Monitor triggers alarm when live wires are tampered with
- > Earth Wire monitor triggers alarm when the earth wires are tampered with
- LCD Voltage Return Display for both zones
- Gate Monitor inputs to monitor the gates
- 2.5 5 Joules maximum output energy per zone
- Compliant with IEC60335-2-76
- Built-in Lightning and Surge Protection
- Internal Battery Backup in case of power failure
- High and low power options

- Dynamic Voltage Monitoring minimizing arcing and false alarms while maximizing power and battery life
- > Energizer supplied with secure key switch operation
- Diagnostic Mode
- > 3 Standard programmable relays (1 siren and 2 strobe) - excellent for communication
- Optional extra Relay Board on request total 6 relays
- Keypad Compatible Add Z-Range Keypad  $\geq$
- Up to 18-Hour Monitoring in the event of a power failure
- Pulse Synchronization

### Certification

Locally certified

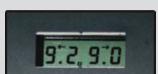
It is a legal requirement, both locally and internationally, that electric fence energizers must comply with stringent safety criteria as stipulated in IEC 60335-2-76:2006. JVA Energizers comply with these standards. All JVA units are tested and certified by Power Lab Limited and Test Africa, both internationally accredited test laboratories.

ternationally certified





- **LCD** Display
- Fence feed and return Voltage Display on Z14 and Z18
- Fence Return Voltage Display on Z28 and **Bi-Polar models**
- Actual Battery Voltage
- Low Battery Warning
- Battery Condition
- Programme Settings
- Software Version
- Diagnostic Feed-Back



5

### **TWO-YEAR WARRANTY**

All JVA products carry a 2-year warranty against defective components and workmanship. The warranty excludes damage caused by acts of Nature such as lightning or flooding, power supply surges, rough handling, malicious action or incorrect wiring.

Please retain your invoice as proof of purchase and fill in the warranty form provided in the manual.

JVA RANGE CATALOGUE -

# **JVA** Arming Devices

The standard JVA Energizer can be chosen with a key-switch or a magnetic tag to arm and disarm the unit.



**JVA** Keypad

### JVA Menu-driven Keypad

The JVA Z-Range Keypad is manufactured specifically for the JVA Z-Range. JVA has simplified things by designing one keypad to operate the full range of Z-Energizers from a simple home Z11 system to a high profile multi-zone system. The JVA Keypad with its backlit LCD display gives the user, at a glance, all the information that may be required. The JVA Keypad displays feed and return voltages and can be fully customized with custom messages and names for Zones and Gates -e.g. Front Gate/Back Fence, etc.



**Z14KP** 

#### **Features**

6 🐡

- One JVA Keypad operates the full Z-Range
- Backlit LCD Display
- > 1 to 14 energizers can be controlled from one keypad
- 1 to 3 keypads can be used to control one energizer
- Zone Voltage displayed on the keypad
- > Zone Voltage Scrolling Function display for Multi-Zone > Maximum 100m on conventional systems
- Simple 3-wire operation
- Battery Voltage Request display to energizer LCD
- User menu-driven display
- Ability to customize zone and gate names
  - communication cable





# JVA Android Keypad

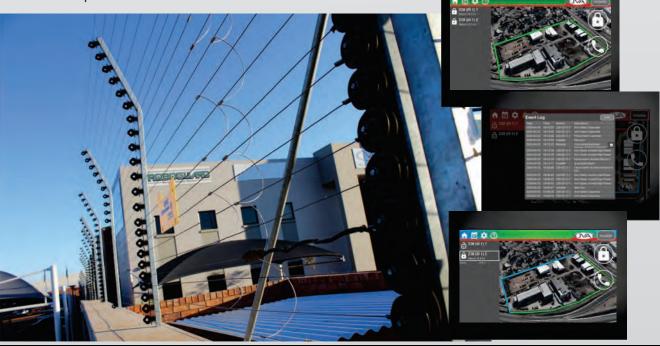
### JVA 9-Inch Android Keypad with housing

The JVA Touch Screen Keypad is an ideal intermediary between the 4-line Keypad and a full PC based JVA Perimeter Patrol System. The JVA Touch Screen Keypad is manufactured specifically for the control and management of the full range of JVA Z-Range Energizers and Monitors, from a simple home Z11 to a high profile multi-zone ZM20 system. The 9-inch screen is protected by a tamper resistant steel case which gives the user, at a glance or a touch, all the information that may be required.



#### Features

- > New easy-to-use graphical user interface, touch screen keypad for the JVA Z-Series Range
- > Quick setup guide to ensure the site is correctly configured
- > Alarms and status notifications can be sent to a user via email by utilizing the built-in Wi-Fi connection
- Menu-driven programming interface for devices: each device can have its unique settings programmed from a drop-down list of possible values, with names and descriptions of each setting available
- Accurate 500 event log
- > Separate Installer and User logins with individual permissions and photo capture
- > Personalized map can be loaded from Internet or from SD Card
- > Zone names can be personalized
- > Zone mimic lines can be added on map for easy identifying of zones
- > Fence feed and return voltages displayed
- Built-in Wi-Fi Gateway, JVA Energizers and Monitors can be integrated easily into the JVA Cloud Router<sup>®</sup> and monitored via an Internet enabled device (cell phone, PC or tablet)
- Ability to load and save site configurations, including device configurations, custom zone names and configurations, which means that ZM20 sector programming and common setups can be saved and quickly loaded into a new device
- Software updates available over Wi-Fi



# **JVA** Specifications

SPECIFICATIONS	Z11	Z13	Z14	Z18	Z114	Z25	Z28
Stored energy	3J	5J	6J	12J	17J	2x4J	2x6J
Maximum Output energy	1.8J	3J	5J	8J	14J	2x2.5J	2x4J
Output voltage maximum	10kV						
Output voltage LCD display	Keypad	Keypad	$\checkmark$	$\checkmark$	$\checkmark$		
Return voltage LCD display	Keypad	Keypad	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
Backup time maximum	24hrs	24hrs	18hrs	18hrs	16hrs	16hrs	14hrs
Ext 16VAC transformer	$\checkmark$						
Battery volts	12V						
Battery capacity	7Ah	7Ah	7Ah	7Ah	9Ah	7Ah	7Ah
Pulse frequency	0.8hz						
Pulse width	0.3ms						
Alarm delay	*	*	*	*	*	*	*
Siren time out	*	*	*	*	*	*	*
Bi-Polar capability			$\checkmark$	$\checkmark$	$\checkmark$		

★ Programmable by keypad

80

RECOMMENDED SERIES WIRE LENGTH	Z11	Z13	Z14	Z18	Z114	Z25	Z28
1.2mm SS	0.6km	0.8km	1km	1.5km	2km	2x0.6km	2x1km
1.6mm SS	1.2km	1.4km	1.6km	2km	2.5km	2x1.2km	2x1.6km
2mm SS	1.8km	2.1km	2.4km	3.3km	3.6km	2x2km	2x2.4km
1.2mm braided galvanized	2km	3km	4km	8km	10km	2x2.5km	2x4km
2mm braided galvanized	2.5km	3.5km	5km	8km	10km	2x3km	2x5km
2.24 galvanized HSS	3km	4km	6km	10km	14km	2x3.5km	2x6km
1.6mm aluminium wire	6km	8km	10km	20km	25km	2x6km	2x10km

DIMENSIONS	Z11	Z13	Z14	Z18	Z114	Z25	Z28
Size (height, width, depth) mm	300x190x115						
Weight (without battery)	2.0kg	2.0kg	2.1kg	2.4kg	3kg	2.2kg	2.4kg

POWER CONSUMPTION	Z11	Z13	Z14	Z18	Z114	Z25	Z28
Average current draw	500mA	500mA	550mA	1000mA	1200mA	900mA	1000mA
Peak current draw	600mA	600mA	750mA	1200mA	1400mA	1100mA	1200mA

All energizers in the Z-Range can be used in a Multi-Zone Network



# **JVA** Specifications

SOLAR PANEL SPEC	Z11	Z13	Z14	Z18	Z114	Z25	Z28
Recommended battery	50Ah	50Ah	50Ah	105Ah	105Ah	105Ah	105Ah
Solar panel	60w	75w	75w	100w	120w	100w	120w
Solar regulator	10A	10A	10A	10A	20A	10A	10A

Solar panel calculations based on an installation in Johannesburg, South Africa. Location-specific recommendations available on request.

WARRANTY	Z11	Z13	Z14	Z18	Z114	Z25	Z28
2-year warranty	$\checkmark$						

CERTIFICATION	Z11	Z13	Z14	Z18	Z114	Z25	Z28
Compliant (IEC60335-2-76)	$\checkmark$						

FEATURES	Z11	Z13	Z14	Z18	Z114	Z25	Z28
Fence monitor	$\checkmark$						
Gate (aux.) monitor	$\checkmark$						
Low voltage monitor	$\checkmark$						
Siren driver	$\checkmark$						
Strobe driver	$\checkmark$						
Armed response	$\checkmark$						
On/Off reset key	$\checkmark$	$\checkmark$	$\checkmark$	$\sim$	$\checkmark$	$\checkmark$	$\checkmark$
Remote control option	$\checkmark$						
Battery backup	$\checkmark$						
Keypad LCD optional	$\checkmark$						
Multi-Keypad compatible	$\sim$	$\checkmark$	$\sim$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
Keypad voltage display	$\checkmark$						
Keypad tamper alert	$\checkmark$						
Microprocessor	$\checkmark$						
Programmable	$\sim$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
Earth monitoring	$\checkmark$						
Security	$\checkmark$						
Software controllable	$\checkmark$						
Solar power option	$\checkmark$						
Number of zones	1	1	1	1	1	2	2
Multi-zone pulse sync	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\sim$	$\sim$



# JVA Jumbo Energizer

The JMB series is the most powerful and feature rich electric fence energizer JVA has manufactured to date. This continues JVA's push for technical superiority in the area of Monitored Electric Fencing and IP Energizers<sup>®</sup>. While the JMB energizers were specifically designed for game parks and exclusion fencing, they are also well suited to any large permanent electric fencing application. The JMB series generates up to a remarkable 46J of stored energy, currently the world's most powerful battery powered energizer.

A monitored electric fence reduces maintenance by reporting whenever there is a fault and by allowing you to check the fence from wherever you are using the Internet.

The JMB series introduces the JVA Virtual Keypad. This allows you to monitor, control and program the energizer from your Wi-Fi enabled smart device (cell phone, tablet or laptop). The JMBs can also be controlled and monitored with a wired JVA 4-Line Keypad supplied with the unit.

#### Features

- > Combined electric fence energizer and monitor
- > Power or Loop Monitor depending on model
- Virtual Keypad via your Wi-Fi enabled device (phone, tablet or laptop)
- ➤ Distant Fault Detection (DFD<sup>™</sup>) technology
- High powered (up to 46J stored)
- Mains or 12V battery powered (mains via supplied 24V plug pack)
- Lightning protection on all fence connections
- > No mains inverter required to run on solar and battery
- Power on demand, i.e. it generates the power only required for the fence conditions
- > Able to be controlled and/or monitored through multiple options
- Built-in 1Amp backup battery charger
- 1 Siren and 2 Strobe 12V outputs for stand-alone security installations (switched 12V DC)
- On/Off switch
- Programmable relays



24/7 Fence Information available via GSM or Wi-Fi





Virtual Keypad Programming via Smart Device

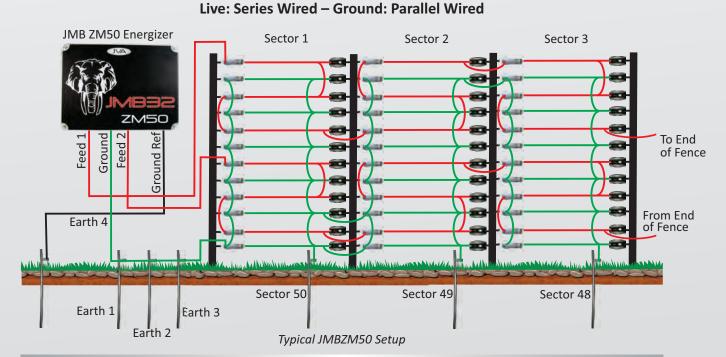
# JVA Jumbo Energizer

### JMB ZM50

The JMB ZM50 contains our patented Loop Monitor with Distant Fault Detection (DFD<sup>™</sup>). The loop, or loops of live wires may run down and back on the same fence or all the way around a property. While previous fence loop monitors suffered from a range limitation of approximately 10km of fence or 30km of wire, DFD<sup>™</sup> has greatly increased this range.

