VECTOR
SWING GATE AUTOMATION

Product Code: DOC1050D02

USER GUIDE

VECTOR

CENTURION
THE AUTOMATIC CHOICE
www.centisys.co.za

Product Guarantee Vector

The CENTURION VECTOR swing gate operators are manufactured with extreme care, thoroughly inspected and tested. The operators are only guaranteed against faulty materials or workmanship for a period of 12 months from the invoice date of the operator or 14 months from the manufacturing date (as shown on the serial number label of the operator), whichever expires first.

The guarantee will cover the repair or replacement at our discretion of such faulty materials or parts free of charge provided that the equipment is returned to our workshop.

The guarantee only applies to the gearbox, motor, controller, charger and other components specific to the operator. Peripheral components such as the battery and other ancillary devices connected to the operator carry the guarantee provided for these components.

This guarantee will not apply to any operator which:

a. Has been subject to misuse or which has been used for any purpose other than designed for by CENTURION SYSTEMS.
b. Has not been installed in accordance with the installation instructions provided.
c. Has damage caused as a result of handling during transit, atmospheric conditions, insect infestation, power surges or other forces outside of our control.
d. Has been repaired by any workshop and/ or person NOT previously authorized by CENTURION SYSTEMS.
e. Has been repaired with components not previously tested, passed or authorized by CENTURION SYSTEMS.

Company Profile

CENTURION SYSTEMS has been manufacturing automatic gate systems since 1987, and is committed to providing reliable, cost effective solutions in the field of access automation.

CENTURION strives to give service and backup second to none. Our engineers are available to give sales support, installation training, and answers to technical or installation problems.

The equipment is installed worldwide and is available through a network of distributors.

CENTURION is an ISO 9001 registered company, continually looking at updating its products in line with world trends to ensure that its products will provide customer satisfaction.

Further information is available on our web site www.centsys.co.za

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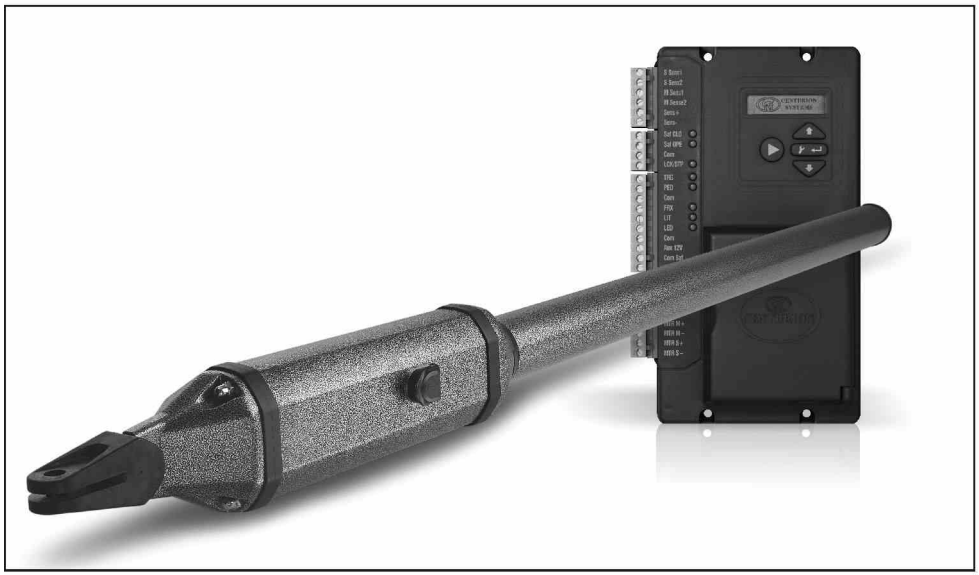
Introduction

A CENTURION GATE AUTOMATION system is a quality product designed to give many years of trouble free use, provided it is correctly installed and maintained.

This guide highlights the features and operation of the CENTURION VECTOR AUTOMATIC SWING GATE OPERATOR to ensure that, YOU, the user will get the most from your system.



Safety Instructions

Even if you have used an automated gate before, please read through the Safety Instructions carefully. Make sure that you fully understand the following safety requirements before finally operating the automated gate.

Ensure that you fully understand:

- How to operate the manual release mechanism.
- How the obstruction detection and all other safety features works.
- All the safety considerations associated with operating an automated gate, and that you understand the importance of explaining these safety instructions to all other users of the automated system:

1. Do not activate your gate opener unless you can see it and can determine that its area of travel is clear of people, pets, or other obstructions.
2. NO ONE MAY CROSS THE PATH OF A MOVING GATE. Always keep people and objects away from the gate and its area of travel.
3. NEVER LET CHILDREN OPERATE OR PLAY WITH THE GATE CONTROLS, and do not allow children or pets near the gate area.

4. Be careful with moving parts and avoid close proximity to areas where fingers or hands could be pinched.
5. Secure all easily accessed gate opener controls in order to prevent unauthorized use of the gate.
6. Keep the automated gate system properly maintained, and ensure that all working areas are free of debris and other effects that could affect the gate operation and safety.
7. On a monthly basis, check the obstruction detection system and safety devices for correct operation.
8. All repair, and service work to this product must be done by a suitably qualified person.
9. This product was designed and built strictly for the use indicated in this documentation. Any other use, not expressly indicated here, could compromise the good condition/operation of the product an/or be a source of danger.
10. Centurion Systems does not accept any liability caused by improper use of the product, or for use other than that for which the automated system was intended.

Principles of Operation

The CENTURION VECTOR swing gate operator is powered by a 12V DC motor using a maintenance free, lead acid battery as the primary power-source. The battery is charged via a 220V mains supply, or a solar panel. The major benefit of this philosophy is uninterrupted operation of the gates even in the event of a mains power-failure.

An independent motor drive unit operates each leaf of the gate. Two models are available the V400 and the V500 which have actuation strokes of 400 and 500 millimetre respectively. Both single and double leaf systems are available. The MASTER operator and the SLAVE operator, where applicable, consist of a high-torque DC motor extending or retracting a piston through a planetary reduction gearbox. The piston is linked to the gate via a gate bracket and release pin. The release pins can be fitted with padlocks where additional security is required. The drive units are self-locking preventing the gates from being forced open.

The electronic controller, charger and maintenance free battery (7A/H) are housed inside a weatherproof enclosure usually mounted alongside the MASTER motor. The electronic controller, which co-ordinates the operations of the drive units, is further protected by a plastic enclosure inside the enclosure. For added reliability the controller is fitted with lightning protection circuitry.

The drive units use an innovative internal position control system with an external fixed reference origin, to track the movement of the gate and to accurately set the "open" and "close" positions. As a result of this position control system, it is not necessary to fit gate end-stops.

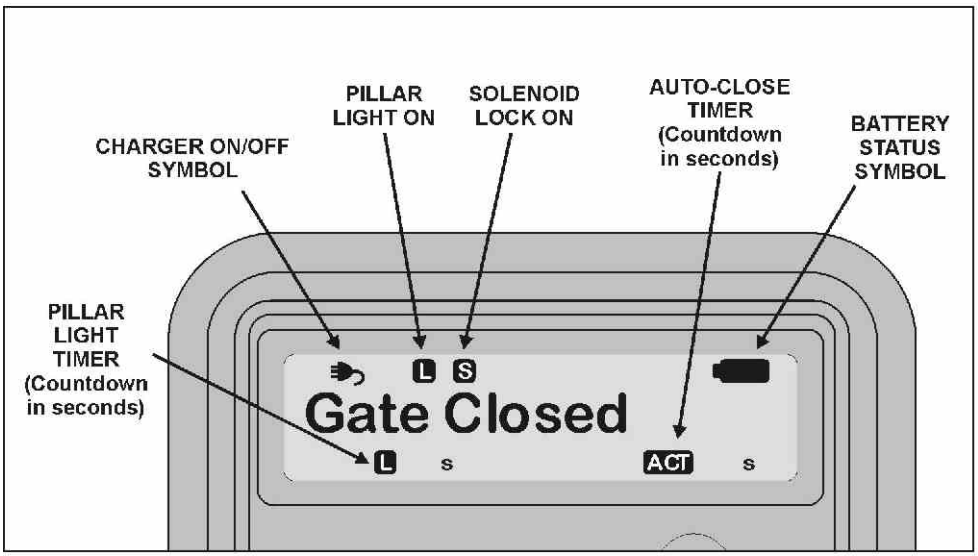
Operators can be fitted to inward, or outward, opening gates.