#### Features

- Can split a single fence into up to 50 sectors
- Can report the position of a fault as a percentage of overall fence length
- Short sectors can be defined accurately using JVA sector dividers
- ELV (Extra-low Voltage) open circuit detection



### JVA Jumbo Range Specifications

Model	Stored Energy	Output I	Energy	Zones	Sectors	Input Voltage	Power Peak
JMB32ZM1	46	32	-	1	0	12/24V	3.6A at 13.5V DC
JMB32ZM2	2x23	2x1	.6	2	0	12/24V	3.6A at 13.5V DC
JMB32ZM50	46	32	2	1	Up to 50	12/24V	3.6A at 13.5V DC
JMB25ZM1	36	25		1	0	12/24V	2.8A at 13.5V DC
JMB25ZM2	2x18	2x12	2.5	2	0	12/24V	2.8A at 13.5V DC
JMB25ZM50	36	25	25		Up to 50	12/24V	2.8A at 13.5V DC
JMB16ZM2	23	2x8	8	2	0	12/24V	2.5A at 13.5V DC
JMB8ZM1	11.5	8		1	0	12/24V	1.8A at 13.5V DC
JMB10ZM2	14	2x!	5	2	0	12/24V	2.0A at 13.5V DC
JMB8ZM50	11.5	8		1	Up to 50	12/24V	1.8A at 13.5V DC
Solar Recomm	commendation 32 Joule Units Area Table 6 Hours Sun					350W	200Ah Battery
Solar Recomm	nendation 25 Jou	le Units	Area Table 6 Hours Sun			300W	200Ah Battery
Solar Recomm	nendation 8 Joule	Units	Are	a Table 6 H	lours Sun	150W	100Ah Battery



110)



# JVA Agricultural Mid-Range LED Energizers

### **Battery and Mains LED Energizers**

The MB1.5, MB3.0 and MB4.5 Electric Fence Energizers are capable of between 1.5 and 4.5 Joules output energy per pulse. This innovative design means that you can have versatile portable power from a 12V battery when needed, or run it from 240V AC mains electricity where that is available. Optional JVA Solar Kits and external batteries are available on request to make these units fully portable.



	MB1.5	MB3.0	MB4.5
Stored Joules	2J	4J	6J
Energy Output	1.5J	3J	4.5J
Power Consumption at 12.5V DC	0.15A	0.3A	0.5A
<b>Recommended Fence Line Distance</b>	2Km	3Km	4Km

# JVA Agricultural High Power LCD Energizers

### Mains/Battery High Power LCD Energizers

The MB8, MB12 and MB16 IP Energizers<sup>®</sup> have 8, 12 and 16 joules output energy respectively and can be controlled from anywhere in the world using your mobile phone App, providing an internet connection is available.. The energizers have an LCD display to show fence voltage and joules. These newly styled energizers include an audible warning if there is a serious fault on the fence and Auto-Sync<sup>™</sup> technology, all of which help keep your fences safe. These universal or mains/battery powered energizers give you the added option of running on 12V should you not have 240V available.



0 12 0

#### Features

- Mains powered
- Battery powered
- Digital control
- > Smooth Wave shape
- Power on demand
- LCD showing Kv and stored energy
- > Ant and moisture protection
- > UV stable enclosure
- Overload indication (audible and visible)
- Lightning protection
- Reverse battery protection



JVA16

- Remote Compatible
- Self-resetting fuse
- Solar capability
- Low battery indication
- > Over discharge battery protection
- Battery life maximization
- Battery voltage measurement
- Power adaptor included
- > Audible alarm
- Bi-Polar output
- > 2-year warranty

	MB8	MB12	MB16
Stored Joules	12J	18J	23J
Energy Output	8J	12J	16J
Power Consumption at 12.5V DC	0.9 A	1.25 A	1.6 A
<b>Recommended Fence Line Distance</b>	8Km	10Km	12Km

# JVA Portable Energizer Range

### JVA SV10 and SV5 Solar Energizers

The SV10 & SV5 energizers are ready to go straight out of the box! A reliable built-in rechargeable battery and integrated solar panel make the JVA Solar Energizers totally portable, without the need for extra batteries and hardware. The energizers have an LCD display enabling you to see the voltage and joules on the fence at a glance. Just slide the energizer onto any Y-standard, connect the fence and switch it on. The SV10 Energizer has 1.0J output energy and the SV5 Energizer has 0.5J output energy per pulse. They are suitable for permanent and temporary fencing.





### JVA SV2 Solar Energizer

The SV2 Energizer is ready to go straight out of the box! A reliable built-in rechargeable battery and integrated solar panel make the JVA Solar Energizers are totally portable, without the need for extra batteries and hardware. Just slide the energizer onto any Y-standard, connect the fence and switch it on. The SV2 Energizer has 0.2J output energy per pulse.

### JVA RSG1 Portable Energizer

The RSG1 is a portable 0.1J electric fence energizer with a built-in rechargeable battery, suitable for strip grazing and any small temporary fence applications. The RSG1 is packaged with both a 240V mains power adaptor and a 12V 'cigarette lighter' adaptor to recharge it. It will run for over two weeks between re-charges.



### JVA Pet100 Kit

### JVA Portable Pet Energizer

The Pet100 energizer has the option of being mains or battery powered. It has a nice compact design with a UV stable enclosure. For larger dogs and longer distances, pet electric fence kits can be made up by using strip grazing accessories and energizers.



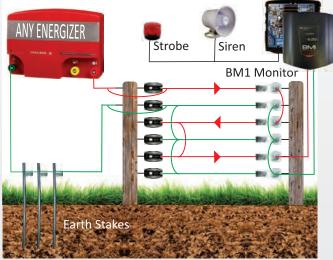




The BM1 (PTE0211) is a basic electric fence monitor. It provides an alarm when your electric fence is cut or shorted or the energizer has been turned off. When connected to the end of the fence (return wire) the BM1 can monitor one complete circuit (zone) of electric fence.

This monitor can be powered from a 12V power supply, or a 12V battery. If you need the monitor to operate during a power failure, consider using a 12V lead acid battery that is being kept charged from a battery charger or solar panel.

The BM1 is intended for use with pulsed type electric fence energizers with output voltages of 10kV or less. The energizer should conform to IEC60335.2.76 or similar.



Series Wired Fence Line

### JVA IPM High Voltage Fence Monitor and Switch



The JVA IP Monitor is an Internet-connected electric fence monitor and switch. Using the free IP Energizer Controller App, it allows you to instantly see the status of your configured electric fence from anywhere in the world, switch the fence on and off, and even alerts you should fence voltage or current go beyond configurable thresholds. It works with any energizer and has built-in Wi-Fi technology, making connection a breeze.

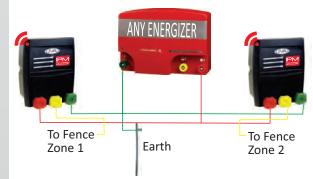
JPTE0256

#### Features

140

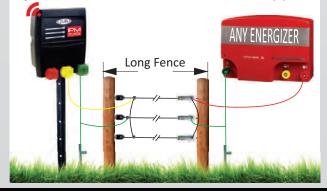
- Mains or 12V Battery operation
- Built-in Wi-Fi for direct internet connection
- Can use 3G/4G cellular network with a separate modem/hotspot
- High power internal relay
- Works with any energizer up to 36 Joules
- Start-of-fence or end-of-fence monitoring
- > Can break a large fence system into separately controlled and monitored zones
- UV stable enclosure
- > O-ring sealed case for ant and moisture protection
- > IP Energizer Controller app available for iPhone and Android
- Designed and manufactured in Australia

#### **Option 1: Monitor the start of the fence(s)**







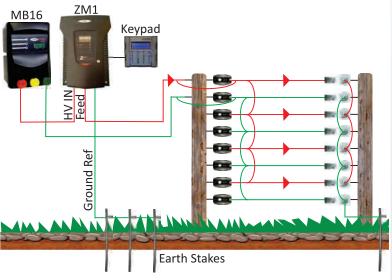


# JVA ZM1 Intelligent Fence Monitoring System

The ZM1 is designed to be coupled with any standard electric fence energizer to power and monitor an electric fence. It can control large energizers, making it ideal on large agricultural, game and border security fences.

The combination of the ZM1 and the Energizer operates in the same way as a single JVA Z-Series energizer, with the exception that the pulse power level of the energizer cannot be modified.

The ZM1 monitors the live feed line from the energizer to the fence and determines if the fence is working properly, by measuring the voltage, current, and therefore power, flowing to the fence.



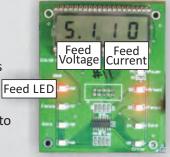
An agricultural energizer transformed into a security system by the addition of a JVA ZM1 Monitor (return line optional dependant on desired security level)

As such, it does not require a return line from the end of the fence. This can represent a large saving on installation costs on new fences or make monitoring an existing fence possible if no return line was originally wired. The ZM1 can, however, also monitor the return if that is desired.

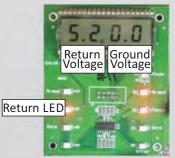
The ZM1 has many programmable options which can be adjusted using a JVA Z-Series Keypad. By correctly setting the alarm threshold levels, it is possible to determine if a fence has been cut or shorted at any point. An energizer used with the ZM1 must comply with IEC6033-2-76 or a similar safety standard.

#### Features

- > Built into the wall mountable Z-Range Energizer enclosure
- > Does not require a return line
- LCD current display (load)
- LCD earth voltage display
- LCD voltage display for feed and return voltage
- Controllable and programmable via keypad with similar codes to the Z-Series
- Monitors fence voltage and current to trigger an alarm if current rises or voltage falls (load increases)
- Can be combined with any SANS IEC compliant energizer, below 63J output, to produce a fully featured, security electric fence energizer/monitor
- Start and end of fence monitoring
- > Able to be monitored via PC (using Perimeter Patrol Software)
- > Run from 16V AC or 12V DC external source
- Built-in battery charger plus connection for alternate larger external battery and charger
- Controls 12V DC feed to energizer
- Can control a 220V AC energizer via external relay (not supplied), (12V coil, 240V AC rated contacts)
- Remote On/Off or Key-Switch
- Gate contact input
- Siren and strobe 12V DC switched outputs, 3-on-board relays with many programmable functions



Output Readings



Input Readings

# JVA ZLM1 & ZLM4 Low Voltage Monitoring Systems



ZLM4 – 4-Sector System

The JVA ZLM1 is a single zone low voltage electric fence monitor. The ZLM1 may be used by itself or in conjunction with a number of high voltage security electric fence energizers.

The ZLM4 is a 4-zone, low voltage, electric fence monitor. The ZLM4 maybe used by itself or in conjunction with a number of high voltage security electric fence energizers. The ZLM4monitors up to 4 loops of fence wire, each up to several hundred meters long, to detect someone tampering with the fence by cutting or shorting the wires.

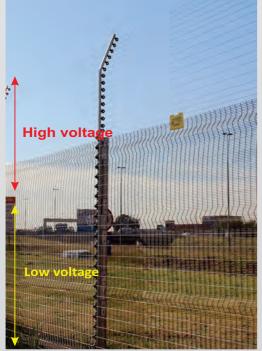
When used in conjunction with a highvoltage electric fence energizer, the ZLM4 is wired to the nonenergizedearth wires on the fence. In this way, the ZML4 can be used to split one highvoltage zone into up to 4 low voltagemonitored zones for improved targeting of the response to potential security breaches. The ZLM4 is compatible with the JVA Z series energizers. It may be connected via a keypad bus network with other Z-series devices to enable the whole group to be controlled via one keypad, or linked to a PC running JVA Perimeter Patrol software.

The ZLM4 monitors a low voltageloop using intrinsically safe, isolated ELV DC. It employs a continuity check for detecting open circuits, DC voltage level sensing to detect ashort to ground and pulse voltage sensing to detect a short to a line powered by a high voltage fence energizer. The advanced features of this device allow the performance to be tuned to the fence and to the particular requirements of the site. This is doneby adjusting the device's programmable options. The ZLM4 will report an alarm on: detecting a low voltage loop cut (open circuit); shorted toground (short); when high voltage from an electric fence energizer wire is shorted to the monitored low voltage loop; or when two low voltageloops short to one another (cross couple).

#### Features

16

- Can be used to split a single security electric fence zone into up to 4 low voltage zones
- Can detect a short, cut, or if the monitored wire is touching a high-voltage wire
- Optional LCD display displays which zone is in alarm and other information
- Controlled and programmed via a JVA Keypad with similar codes to the JVA Z-Series
- Able to be integrated into third party access control and security information management systems at a variety of levels
- Enables the construction of systems from economical Key-Switch operations to complex PC controlled applications
- > Runs from 16V AC or 12V DC external source
- Built-in battery charger for optional 7Ah backup battery
- Siren and strobe switched 12V DC outputs for stand-alone operation
- > 2 Control inputs and 4 relays with many programmable functions for low level integration with other systems
- Fence connections are fully isolated from power and IO as per relevant part of ICE60335.2.76



ZLM4 Used to Make Fence IEC 60335 / SANS 10222-3 Compliant



### **JVA VM2 Vibration Detection Monitor**



The JVA VM2 is a Perimeter Intrusion Detection System utilizing Microphonic Cable. The VM2 (PTE0342) is designed to monitor 1 or 2 zones of Microphonic (acoustic) cable and detect attempted breaches of perimeters, by detecting the noise and vibrations created by unauthorized access or vandalism. The monitoring cables may be buried to detect digging; or attached to a fence or placed inside a wall, roof or floor, etc. to detect illegal activity.

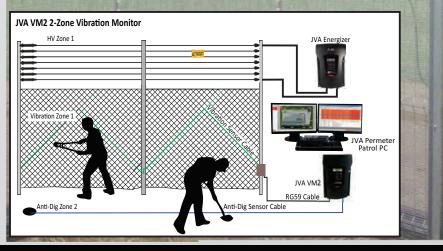
The VM2, coupled with correctly installed cable, creates a fully monitored and zoned intrusion detection system. The VM2 has adjustable threshold and time parameters that allow the installer to tune the system to differentiate between an intrusion attempt and normal environmental sound vibrations. The VM2 complements the JVA Range of security electric fence energizers and monitors.

**JPTE0342** 

#### **Features**

- Competitively priced solution
- Compatible with security electric fencing (can be used adjacent to or on the same fence)
- > Operates with:
  - Z-Range Keypads
  - Perimeter Patrol
  - Cloud Router<sup>®</sup>
- Detects cut or shorted cables
- Buried cable sensor system is able to monitor 2 runs of up to 300m of active cable
- Detects digging with any common tool, spade, pick, crowbar, etc.
- Able to be attached (cable tied) to palisade or mesh fencing
- > Detects cutting by a power tool
- > Detects hammering or crowbars separating bars
- Simple setup of sensitivity levels (threshold, event limit and window)
- Independent settings for each zone
- Can be retro fitted

- > On board Wi-Fi
- ➤ Virtual Keypad<sup>™</sup> for programming
- Cloud Router<sup>®</sup> Gateway
- LCD display
- Z-Series Keypad Bus Mk2
- IO (inputs and relays)
- > Arm 1, 2
- > 3 Switched 12V outputs
- > 3 Form C dry contact or 12V switched relays
- Battery charger for stand-alone operation
- > 12 or 24V DC operation, low power requirements
- Self-diagnostics with on-board LEDs for:
  - Wi-Fi status
  - PCB error
  - Cut or shorted cable
  - **Events**
  - All power fails
  - Battery power
  - Supply power
  - Relay functions



Configuration Group ID

Zone 1 Threshold Zone 2 Threshold

Zone 1 Events

Zone 2 Events

Zone 1 Window

Zone 2 Window

Zone 1 DNR Zone 2 DNR

Battery Float

Battery Alarm

Siren On Time Siren Off Time Siren Cycles Auto Rearm Ti Input 1

(JVA)

3

2.0

14.2 + Volt

10.0

Arm Me

+ N/C \*

\$ 17

1 5 25

. 2.0

# JVA ZM20 and ZM50 Sector Fence Monitoring Systems



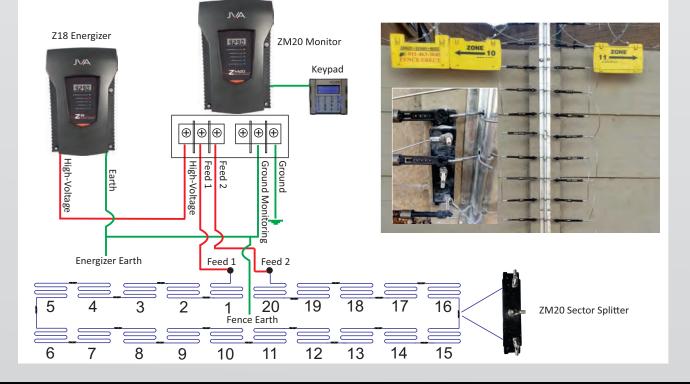
The JVA ZM20 and ZM50 are advanced security electric fence monitoring systems, enabling the partitioning of an electric security fence into 20 or 50 programmable sectors. This gives greater accuracy for detecting the locality of a fault on the fence line, which in turn allows for quicker targeted responses and/or better camera positioning.

The system is ideal when energizer placement in the field is not always possible. An energizer in one location can partition a single high voltage zone into 20 or 50 manageable sectors.

#### Features

- TCP/IP Connectivity with optional LAN Interface Board
- Reduces the cost of multi-zone systems
- Accurately divides a high voltage fence zone into up to 20 or 50 sectors
- Is able to be monitored via a keypad or a PC using Perimeter Patrol Software, or any Web enabled device with the addition of a JPAE225 Web Server, with e-mailed alarms; also able to be integrated into third party security management systems at a variety of levels
- > Dual HV Feed, increases deterrence and reduces the effect of a cut wire
- > The JVA ZM monitor can be powered by any JVA electric fence energizer
- Monitor 1–20 or 1–50 fence loops up to 8km wire length or maximum loop resistance of 1000 ohm
- > 2–20 or 2–50 Programmable sectors
- Cut or bridge alarm on sudden reduction in current
- > 3 Programmable dry contact control relays
- > Siren and strobe switched 12V DC outputs
- > Built-in charger and space for a 12V 7Ah/9Ah backup battery





# JVA ZM20 and ZM50 Multi-Zone, Multi-Sector Systems

On larger sites, consisting of multiple networked energizer stations, the ZM20s and ZM50s can further divide the individual energizer zones into multiple sectors. This improves detection as high voltage zones are broken up into smaller more manageable sectors.

The energizer stations would then, through the LAN, (Local Area Network) be networked back to the control room to the PC Perimeter Patrol Management System. Through the use of a WAN, (Wide Area Network) the JVA High Level Interface (HLI) can further integrate the system into an offsite, multiple site management system for a larger control centre setup.









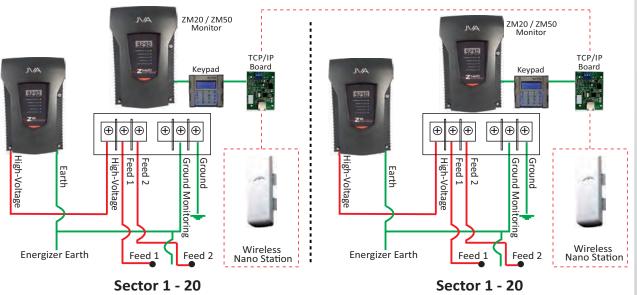
Wireless Access Point



ADSL Router



190





# **Pulse Synchronization**

The synchronization of electric fence energizer pulses, powering different zones on a multi-zone electric security fence, is a necessary safety requirement to prevent someone from receiving a potentially dangerous shock. The danger arises when multiple zones, powered by different energizers, intersect each other as is often the case in urban security installations.

The zones may be electrically isolated from each other at the point of intersection. However, it is still possible for someone to touch two different zones simultaneously. Should this happen, the possibility exists that a person



Synchronized System - Internal View

will receive a shock which will be either of a greater magnitude or of a higher frequency than is safe or legal. So the purpose of synchronizing the electric fence pulses is to limit their frequency and magnitude to ensure a shock only once per pulse cycle. If energizers were able to fire a pulse, irrespective of when energizers powering neighbouring zones were pulsing, it would be possible to receive a shock at a higher frequency than is considered safe.



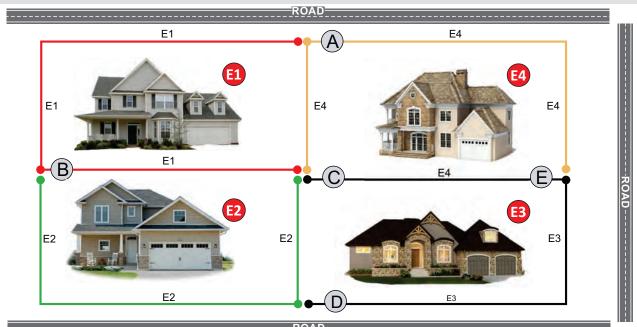
Synchronized System – Fence Line

200

For instance, in the picture below, if it were not for synchronisation, a person at point A could get shocked by fence E1 and then by fence E4 a fraction of a second later.

Synchronizing pulses also means that the magnitude of the energy passing through a person, who touches two zones simultaneously, is less than the arithmetic sum of the energy put out by the two energizers.

Thus the energy passing through the person is kept within international safety standard requirements.



### **Group Synchronization Pulse Feature**

In certain installations, such as walled estates, retirement villages, and large commercial and industrial complexes, it may be preferable to sectorize a fence line by installing a number of individual energizers and then linking them together into a group.

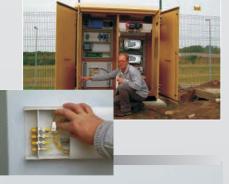
In this group mode, while the Z-Range Energizers will each power a specific sector of fence line, they will now act as one energizer by pulsing in perfect syncronization with each other, while also ensuring that the energy output of the group meets legal requirements.

#### Note

- Each energizer within the group can be switched on or off individually and the group's master energizer can even be turned off without affecting the others.
- 2. A slave energizer will alarm if the keypad bus communication line is broken between it and the master energizer.
- 3. The keypad may be disconnected after programming the system, as it is not required for group operation.

#### **Communication Medium**

Cables using Cat5, Cat6, Fibre Optic or Wireless communication installed along a fence line, provide the communication link between JVA energizers in a synchronized group system. This form of communication enables energizers, positioned along the fence line, to communicate with, and be controlled by a central control room where voltage levels and alarm situations can be monitored and recorded on a JVA Perimeter Patrol Management System. Fibre Optic Cable or Wireless is the preferred option when long distance is required or when the site is situated in high lightning areas.



TE0345

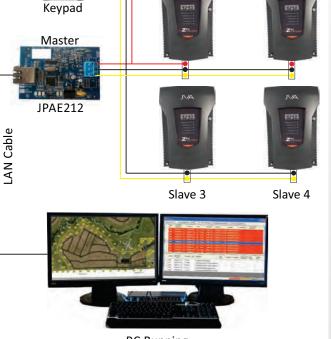
210

### JVA GPS Sync Module

The JVA GPS Sync Module allows a group of JVA Z Series energizers, monitors and other devices to synchronize their fire pulse to the GPS network. In this way multiple groups of energizer can be synchronized without needing to link the groups by Keypad Bus or ethernet. IEC 60335.2.76 Electric Fence Energizer Safety Standards requires pulses on fences within 2.5m of one another be synchronized so as to remain safe. Simply install a PTE0345 GPS Sync Module as master on each group and they will be automatically synchronized.

#### Features:

- Synchronize multiple groups with no additional wiring
- Millisecond accurate time clock
- Integrated GPS receiver antenna
- External antenna possible via SMA or MLCC
- 12V supply with reverse polarity protection
- Low power, can run directly from Keypad Bus
- No configuration required
- LEDs for easy diagnostics
- Ip66 weatherproof wall-mountable enclosure



Slave 1

Slave 2

PC Running Perimeter Patrol Software

Group Synchronized System





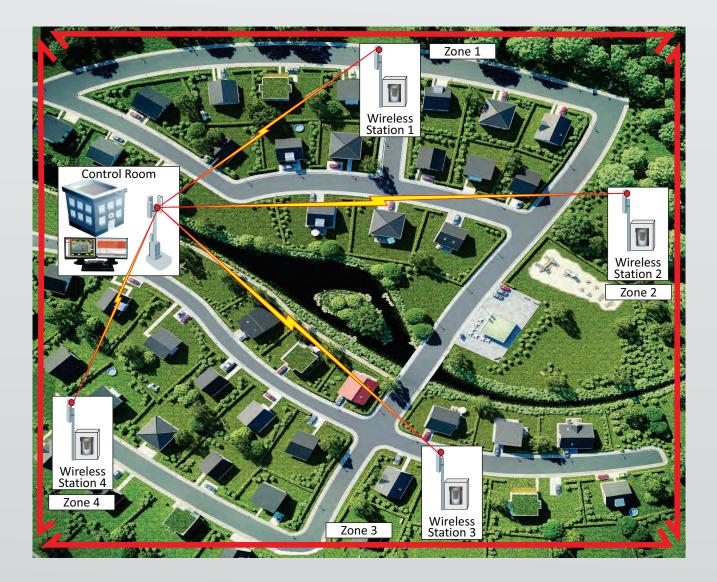
# **JVA** Wireless System

Wireless communication enables transfer of information between two or more JVA devices without the need for hard wiring. The wireless transceivers operate on unlicensed frequencies of 2.4 and 5.8Ghz.