Each operator is fitted with a manual-override key-release.

Introduction

The VECTOR linear arm operator is controlled with the Vector controller (PCA10501Vx). The controller synchronizes the functions of the gate operator.

The Vector controller is particularly user-friendly as it is fitted with a LCD (Liquid Crystal Display) that provides useful information on the status of the system.



Under normal running conditions the "User Display" is shown on the LCD display. (A "Debug Display" can be invoked and is typically used by the installer where abnormal operational problems occur)

Not all the symbols are, necessarily, shown simultaneously.

Modes of Operation

There are two different modes of operation that can be selected. Only one mode can be selected at any one time.

STANDARD (with selectable auto close feature[1])

CONDOMINIUM (compulsory auto close[1])

STANDARD MODE is most commonly used in domestic applications and CONDOMINIUM MODE in multi- user, light industrial applications such as townhouses, housing estates and office parks.

[1] ***The auto-close feature is described under the section "Automatic Closing"***

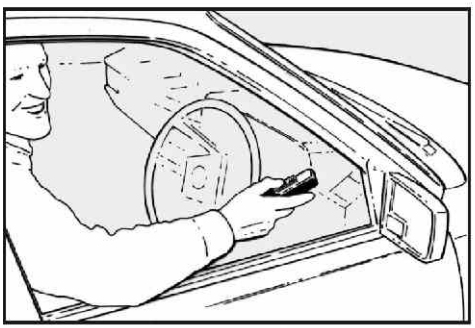
STANDARD MODE OF OPERATION

The gates are opened in the following way:

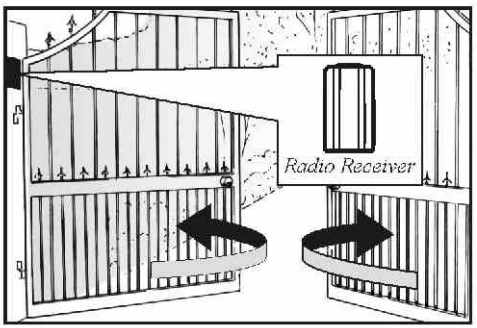
Radio Transmitter

A hand held radio transmitter, carried in the motor vehicle, sends a coded signal to the radio receiver mounted in the control enclosure to open, or close, the gate.

Press once for approximately 1 second to get the gate into motion.



Hand held transmitter sends coded signal

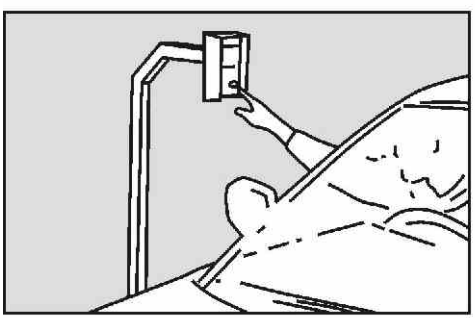


Receiver uses signal to open or close the gate

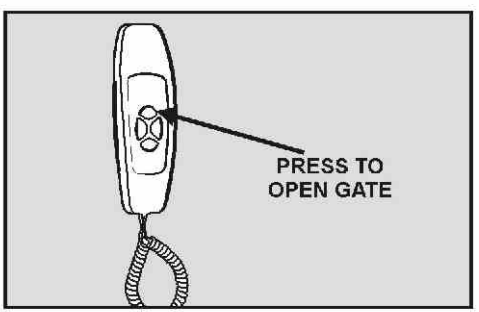
If the transmitter is pressed while the gate is either opening, or closing, the gate will immediately stop. Pressing the button again will cause the gate to reverse.

If the automatic closing facility has been selected, and the gate is closing automatically when the transmitter is pressed, the gate will stop and stay in that position. Pressing the button again will cause the gate to reopen. If the gate is opening with the automatic closing facility selected, and the transmitter is then pressed, the gate will stop. The gate will close automatically after the auto-close delay time.

Intercom Push button (Optional)



Visitor outside gate requests entrance.



Gate opened from intercom pushbutton inside house.

Most automatic gate installations are fitted with an intercom which provides for communication between

the house and the gate.

The intercom handset is usually provided with a GATE or DOOR RELEASE pushbutton which, when pressed, sends a signal to the gate controller to open the gate.

The sequence of operation of this pushbutton is identical to the operation when using the radio transmitter as described above.

CONDOMINIUM MODE

The system can be set for CONDOMINIUM operation. This facility is designed for greater safety and security, in applications where there will be a number of users, such as the entrance to a townhouse estate, factory or office park.

In CONDOMINIUM mode, the gate is opened by pressing the pushbutton on the remote transmitter or intercom. Any triggers to the system while the gate is opening, are ignored. The only signal that will cause the gate to close is the internal AUTO-CLOSE trigger. (Auto-close is described more fully later in this user-guide).

In CONDOMINIUM mode the AUTO-CLOSE cannot be overridden.

If the remote transmitter, or intercom pushbutton, is pressed while the gate is closing the gate will immediately reopen.

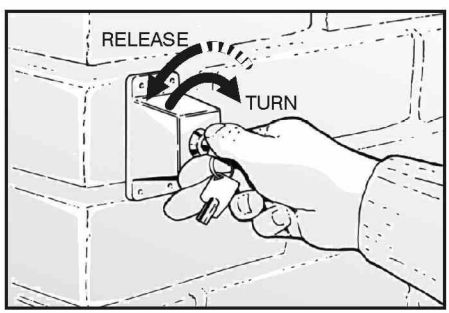
The gate cannot be stopped in a midway position and will, therefore, always close.

If the gate is triggered while the gate is in the open position, the AUTO-CLOSE timer is reset.

It is highly recommended that a protection beam(s) be used in conjunction with this facility to prevent the AUTO-CLOSE from closing the gate onto a vehicle passing through.

Pedestrian Key-switch (Optional)

The pedestrian key-switch is typically fitted to the gate pillar. Its purpose is to open the gate a limited amount for pedestrians. In the case of a double leaf system only the MASTER gate will open.



Pedestrian Keyswitch

Fit the key into the key-switch and turn the key clockwise as though starting a motor car. Let the key spring back to rest position and remove the key immediately.

To allow time for removal of the key, there is a 2 second delay (adjustable) before the gate begins to open. If the courtesy light (refer section, "Security / Courtesy light timer") is connected to the control card, it will flash a number of times, indicating that the gate will open approximately 1 metre and then stop. After 2 seconds the gate will automatically close.

The gate can be held open by keeping the key turned in the key-switch. As soon as the key is released back to its normal rest position the gate will close after the 2 second delay. (The opening distance and the time that the gate remains open can be adjusted to suit. Default values are described above)

If a protection beam has been fitted (refer section "Protection Beam") and the beam is broken while the gate is closing, the gate will stop. The gate will remain in that position while the beam is broken and only

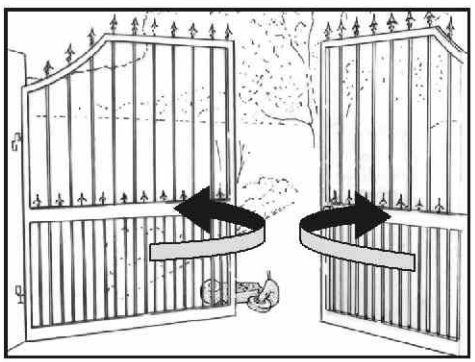
close 2 seconds, or whatever the pedestrian auto-close time has been set to, after the beam has been cleared.

Anti-crushing Device

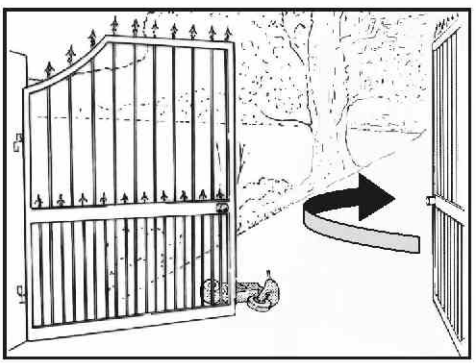
The VECTOR operator incorporates an electronic anti-crushing mechanism that will activate if a person or vehicle obstructs the gate.