Energizers are connected to a TCP/IP interface which is then connected to the wireless transceiver via Cat5 cable. This creates a wireless TCP/IP network which can be used to transfer voltage and alarm data to JVA Perimeter Patrol Software located in a control room, laptop, smart phone or tablet. This also enables remote monitoring of fence conditions from anywhere in the world.

The use of wireless repeaters, omni-directional, 90° and 120° sector aerials, enables one to create point-tomulti-point communications that will cover a wide variety of applications. Wireless TCP/IP networks offer further benefits, namely the addition of IP devices such as IP cameras which enable the user to view and monitor the electric fence zone.

The flexibility of wireless communications allows connectivity from 1 to 40km and is a very cost effective solution. The wireless connectivity also reduces the likelihood of lightning damage to the entire system as the strike impact is isolated to the electronic equipment in the strike region only. There is no physical cable conductor for the surge to pass through to reach the entire network.



#### = JVA RANGE CATALOGUE =

# JVA Wireless Systems



Wireless Transceiver Installation



Programming TCP/IP Board



**Energizer Field Station** 



Programming Wireless Device



Wireless Transceiver at Control Room



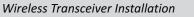
Wireless Repeater at Entrance



Wireless Repeater Station







Control Room

© 23 ·



24

# **JVA** Perimeter Patrol

This Perimeter Patrol Software is ideal for a stand-alone system, where the user requires a visual representation of an electrified enclosure (mimic screen) and the ease of operation that a Windows compatible GUI application can provide. It can also be integrated into existing systems using Cat5, Cat6, Fibre Optic Cable, Wireless Communication and Local or Wide Area Network protocols. The JVA Perimeter Patrol Software Package enables one or more energizers to be monitored and controlled from a PC.

JVA Perimeter Patrol can be used to quickly view the status and voltages of electric fences and devices; alert and email the user when the fences, gates or other devices need attention; arm and disarm electric fences according to a custom schedule and remotely access electric fence systems. Icons representing the energized zones are positioned over an image of the site map. Status and voltage information from the various zones throughout the site are updated in real time from a remote or central location. The PC speaker or external Input/Output Interface Board can be used to generate an audible alarm.



### **JVA Perimeter Patrol Professional**

JVA RANGE CATALOGUE •

# JVA Site Monitor with High Level Interface

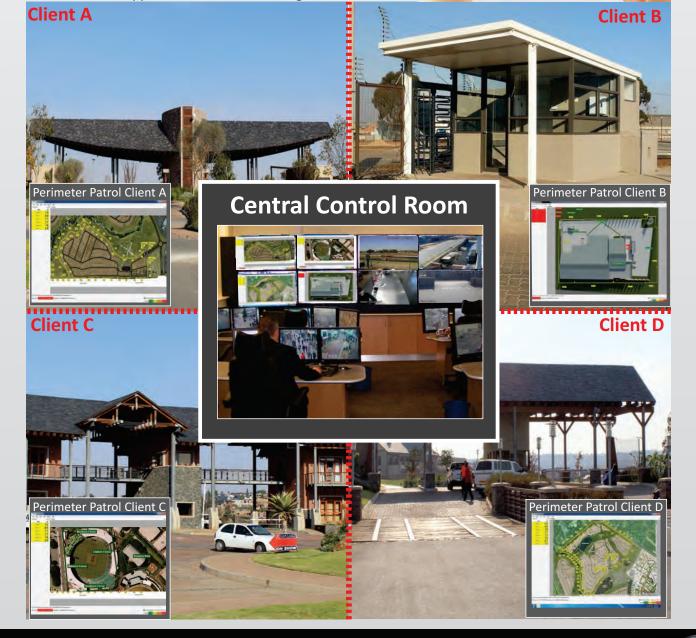
The JVA Site Monitor application utilises the Perimeter Patrol High Level Interface (HLI) to provide the user with one concise view of multiple Perimeter Patrol sites. This is ideal for offsite management in a central monitoring station/control room.

The HLI provides an encrypted TCP/IP data connection to transfer information between the secured site (Perimeter Patrol server) and the client software (Site Monitor). This uses a Dynamic-link library (DLL) as the gateway between the applications.

JVA freely provides a Software Development Kit (SDK) for customers to integrate the JVA suite of security products into an existing software platform. The SDK contains programming documentation and a working C# demo of a Windows Forms Application to reduce the integration time.







# **JVA** Perimeter Patrol Integration Functionality

Ethernet Adaptor Device Connected to single and

multiple groups of



#### **General Purpose Input Output Board**

Monitors and Controls: 4 inputs, 4 outputs PIRs, temperature, pumps, water level, access control, beams, lights, gate control, camera integration.

eGPIO Board - TCP/IP

**TCP/IP Interface** 

**GPIO Board** 

Perimeter Patrol A powerful, flexible, intuitive user interface

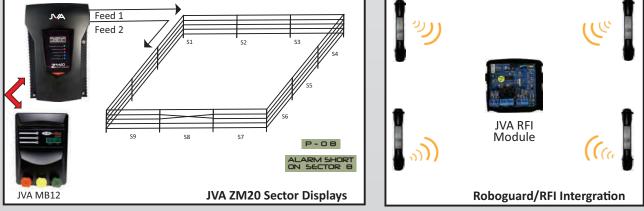
#### **Features Include**

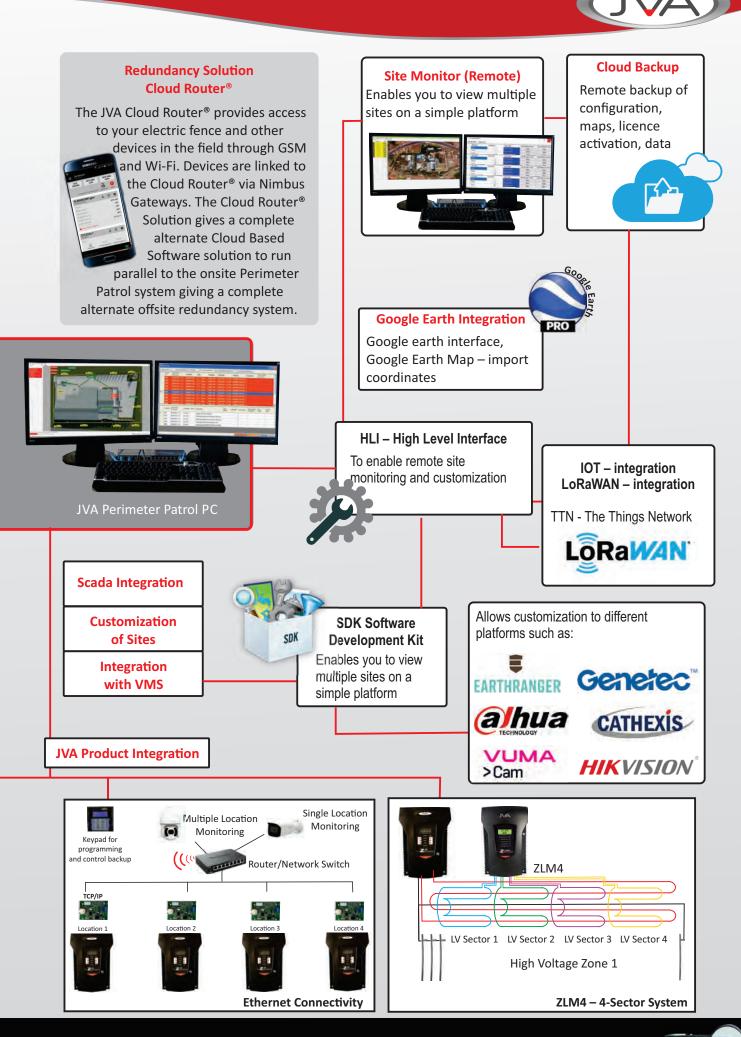
- User Authentication
- Remote Access
- Multiple Site Monitoring
- Event Logging/Archives
- High Level Interface API
- Cloud Backup
- Multiple user access levels
- Quick view screen
- Control on schedule
- Global Site Arm/Disarm
- Individual Arm/Disarm
- Export Event Logs
- Print Event Logs
- Built-in relay controller
- Integration
- Serial Comms
- Ethernet Comms
- Alarm Popups
- Map Zooming
- Custom URL (Hyperlink buttons)
- Server/Client configuration
- ➢ Alarm Escalation

26

Graphical Log View

energizers and monitors Perimeter Patrol Management Software **(**(†) **Real Time monitoring of** Energizers, Monitors, **Radio Frequency Interface** Cameras, (JVA) Access Control PERMETER and Beams Radio Frequency Interface Monitors and controls: 2 inputs, 2 outputs Roboguards, PIRs, door sensors, beams, gates, etc. JVA VM2 2-Zone Vibration Monitor **JVA Vibration Detection** HV Zone 1 2-Zone Perimeter Intrusion Detection System utilizing Microphonic Cable that can be used above and underground. Total distance of JVA VM2 RG59 Cable 350m per zone.



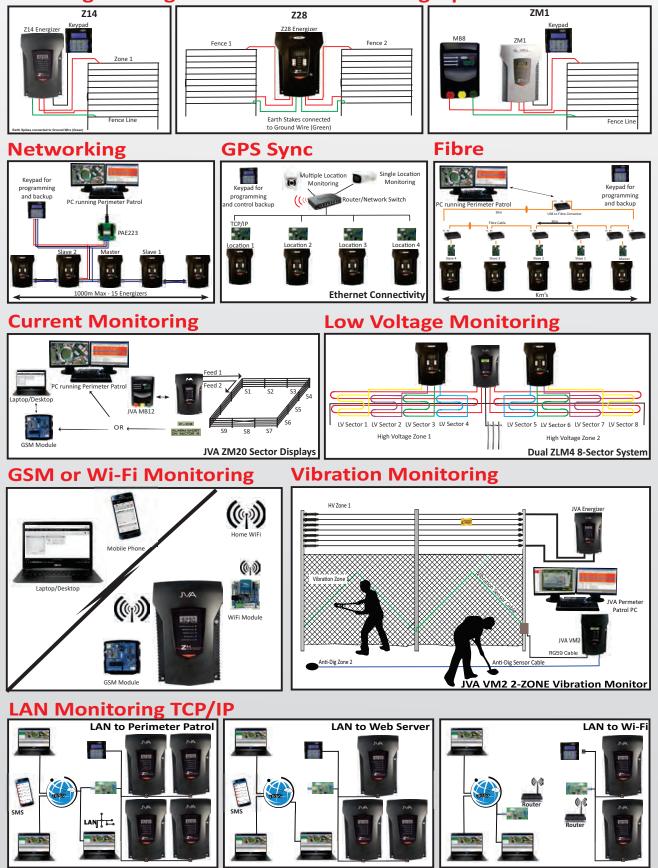


JVA RANGE CATALOGUE =

27

# JVA Multi-Zone Methods

### **Basic High Voltage Stand-Alone Monitoring Options**



280

# **JVA** Network Interface Boards



PAE223

#### **USB Interface**

The USB to keypad Bus Interface provides an optically isolated connection between the Z-Series Keypad bus and a standard USB port. A USB Interface enables control of JVA Z-Series Energizers or Monitors via a PC running Perimeter Patrol Software. The USB to keypad bus interface is required to use the JVA Firmware Flash upgrade Utility.

#### **TCP/IP Board**

The TCP/IP Board enables control of JVA Z-Series Energizers and Monitors via LAN and WAN using JVA Perimeter Patrol Software. The Internet protocol suite is a set of communications protocols used for the Internet and similar networks and generally the most popular protocol stack for wide area networks. It is commonly known as TCP/IP, because of its most important protocols: Transmission Control Protocol (TCP) and Internet Protocol (IP).