If the anti-crushing circuitry is invoked during the opening cycle, then the controller will stop the gate. The second gate (if fitted for a double-swing system) will continue to open.

Once the obstruction is cleared, the obstructed gate can immediately be operated using the remote



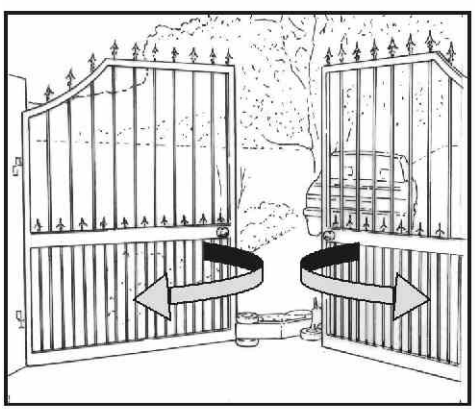
Gate opening onto an obstruction.



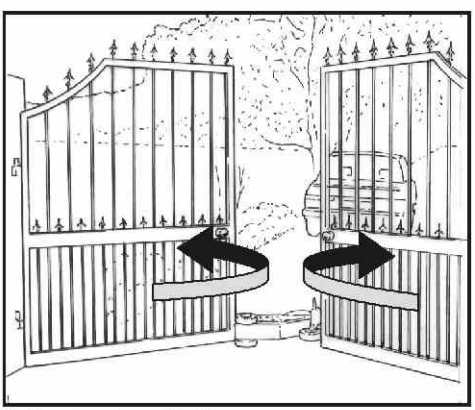
Obstructed gate stops, unobstructed gate opens.

control, or gate release pushbutton, (refer to ***Multiple Collision*** overleaf). The gate will close.

If the gate(s) are closing, both gates will re-open, regardless of whether the anti-crushing mechanism on one or both gates is activated. As per the above, when activating the system again, both gates will close.



Gates closing onto an object.



Both gates automatically re-open.

Multiple Collision

There is a counter that monitors the number of collisions. If the number of collisions exceeds the value set in the MULTIPLE COLLISION COUNTER (fixed value of 4) before both gates reach the fully closed position, the controller shuts down.

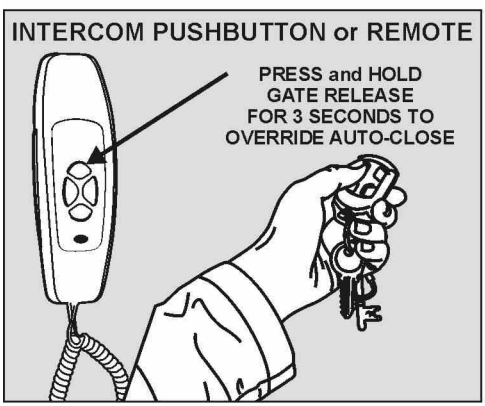
As indication the STATUS LED will flash 4 times every second. The multiple collision fault indication will continue to flash indefinitely or until the TRG input has been triggered. The collision counter is reset and normal operation is resumed.

Automatic Closing

The system has the facility to automatically close the gate after it has been opened. The time that the gate remains open is adjustable from 1 to 200 seconds. The factory default when the facility is switched ON is 15 seconds.

Auto-close Override

In STANDARD MODE of operation, the auto-close function can be overridden on-the-fly for a single cycle. This over-ride is activated by holding down the remote control push-button, or intercom gate release button, when opening the gate, until the gate stops. (Approximately 3 seconds). This confirms that the auto-close has been overridden. On releasing the button, the gate will continue to open fully and remain open, indefinitely, until instructed to close by means of a valid trigger signal.



Closing the gate by using either the transmitter, or intercom, gate-release button resets the system back to auto-close.

The Auto-close override time is adjustable from 1 to 15 seconds.