JPAE212



JPTE0236



JPAE248



JPTE0320

#### JVA RFI Board

The JVA RFI Interface Board is designed to monitor wireless security devices on the 433MHz radio frequency and integrates the information into JVA products such as the JVA Keypad and the JVA Cloud Router.

#### GPIO

The JVA GPIO adds functionality to the JVA Perimeter Alarm System. It provides stand-alone inputs and outputs to easily integrate external equipment into the JVA Software Solutions. The 4 inputs can monitor either Digital or Analogue devices such as motion detectors, IR beams, temperature sensors, and water level indicators, while the 4 outputs can be used to turn on security lighting, sirens or water pumps.

The GPIO provides an Ethernet or 2.4GHz Wi-Fi gateway between Perimeter Patrol or Cloud Router and up-to 14 Z-Series Energizer or monitors. Configuration of the GPIO is made simple through the JVA Virtual Keypad using the customer's mobile phone, tablet or laptop.

#### Wi-Fi Gateway / Cellular Gateway

The JVA Gateways allow for communication between the JVA Cloud Router and a group of Z-Series Energizers, monitors and accessories, enabling remote access and monitoring of your devices from a smart phone, tablet or PC. The Gateways feature an intelligent bandwidth-conserving protocol to ensure the Cloud data remains up to date while reducing data usage.

29 0

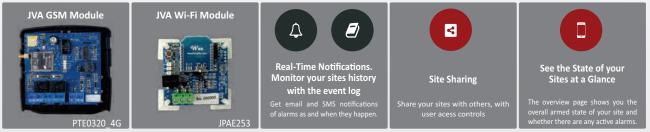
Wi-Fi Gateway – does not contain input/output integration Cellular Gateway – contains 2 inputs and 2 outputs GPIO Gateway – contains 4 inputs and 4 outputs

= JVA RANGE CATALOGUE =



# JVA GSM and Wi-Fi Cloud Router® Gateways

JVA's GSM and Wi-Fi module is compatible with all the JVA range energizers. The module is designed to interface seamlessly with JVA's own internet platform and application to allow the end user to monitor and control his electric fence energizer. More specifically, the end user may login using his personal username and password to configure the module to do the following:



#### Features:

- Real-Time Notifications get email and SMS notifications of alarms
- > Site Sharing share your sites with others, with user access controls
- Monitor Site's History easy search history of events and who had access
- Status of your sites at a glance will tell you if a site is off line or whether there are active alarms
  - Power supply to energizer
  - Feed and return fence voltages
  - Tamper conditions
  - Gate statuses
  - Battery condition
- Clean, crisp, User Interface on all JVA Devices displays information you need, whether on your mobile or desktop PC
- > A single GSM unit can be connected to up to 14 Z- Range devices
- Two Output Relays (30V DC 8 amps) GSM Module
- > Two Inputs dry contact or active pull down, GSM Module
- Micro Sim Card required GSM Module
- > There are 3 user levels, *Admin/Supervisor/User*
- By using a JVA ZM1, any energizer brand can be brought into the cloud management system.



The JVA Cloud Router App provides real-time push notifications of alarms as and when they happen.

Control and Monitor your sites from the palm of your hand, anywhere in the World. With the touch of a button you can see what is happening and share with family, friends or colleagues.

Share your sites with others with granular permissions that you control.

View the state of your sites at a glance. Monitor the sites' history using the events logs.

Clean, crisp user interface on all of your devices.

NO MONTHLY CHARGES FOR PUSH NOTIFICATIONS OR APP USAGE





Multiple Sites and Enegizers







# JVA Electric Fence Management Devices

### JVA Directional Volt Meter

The JVA Electric Fence Fault-Finder is a 3-in-1 tool designed to display fence voltage, current and lead the user quickly to the location of the fault on an electric fence.

#### Features

- Built-in voltage and current meters with digital screen display
- Simple-to-use, one-touch operation
- > No wires or clips means no tangles or shocks
- > Brightly illuminated arrows indicate fault direction
- Automatic pulse polarity recognition will operate accurately with any brand of energizer
- Gives low battery warning if the battery needs replacing
- Positive location gives more accurate and steady current readings
- Can be used in all weather
- Is made to withstand tough environments
- > Commonly available battery that is easily replaced by the user
- Backlit display

### **JVA Digital Volt Meter**

#### Features

- Essential for accurate testing of fence and energizer earth systems
- Readings from 100V to 10 000V
- Solid state circuitry designed for durability and rugged use
- Automatic on/off
- Replaceable 9V battery with a life of 12-18 months
- Large clip for attaching to the earth wire.



Economical Keyfob Tester, which, when held in close proximity to a working electric fence, responds with a loud beep.



### JVA Remote Control Kit

The JVA Remote Control Kit is used for arming and disarming with dedicated arm and disarm buttons.



N704JVA-B

### **Fence Nite Lite**

#### Features

- Flashes with every fence pulse
- > Visible for up to 100m at night and 20m by day
- > Seven high bright LEDs for long life and extra brightness
- > Continuous monitoring no reset required
- > Designed to be connected between live and earth fence wires
- > Stainless steel connecting wires
- Reduce fence voltage by up to 0.3kV
- > Sealed weatherproof unit no maintenance or batteries required
- > Can be placed anywhere on the fence
- Available in various colours



AUS - PTE0129

N704JVA-G

31

1

N704JVA-R

**JPTE0311** 

# **Electric Fence Applications**

### **Domestic Applications**

Aesthetically pleasing electric fences provide security and peace of mind for:

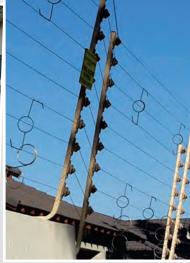


Retirement Villages

Residential Complexes



Condominium, Panama



Housing Estates



Holiday Homes



Housing Estate, Control Rooms





**Building Apartments** 

Golf Estate





### **Commercial Applications**

Monitored electric fences are being used extensively on commercial sites to protect company assets and personnel:



Vehicle Parks

Wholesalers







Vehicle Impound Facilities

Garages





JVA Perimeter Management Systems

1 33 1

Factories



### **Industrial Applications**

No site too big. No site too small. From communication towers to large industrial complexes, monitored electric fences are proving the ideal solution for:



Industrial Parks

Vehicle Storage Yards



Agricultural Dealerships



**General Industrial Plants** 





Trucking Companies



**Communication Towers** 

@ 34 @

Factory Complexes

Petrochemical Refineries

# Pirates in for a Shock

Hundreds of JVA Z14 Energizers have been purchased by major shipping companies, plying the African shipping lanes to protect their ships against pirates. A simple cantilevered barrier, erected around the ship's deck, is proving highly effective in preventing pirates from boarding their vessels at sea. The barrier is also an effective deterrent to would-be thieves when the ships are docked in a harbour.



## Around the World with JVA



Domestic Security in Las Pinas, Philippines



Prison Security, South America





JVA Delegation to Moscow



Security Fence Installation, India

Installation Team, Papua New Guinea



JVA Security Installation, Africa

1 35

= JVA RANGE CATALOGUE —



### Around the world with JVA (Continued)



Prison Fence, Kimberley (SA)



Domestic Fence, Kyalami (SA)



Estate Fence, Hartebeespoort (SA)

Prison Fence, USA



Chicken Farm, Swaziland



Domestic Fence, Panama

Estate Fence, Midrand (SA)





UN Embassy, Senegal

Farm Security, SA



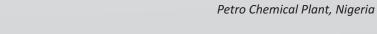
Container Depot, NZ

Power Station, Chile



JVA RANGE CATALOGUE =

Petrol Storage, USA





## **Free-Standing Poles, Posts & Standards**

### **JVA Y-Standard Round Hole**



- This strong, custom manufactured, Y-Standard has larger holes punched through it to take the plastic Pop-Em and JVA Y-Standard insulator
- With the Pop-Em insulator, the wires run through the Y-Standard which makes it difficult to separate the wires apart
- Available in 2.4m and 3m lengths and in black or galvanized

Y24JVA - 2.4m Y3JVA - 3m Y24GJVA - 2.4m Galv Y3GJVA - 3m Galv

#### Security In-line Posts & Stays



- JVA Electric Fence Centres stock fully galvanized
   96mm x 2mm poles
- Available in 2.4m and 3m lengths
- The poles are drilled with 1 hole at 100mm intervals along the post for S-hooks
- The posts are used for in-line straining, at starting points and gates

Y023P - 2.4m Single Hole Y024P - 3m Single Hole

38 🔿

#### **Rolled Profile Standard**



- This lighter, electroplated or hot-dipped, galvanized profile pole can be used with Pop-Em or Y-Standard insulators
- Supplied in 1mm or 2mm thick rolled
- Can be used to reinforce palisade, or as a light, intermediate, free-standing standard
- Available in 1.8m to 3m lengths

EY1800 - 1.8m EY2100 - 2.1m EY2400 - 2.4m EY3000 - 3m



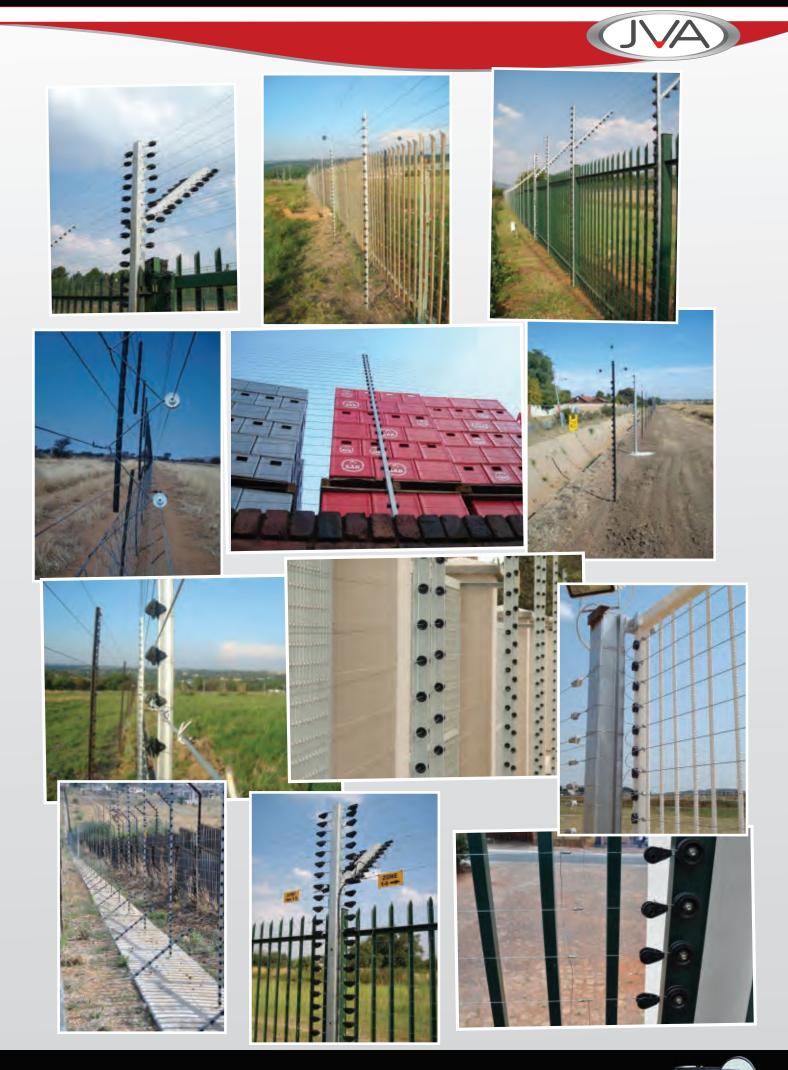
### **Security Corner Poles & Stays**



- JVA Electric Fence Centres stock fully galvanized 96mm x 2mm poles
- Available in 2.4m and 3m lengths
- The poles are drilled with 2 holes at 90° with 100mm intervals along the post for S-hooks
- > The posts are used to turn corners

Y023PD - 2.4m Double Hole Y024PD - 3m Double Hole

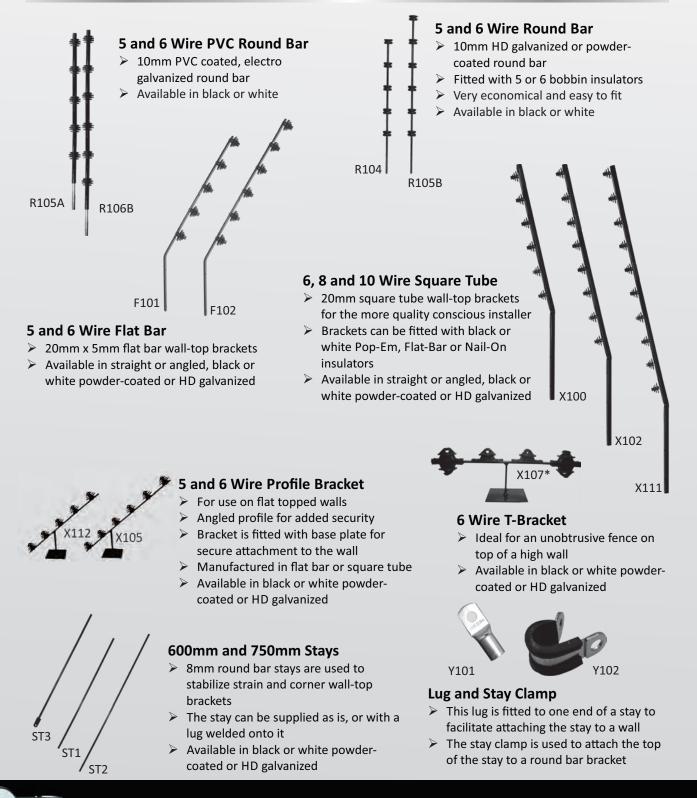






# **Wall-Top Brackets**

JVA South Africa has a well-equipped steel fabrication factory and powder-coating plant. These facilities enable us to quickly and economically manufacture our standard, or custom-designed, wall-top brackets. Walltop brackets can be either hot-dipped galvanized or powder-coated depending on a customer's requirements. JVA Security Centres can also custom manufacture aluminum or stainless steel, wall-top brackets. Customized orders require approximately 7 working days for completion. All JVA Security Centres hold a wide variety of wall-top fencing brackets in stock at all times.



40

= JVA RANGE CATALOGUE =



641 0



# JVA Coastal Range of Nylon Polymer Profile Brackets



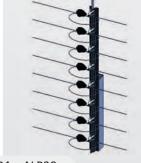
The JVA R&D team has solved one of the worst problems faced by home owners in coastal areas. Salt deposits on electric fences can lead to arcing and false alarms, not to mention rusting and failure of metal fittings. The solution is our new range of extruded and moulded nylon polymer (NP) brackets.

These state-of-the art extruded profile brackets can be used to reinforce palisade and are ideal for matching and reinforcing modern, welded mesh, clear view type fencing. The insulators clip easily into place and can be used with a variety of wiring configurations.



### JVA Extruded Profile Standards





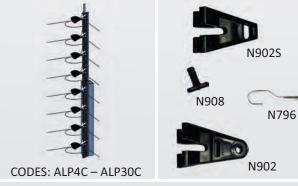
CODES: ALP4 – ALP30

#### JVA EPS Intermediate Profile

42 0

This bracket can be used as an intermediate post with the N902 Intermediate Insulator and N908 Pin fitted. It can also be used as a straining post in conjunction with N902S Strain Insulators and N908 Pins. When used as a strain post, it is recommended that the profile be reinforced with 1mx10mm lengths of 304 grade, stainless steel rod inserts, to strengthen the post further when under tension.

Available in: 4,6,8,10,18,21,24 and 30 wire spacings.



#### JVA EPS Corner 90° Profile

This bracket, used in conjunction with the N902S Corner Strain Insulator, is the ideal straining point for the inside of a 90° corner of a conventional, square-tube fence post.

The post can be further reinforced with 1mx10mm lengths of 304 grade, stainless steel rod.

Available in: 4,6,8,10,18,21,24 and 30 wire spacings.





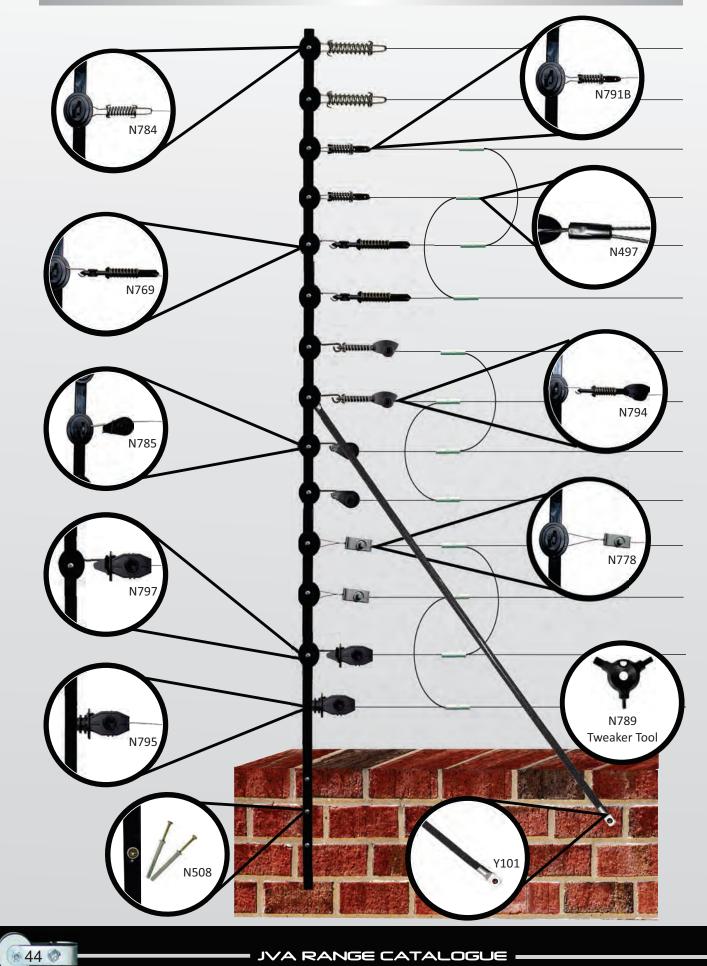
The JVA Nylon Polymer, Moulded Wall-Top Brackets with their unique, patented mounting bracket, provides multiple installation solutions for wall-top fences. The JVA nylon polymer moulded wall-top bracket arms are available in 6, 7, 8 and 10 line variants but can also have additional lines added at 50mm spacings to increase security. Purchased in sufficient quantities, these bracket arms can be colour coded to match the wall. The range also has a 6-wire T-Post, with spacings for earth wires under each live wire. Available ex-stock in black in number of strands as per table.



Option 1 Mounted angled on the inside of a wall using the reverse mount bracket	<b>Option 2</b> Mounted vertically on the inside of a wall using the reverse mount bracket	<b>Option 3</b> Mounted vertically on the outside of a wall using the small bracket	<b>Option 4</b> Mounted angled on the outside of a wall using the small bracket	<b>Option 5</b> Mounted horizontally on the top of a wall using the small bracket
6 Strand (X100PLJVA)	6 Strand (X103PLJVA)	6 Strand (X100PLJVA)	6 Strand (X100PLJVA)	6 Strand (X107PLJVA)
XPLMB-L	XPLMB-L	XPLMB-S	XPLMB-S	XPLMB-S
Reverse Mount Bracket	Reverse Mount Bracket	Small Bracket	Small Bracket	Small Bracket

# 

# **Options Available to Strain a Wall-Top Fence**



# **Tensioners**

### **Wall-Top Wire Tentioners**

(1mm - 1.6mm wire)



N791B **Security Spring** 304 Stainless Steel and Nylon



**Midi Tweaker** Nylon flush-mount for walls and square tube



N769QR Compression **Nylon Spring** 304 Stainless Steel

**TEREFERE** 

N794



N797

Mini Donza Galvanized or 304 Stainless Steel



N785 JVA Mini **Nylon Tweaker** Ideal for coastal installations



N786

Maxi Tweaker Strong Nylon quad securing tensioner 1.6mm - 2.2mm wire

#### **Free-Standing Fence Wire Tensioners** (1.6mm - 2.24mm wire)



Plastic Combi Hot-Dipped Galvanized or 304 Stainless Steel



**HD Plastic Combi** Heavey Duty Galvanized for 2.5-3mm wire



Mini Tweaker Combo

304 Stainless Steel

and Nylon

**GFT Combi** Hot-Dipped Galvanized or 304 Stainless Steel



**HD** Atlas Hot-Dipped Galvanized or 304 Stainless Steel



**Midi Hook Tensioner** 

Nylon 1mm - 1.6mm wire

Porcelain Combi Hot-Dipped Galvanized or 304 Stainless Steel



Combi & Jumbo Strain S-hook 6mm Hot-Dipped Galvanized or Stainless Steel



N760 Atlas Hot-Dipped Galvanized



**Mini Tweaker** S-hook 3mm



Maxi Tweaker S-hook 4mm







Ferrule

4mm







N721









N742HDG

U-Bolt Hot-Dipped

**Ferrule** 6mm

Mech Galv

Standard Mech Galv

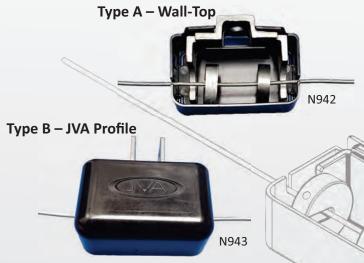
**U-Bolt** Mech Galv

N740

Standard Hot-Dipped

45

# JVA Electric Fence Tamper Switch

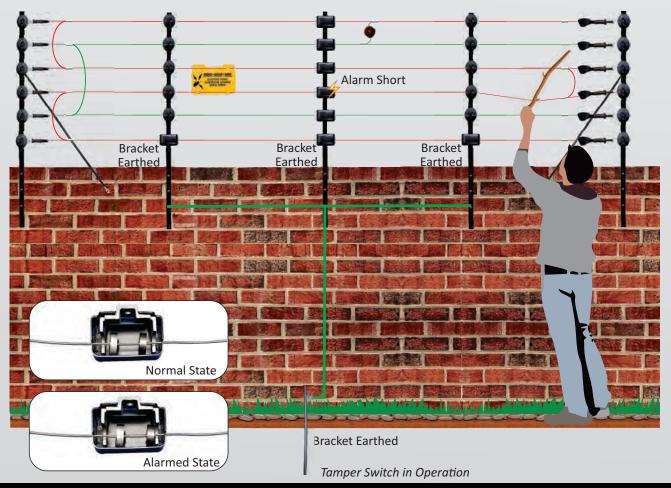


The JVA Tamper Switch is a simple, clever patented product designed to be fitted to new or old fences, to detect when a live wire on an electric security fence line is being tampered with.

This tamper switch will then trigger the fence line voltage monitor which in turn will trigger an alarm (siren, armed response, security lights, etc.) to warn the occupants of a property that their perimeter is being interfered with. (The electric wire may have been cut or forced apart.)

The Switch has adjustable disks that can set the sensitivity of the tamper. Ideally the switch should be centered between two spring loaded tension points. The switch can be retro-fitted to Flat Bar and Square Tube fencing using the Type A Plate and to JVA Profile and JVA Y-Standards using the Type B Plate. Multiple Switches can also be used on one post.

Multiple switches can be added in a single strand if higher security is required (see bottom strand below). The switch can be used on HV and LV fencing. The susceptibility to wire movement can be made very sensitive on low voltage fences (ZLM powered), where the arcing of high voltage is less of an issue. It is important to make sure that the post to which the Tamper Switch is attached is earthed to ground.



46



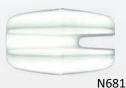
### **Strain Insulators**



Jumbo **Plastic Strain UV Stabilized Plastic** 



**Jumbo Strain Security** Hardened plastic for higher tensioning



**GFT Strain** Glass fibre, DMC **Fire Resistant** 



N676

Porcelain **Bullnose Strain** Fire-proof

#### **Intermediate Insulators**



**Plastic 10mm Round Bar Bobbin** UV Stabilized Plastic



**Export Nail-On UV Stabilized Plastic** 



Smart Bobbin Black UV Stabilized Plastic



**Pin Lock UV Stabilized Plastic** 



**Gate Strain and Combi Bobbin UV Stabilized Plastic** 



Nail-On **UV Stabilized Plastic** 



N689B

N521

**GFT Buzz Bar** 

**UV Stabilized Plastic** 

**Anti-Twist Flat Bar Bobbin UV Stabilized Plastic** 



Pop-Em 19 — 25mm **UV Stabilized Plastic** 



**Ring Insulator HD Ring Insulator LD** Square tube or Wall-mount screws supplied separately

N685 N686

Large and Small **GFT Bobbin** Glass Fibre, DMC **Fire Resistant** 



**JVA Y-Standard UV Stabilized Plastic** 



N691-2P (50mm)

HD Pop-Em 25 — 55mm **UV Stabilized Plastic** 





\$ 47







N690 **Y-Standard** 

N687

**UV Stabilized Plastic** 

**Porcelain Bobbin** 

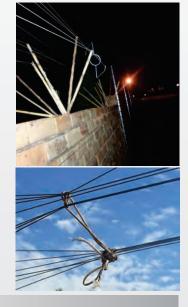
Fire-proof

# JVA Taut Wire Monitoring Solutions

Keeping two steps ahead of criminals is JVA's aim and forte. As criminals become more proficient and fence tampering and bypassing become an issue, so we develop increasingly sophisticated monitoring systems to thwart their efforts.