Protection Beam (optional but recommended)

The Vector controller has separate inputs for CLOSING or OPENING beams.

Generally speaking, beams are fitted to ensure that the gate(s) will not CLOSE onto a vehicle, or person, when the beam(s) is(are) obstructed. For this functionality the beam(s) need(s) to be

connected to the terminal on the vector controller marked "Safe CLS" (Safety Closing).

If the OPENING beam input is used the gates will not OPEN when the "opening" beam is obstructed. Special care needs to be taken if both opening and closing beams are connected. Refer to CENTURION or a qualified installer for assistance.

The following describes beams connected to the standard "Safe CLS" input:

An infra red beam across the gate entrance is connected to the controller as an additional safety feature. For optimum protection when using infra red beams, a set must be mounted across the entrance when the gate is closed and a second set across the entrance when the gate is open. The contacts of both beams should be connected in series and wired between "COM" and "Safe CLS"

When a motor vehicle activates the beam the following occurs:

If the gate is closing, it will immediately stop and re-open.

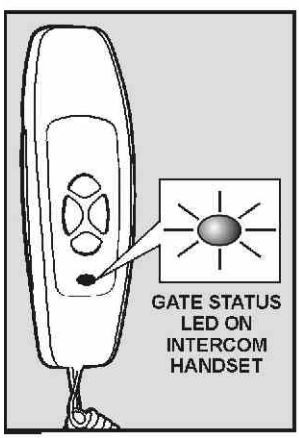
If the gate is open, and the beam is broken, a trigger signal trying to close the gate will be ignored.

If the AUTO-CLOSE feature is selected, the gate will remain open while the beam is broken. If the beam is cleared the gate will only close again after the normal auto-close time has expired.

It is possible to substitute the beam for other protection devices such as an inductive loop. Caution is advised with the use of inductive loops as they may trigger with the movement of the gate over the loop. Contact Centurion or an authorised gate-installer for further details, if required.

Gate Status Indication (optional feature)

The controller can provide visual indication inside the house of the position of the gate and the condition of the battery and power supply. A LED (Light Emitting Diode) is typically mounted on the intercom inside the house. The different signals of the LED are described below:

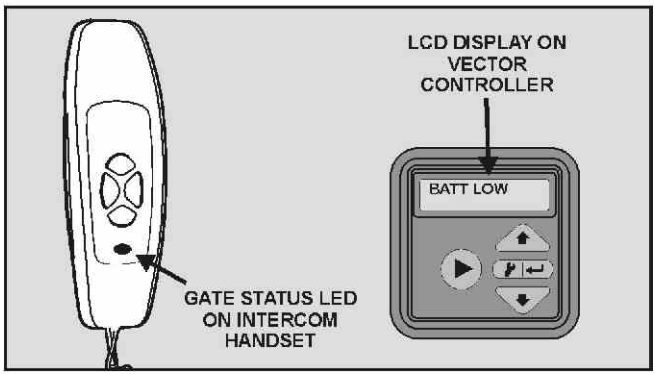


LED STATUS	*INDICATION*
Slow regular flash	Gate is opening
Fast regular flash	Gate is closing
Off	Gate is closed
On	Gate is open
1 Flash/2 seconds	Courtesy light latched on
2 Flashes/2 seconds	Mains failure
3 Flashes/2 seconds	Battery low
4 Flashes/2 seconds	Collision shutdown

Battery Low Protection

The controller has circuitry that monitors the state of the battery. During a power-failure energy is

drawn from the battery, but is not replaced. To prevent the battery from being run totally flat, and being damaged, the protection circuitry shuts off the gate system when the battery voltage drops below 10.5 volts.



Indication that the battery-low protection has been triggered is provided by the small gate-status LED mounted on the intercom inside the house, which will flash three times every two seconds. The gate will complete its current cycle and then shut down until the battery has recovered.

CONTACT YOUR LOCAL GATE AUTOMATION SPECIALIST OR CENTURION SYSTEMS IF YOU DISCOVER THE BATTERY-LOW SIGNAL GIVEN BY THE LED INSIDE THE HOUSE CONTINUES TO RE-OCCUR.