Closer intermediate posts, narrowing the wire distance between lines and shorter strain distances all help to contribute to an effective physical fence structure. However, there is still a need to reinforce old fences and for more high-tech, anti-tampering devices to monitor new strategic fences.

While traditional methods such as High Voltage and Earth Loops are effective, JVA offers the Inline Tamper Switch and the Genius Taut-Wire Tensioner to be used on their own or in conjunction with the JVA ZLM4 monitoring system to create an even higher level of detection on existing or new electric fences.



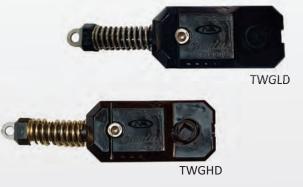
# **JVA** Traditional Tamper Solutions Earth Loops (Triggers alarm if fence wires are separated) E105W F102 E108 E106 E105 **Bi-Polar Security SIS Series** Intermediate Earth Loop Wall-Mounted **Monitor Loop** 316 Stainless steel or **Double Earth Loop** Allows for earth and live 316 Stainless steel or 4mm fully galvanized monitoring or Bi-Polar monitoring 4mm fully galvanized

#### JVA RANGE CATALOGUE =

# JVA Genius Taut Wire Tensioner

The JVA Genius range of tensioners are specifically designed to work in conjunction with the JVA ZLM4 monitor to detect fence line tampering. The tensioner is designed to work with 1mm to 1.6mm high strain wire.

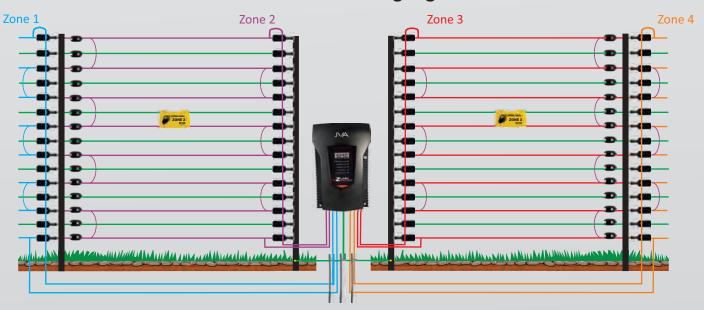
This Patented Monitoring System will trigger an internal monitored switch if tension on the fence is released by interference such as an intruder pulling on or cutting the wires. The tensioner can be retrofitted if required.



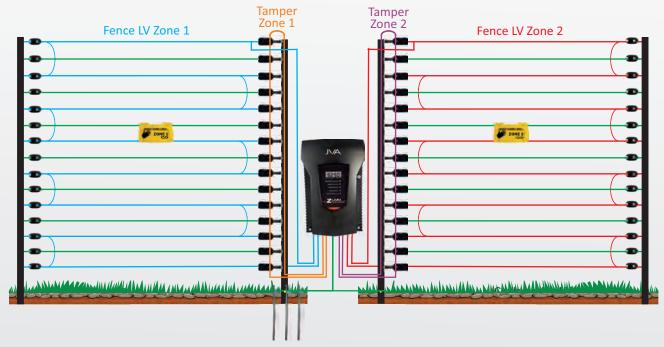
#### Zone 1 Zone 2 Zone 3 Zone 4 Zone 4

### Method 1: Taut Wire Only – Tension Monitoring Only

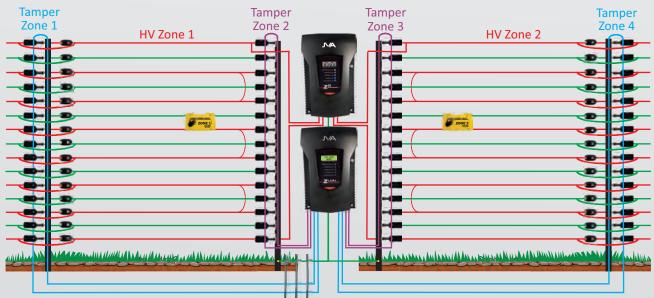
### Method 2: Taut Wire and LV Fence Monitoring Together



### Method 3: Taut Wire and LV Monitoring Separately



### Method 4: Taut Wire and HV Monitoring Together



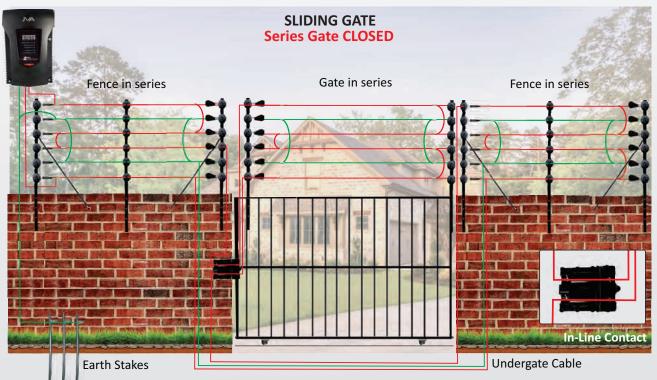




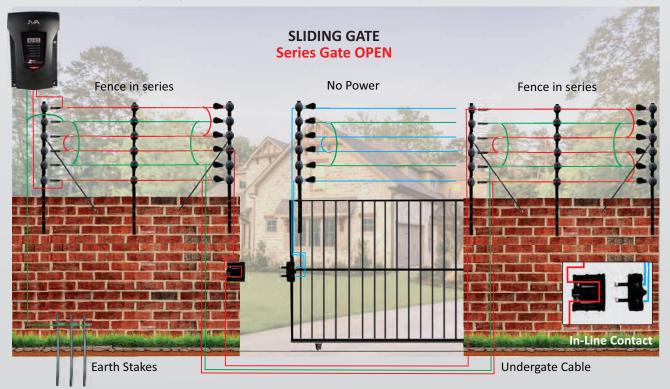
© 51 ·

# **Gate In-Line Series Circuit**

The diagram below illustrates a gate-top fence circuit when the gate is CLOSED. Here the gate In-Line Contact enables the gate-top circuit to be an integral part of the over-all fence circuit. Cutting the wires or interfering with the gate will break the circuit and trigger an alarm.



The diagram below illustrates a gate-top fence circuit when the gate is OPENED. Here the current from the fence will pass through the gate contact and under the fence to complete the circuit and allow access.



To detect an intruder forcing the gate open, a Mag Contact linked to the energizer gate alarm, can be installed to monitor the gate status.



### **Gate Contacts**



Standard

**Gate Contact** 

N525

**Series** Gate Contact

N526

N526B

In-Line **Gate Contact** 



N526SAG **Slide-Across Series Gate Contact** 

### **Switches**



Lockable **Cut-Out Switch** 

Nipper



**Zone Resistor** 



**Flood Gate** Controller



### **Tools**

0 52 🔿



- JVA RANGE CATALOGUE -





N735

#### **Braided Wire** High tensile, low resistance Available in 1.2mm, 1.5mm and 2mm galvanized, stainless steel or aluminium 1.2mm – 135m/kg



Aluminium Wire Low resistance Available in 1000m rolls in 1.6mm and 2.0mm

JVA RANGE CATALOGUE =



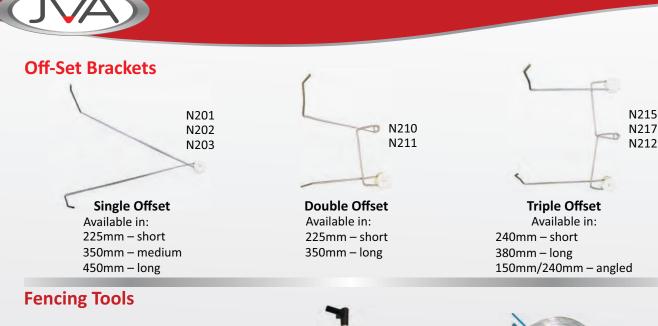
N736 N739

Stainless Steel Wire Available in 1mm to 3mm; 304 and 316 grades 1mm – 157m/kg



High Strain Steel Wire Full range available in light or double galvanized 2.24mm 50kg 1650m 2.00mm 50kg 2000m

\$ 53

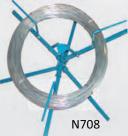




Braided Wire Reel Holder For use with braided and stainless steel wire



Rotosure Measuring Wheel Fence-line measurement, accurate to the cm



Spinning Jenny For use HSS Wire

Enclosures









### **Batteries**

We stock a wide variety of Battery Types and sizes.



Lead Acid Batteries



**Gel Batteries** 



**Deep Cycle Batteries** 



**Lithium Batteries** 

### **Solar Panels**

54 🗇

Solar panels utilize premium polycrystalline cells secured in heavy duty aluminium frames. Polycrystalline panels provide superior efficiency of sunlight to electrical current, resulting in faster charging of batteries. A full range of solar panel sizes from 40W to 305W are available.

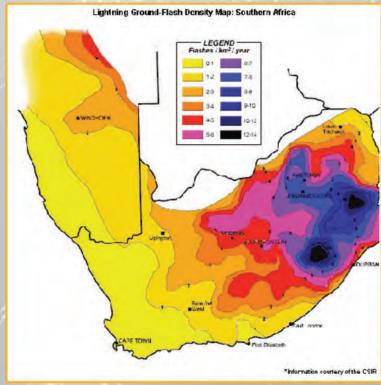
40W – N803	75W – N938	100W – N810	160W – N939
50W – N804	80W – N813	120W – N817	265W – N842
60W – N821	85W – N812	140W – N820	305W – N823





# **Lightning and Surge Protection**

Lightning is the most powerful and most destructive 'natural enemy' of electric fences and while one can take precautions against it, no lightning protection kit will totally guarantee protection against a strike. However, it will considerably help reduce the risk and damage to an energizer.



#### **Dual Lightning diverter**

At last, a lightning diverter that can handle both the feed-out and return circuits of a security energizer! Also, its 2-stage protection can withstand a lightning surge of up to 2000 Amps, limiting the voltage return to the energizer to an acceptable 15kV. This Dual - Channel Diverter is ideal for any JVA Security Energizer, especially on security fences in areas experiencing high lightning intensity.

#### **Features**

- Feed and return wiring protection
- > Affordable sacrificial security component
- > One diverter required for most installations
- > Provides a highly visible indication of a lightning surge
- Large sturdy terminals for solid under-gate wiring
- Dust resistant design and cover for internal use only



# Fence Line Lightning Diverter







Cover OFF

**Cover ON** 

Inside

The unique, V-shaped JVA Electric Fence Lightning Diverter is fully SANS 10222-3 compliant and is ideal for incorporation into lengthy agricultural and wildlife fences in areas where lightning is problematic.

#### Features

- Ideal for installation on long fence lines
- Choke and Arc gap built into one diverter
- Large protected terminals
- Unique V shape favours lightning's preference for shortest straight line route to ground
- Adjustable Arc Gap
- SANS 10222-3 Compliant (20KV Protection and Terminal Touch Protected)
- Water resistant design for external installation

#### 220V Under/Over Voltage Protection Plug

In the event of an over or under mains power supply to the energizer, this product completely protects the energizer by temporarily disconnecting the energizer form the mains supply.



\$ 55

# **Lightning and Surge Protection**

#### JVA Lightning Diverter (multi-stage) Electric Fence Energizer Protection

Simple to fit and proven effective in the field over many years this device is cheap insurance for any electric fence Energizer. Easy to fit, completely sealed against the elements, this device is a true multi-stage lightning diverter, not just a cheap spark gap!

#### JVA Power and Signal Line Surge Protector - Z Series

The JVA Power and Signal Line Surge Protector is the must have device when installing single zone Z-Series Energizers. It provides protection for all of the low voltage connections to and from the energizer. This ensures that a lightning strike on, or near the cabling, is safely diverted to Earth. Its two stage protection can withstand a lightning surge of up to 250 Amps.

#### **Features:**

- Protects the 16VAC, Keypad bus, inputs, Keypad bus, and Siren/Strobe outputs
- Affordable sacrificial security component
- Suitable for all single zone JVA Z-Series
   Energizers and the ZLM4, ZM20 and ZM1.



#### Features

- Easy to install
- Cheap and reliable way to protect your Energizer
- Contains an RFI filter to aid in reducing the electrical interference that can cause a ticking noise on telephones and inhibit the use of the Internet.



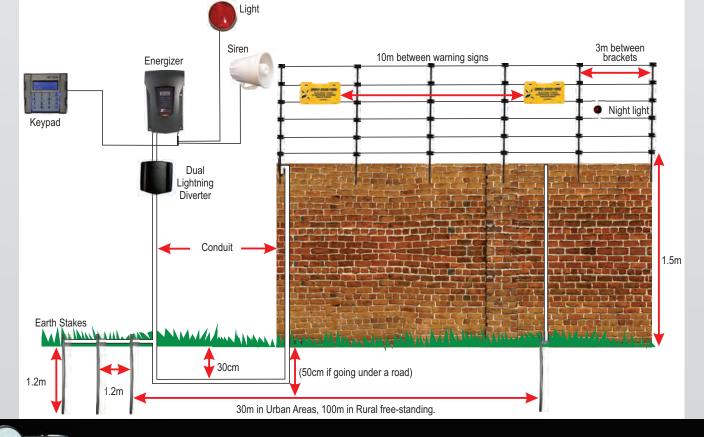
#### Four Channel Low Voltage Lightning Diverter - ZLM4

The JVA 4 Channel Low Voltage Lightning Diverter provides protection for a ZLM4, ensuring that a lightning strike on, or near the fence, is safely diverted to Earth. By doing this you are

protecting not only the ZLM4 but also any equipment connected to the ZLM4. Its two stage protection has been designed to withstand a lightning pulse of up to 2500 Amps while limiting the voltage to within 60V of the Earth.

#### Features:

- Feed and Return wiring protection
- Affordable sacrificial security component
- Easy to fit





#### JVA RANGE CATALOGUE =

# Wireless, Outdoor, Double, Wide-Angled Beams



The Roboguard is a reliable, affordable outdoor surveillance system, ideal as an add-on to any electric fence, alarm or complete stand-alone security system. The Roboguard sensor is weatherproof, tamper-proof, robust, impervious to lightning and UV damage.

#### **Roboguard Beam**

This is a battery operated, dual-sensor, outdoor movement detector designed to detect intruders and wirelessly transmit the information to a Roboguard Base station. The internal batteries have a ±2-year life span. The Roboguard dual-beam system uses stateof-the-art equipment and technology.

#### **Portable Headquarters (HQ)**

A portable 8-zone, 4-output, base-station is used to receive and announce signals from up to 8 Roboguard Sensors. The HQ can also be wired to a siren and/or alarm panel.



#### **Alarm Interface**

The Roboguard alarm interface is used to interface up to 4 Roboguards with individual intruder detection, tamper and status LEDs.



#### Power Pack

The HQ interfaces with external devices such as a siren and/or alarm panel. It is a complete solution with a 7A/h battery, 16V DC transformer, tele-cable, DC power to HQ and 5 relay out-put PCBs.



A separate receiver provides the data stream for the Keypad and for the repeater station.



A Roboguard Transmitter is capable of transmitting roboguard intruder and roboguard remote alarms in response to triggering from externally connected systems.

LED

The LED Driver unit is used to indicate visually the status of the Roboguard system. The status is indicated via an add-on LED. LED indicates Armed, Disarmed or Alarm conditions.

\$ 57



#### **Keyfob Transmitter**

A handheld, remote transmitter is used as a panic button and remote control for radio base-stations. 4-button and 6-button versions are available.

### Quick, Simple, Reliable Effective Perimeter Surveillance

#### Features

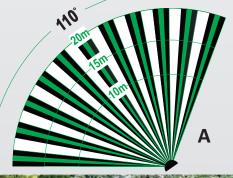
- > Roboguard uses state-of-the-art equipment and technology.
- ➤ The portable Headquarters (base station) can monitor up to 8 sensors at once and will give both an audible and visual alert of the exact sensor that is triggered.
- The Headquarters has an internal rechargeable battery pack. The unit can operate directly off mains power and has a 24-hour backup for portable use.
- > The units have internal batteries which have an approximate 2-year life span.
- > The Headquarters monitors any tampering with the sensors, as well as battery levels.
- The Roboguard sensor is weatherproof, tamper-proof, robust and impervious to lightning and ultra-violet light damage.
- The basic kit includes a Headquarters and one sensor. Additional sensors 'guards', can be added up to a maximum of 8.
- > Roboguard sensors are available in black, green or white.
- No digging, no cabling, no trunking

#### Unique benefits:

- A. Fanned beams range over a wide area
- B. Dual beam eliminates false alarms

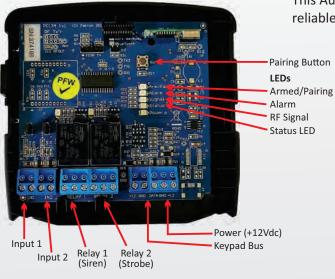
#### **Applications include:**

Houses, driveways, carports, gardens, pools, caravans, game spotting, factories, store rooms, farms, chicken houses, stables.





### JVA RFI Interface Module Compatible with Roboguard



This Australian designed and manufactured device is highly reliable and boasts the following features and benefits.

#### Features

- > Can monitor up to 8 wireless zones
- Can monitor up to 2 wired zones (sacrificing 2 wireless zones)
- > Can be paired with up to 20 remotes
- Alarm reporting for each zone through a User Interface
- Programmable Options easy to customize the device to suit varying site requirements
- > 2 programmable function relay outputs

#### JVA Android Keypad Configuration

Program the Roboguards into the JVA RFI via the program button or the JVA Android Keypad. Arm and disarm the system via a JVA Remote or Roboguard Remote or JVA Android Keypad. When a Roboguard detects motion, the RFI will trigger the siren and strobe outputs and the zone name will display on the JVA Android Keypad Mimic screen. Zones can be named for easier identification.

6 59

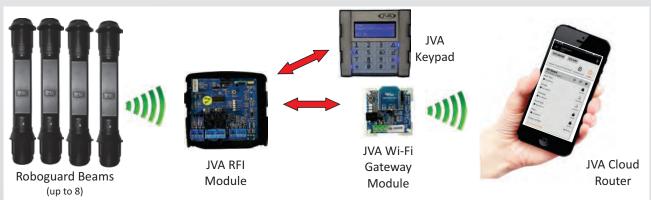


Diagram of Roboguards Interfacing to a JVA Cloud Router on an Internet enabled device via an RFI Board

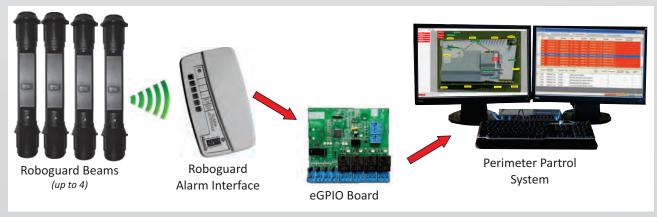


Diagram of Roboguards Interfaced with a Perimeter Patrol System

Frequency range

- 150m Roboguard Detectors
- ➢ 60m − PIR Detectors
- ➤ 40m Remotes

A Roboguard Repeater might be required for larger sites or improved signal strength.





# **After Sales Service, Repairs and Consultancy**

In security, product reliability and fast and efficient backup service is paramount. So, an installation is only as good as the security company's ability to provide sound products and service. Apart from its certification, JVA also offers a 2-year warranty on its products. JVA is also proud to be able to offer a 24-hour, turn-around on repairs to JVA products at their in-house repair and service facilities.

In addition, a countrywide JVA dealer network is ever present to provide fast and efficient in-field installation and backup service. Further, should an accredited JVA dealer not provide satisfactory backup service at an installation where he has installed and commissioned JVA products, the company undertakes to meet all obligations relating to those JVA products that have been installed. While fence maintenance, fault finding, and fence repairs are excluded from this undertaking, the company does offer consultancy services and advice on where and how best to solve fencing challenges. With over 50 years' experience in the field of electric security fencing, JVA's management is proud to be still servicing customers to whom we first sold in 1978.

# Training

In addition to having trained sales personnel and in-house service technicians at all our distribution outlets, JVA also has fully equipped training facilities with trained facilitators where regular training courses, ranging from a basic introductory course on electric fencing to installation techniques, legal requirements and advanced technical training on our wide range of products is offered. We also run inhouse customized training courses for specialized groups at locations such as venues serving security associations, farmer's security forums, schools, neighbourhood watch groups and game reserves.



JVA's close association with their vast range of international trading partners enables these companies to keep abreast with the latest international trends, developments, and requirements. JVA South Africa offers a comprehensive SAQA registered course and examination to qualify as an installer registered to issue a *Certificate of Compliance*. Ndlovu Fencing (Pty) Ltd, JVA's African distributors, is a leading role player in the setting up of the current South African Electric Fencing Standards and Regulations and Ndlovu's management are members of associations such as SASA, SABS Standards Committee, the Electric Fence and Components Manufacturer's Association, ESDA and the South African Game Fencing Association.



# Do's and Don'ts

### Do's

- Do select the right energizer for the job on hand. Determine the fence load and check that the energizer can cope with this load.
- > Do make sure that your system is well earthed.
- > Do place the energizer in a safe location and out of reach of children.
- > Do secure all joints with either line clamps or ferrules.
- > Do seal the joints to eliminate any corrosion.
- Do be conversant with the law and codes of practice applicable to electric fencing (SANS 10222-3).
- > Do consult local bylaws that may impact your installation.
- Do make sure that your client is fully conversant with the workings of the unit you have installed.
- Do make a sketch of your layout and of the wiring configuration of the fence. Retaining this will facilitate fault finding and maintenance.
- Do make sure that your supplier can service the unit you have chosen and that spares are readily available.
- Do make sure that your installer is a registered installer and ask for references.
- > Do make sure that you receive a Certificate of Compliance from the installer.
- Do make sure that the energizer you have installed is certified and meets the required statutory safety requirements (SANS 60335-2-76:2006).
- Do consult your neighbour before installing an electric security fence. Assuming you meet all the legal requirements, s/he has no reason to object.
- Do let only suitably qualified people operate your system and limit the number of key holders.
- Do make sure that the energizers are synchronized where there is the possibility of a person touching two fence lines powered by two different energizers.





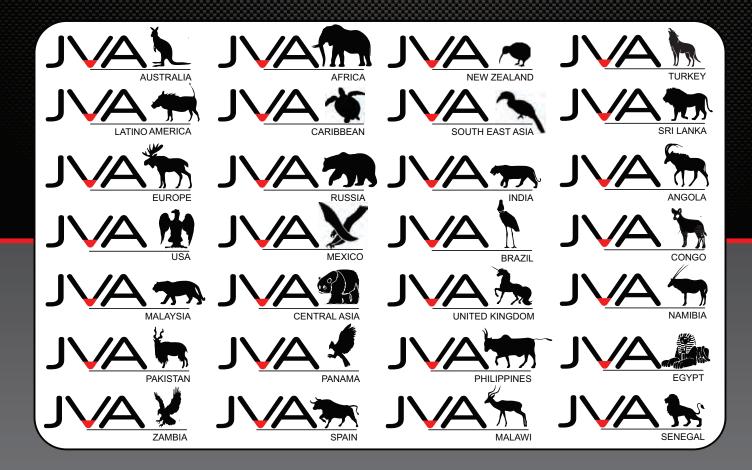


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### Don'ts

- > Don't electrify barbed wire.
- Don't include H.T. feed-out wires and H.T. return wires in the same conduit.
- Don't include H.T. wires in the same conduit as low voltage communication cables, as you will encounter induction problems.
- Don't combine unlike metals, i.e. copper earth stakes attached to galvanized wire, as electrolysis will occur and your wires will soon corrode away.
- Don't have an overhang that encroaches on your neighbour's property or over municipal property.
- > Don't install two energizers on the same fence line.
- Don't earth your energizer to a mains or telecommunication earth system.
- Don't attach your earth to taps, dairy, or shower pipes as you could experience induced shocks.



# JVA electronic products are proudly designed and manufactured in Australia



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Although the information presented in this product catalogue is believed to be accurate and reliable, no responsibility for inaccuracies can be assumed by JVA Technologies. Performance data is typical only and variations owing to component manufacturing tolerances are normal.