If the gate status indicator has not been fitted, there is an equivalent LED mounted on the Vector controller printed circuit board marked LED, which can be used as a fault-finding aid, or the LCD display on the Vector controller will indicate battery-low.

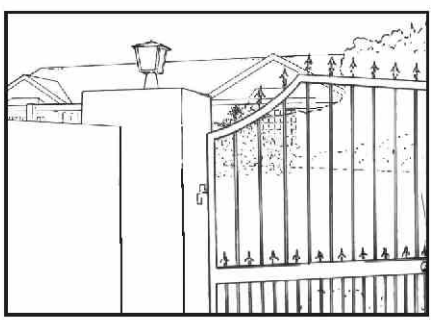
NOTE: The controller's battery-low protection will ensure that only the motors are prevented from drawing current from the battery. Items such as the radio receiver, beams, etc, continue to flatten the battery. An optional battery low cut-out switch (product code CP107) is available which will totally disconnect the battery. Contact your local installer or Centurion Systems for further details.

Security (Courtesy) Light Timer (optional feature)

If a 220V power supply is available at the gate, timed security lights can be connected through the controller. The lights will switch on each time the gate is given a signal to operate, for approximately two minutes and then automatically switch off. The time that the lights stay on can be programmed from 1 second to 42 minutes in increments of 1 second.

If security lights are fitted to the controller, and the pedestrian key-switch is operated, the security lights will flash three times before the gate opens.

A pushbutton can be connected to the Vector controller which will allow the pillar/courtesy lights to be switched from inside the house without having to operate the gate.



Typical Security or Courtesy Light Installation

The pushbutton switches only low-voltage signals and is therefore totally safe. The spare pushbutton provided on many brands of intercom handsets can be conveniently used.

When the pushbutton is pressed momentarily, the pillar lights will switch ON for the pillar-light time-

period and switch off automatically. If the pushbutton is pressed and held for approximately 3 to 4 seconds, the pillar lights will stay on permanently. The lights are switched off by simply pressing the pushbutton again. If the gate status indicator is fitted to the intercom handset, it will flash once every two seconds to indicate that the pillar lights are ON permanently.

Low-wattage, 12V DC light fittings are also readily available and can be connected to the system, drawing power directly from the battery. Caution must be taken to ensure that the power drawn from the system by lights and the motors does not exceed the re-charge rate of the CP84 battery charger. A larger charger unit could be fitted to cope with the additional load.

Holiday Lock-out (optional feature)

An ON/OFF key-switch (or any other contact from a keypad, radio receiver, etc) can be connected to the gate system that will allow the system to be totally immobilised. The key-switch is mounted with access from the outside of the property. When the key-switch is ON, the gate system will shut-down and it will not be possible to operate the gate. When the key-switch is OFF, the gate system will operate normally.

This is an added security feature should the property be unattended for an extended length of time.

Lightning Protection

The Vector controller has on-board lightning protection. The protection circuitry was originally designed in conjunction with the CSIR. It is however important to realise that the controller's protection only functions correctly if an adequate lightning-earth is fitted during installation. Lightning damage is not covered under the normal guarantee of the equipment.

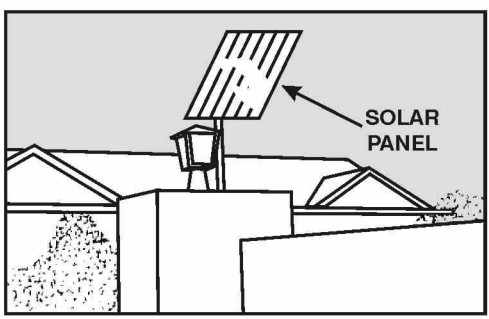
Leaf Delay

The Vector controller has the ability to set a leaf delay for gates which are fitted with "lips". Thus the MASTER gate (assumed to have the lip) would be set to open first and then some preset time later the slave gate will open. When closing the SLAVE gate starts closing first and then the MASTER gate closes after a preset delay.

Alternative Power Supply

Solar Panel (Optional)

With the battery driven system, the battery may be charged using a solar panel in place of the conventional charging circuit. A 20 Watt panel will provide about 20 operations of an average gate without causing the battery to discharge over a period of time. (The allowable number of operations will be reduced if 12V DC security lights are fitted). It is necessary to have at least a 35A/h deep-cycle low-maintenance battery fitted, in order to provide sufficient back-up capacity during days of poor weather.

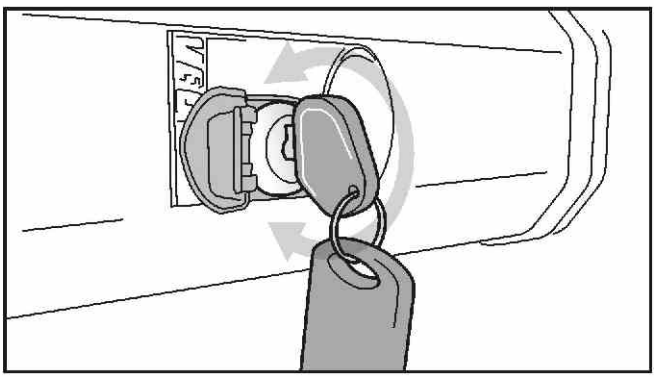


Manual Release

Most gate operators have a means of manually operating the gate in the event of a total malfunction of the equipment.

The Vector can be manually released, by turning through 180 degrees, a removable key in the camlock mounted on the main housing of the Vector operator.

Fit the key into the camlock and rotate through 180 degrees. Gate can be pushed open manually



Basic Maintenance

The CENTURION system is designed to be maintenance free. However, there are some basic checks that should be carried out regularly (every six months) which will increase the long term reliability of the system, and obviate false triggering of the protection systems leading to erratic operation of the gate.

IMPORTANT: ISOLATE MAINS AND BATTERY SUPPLY TO SYSTEM BEFORE CLEANING OR WORKING ON THE EQUIPMENT. (NB: The battery driven operators can operate even if the mains has been switched off due to the internal battery)

- Remove all shrubs and vegetation which may interfere with the gate opening or closing correctly.
- Make sure that all terminals are tight and that the terminals are firmly plugged into the sockets on the Vector controller
- Keep the inside of the control housing clear of insects and dirt.
- Grease the gate hinges to ensure that the gate swings freely.
- Ensure that the manual release camlocks work correctly and lubricate as necessary. A graphite powder lubricant is sometimes better than oil, or grease, as it does not attract dust. Ensure that the dust covers are closed to prevent the ingress of dust and insects.
- If padlocks (optional extra) are fitted to the pins securing the Vectors to the gate- and wall-brackets,

then check that these padlocks can be opened. Lubricate padlocks as required, particularly during the rainy seasons.

- Carefully check the welding (or nuts and bolts) securing the gate bracket to the gate, and the wall bracket to the wall, or pillar. There are very large forces applied to all the brackets and metal fatigue can take place.

BATTERY

All CENTURION domestic systems are fitted with a maintenance-free lead-acid battery that should provide at least three years of uninterrupted operation.

If a larger 35A/h battery has been fitted, ensure that the level of liquid (electrolyte level) is correct.

Check for corrosion of the battery terminals. Clean and apply grease as necessary.

BATTERY CHARGER

The battery-driven system used in domestic applications has a built-in battery charger that automatically adjusts its charge rate to keep the battery fully charged. After extended power outages the charger may get hot as it recharges a flat battery. This is quite normal and is no cause for concern.

The LCD display should show that the CHARGER is ON (see information on LCD display earlier). This light indicates that the electricity supply from the charger unit is being fed through to the controller and should be charging the battery.

NB: It does not, necessarily, indicate that the charger is charging correctly, and therefore it is good practice to have the charging-rate of the unit checked from time to time. This is particularly important in locations which are prone to lightning, or mains-supply surges.

SPECIFICATION OF CHARGER:

No load charge voltage 13.6 to 13.8 volts DC.

Charge rate under full load - +/- 1 amp.

SOLAR PANEL (if this option is fitted)

Ensure that the panel is cleaned regularly; excess dirt, dust and leaves collecting on top of the panel will reduce it's efficiency. Cut back any vegetation or trees that are shielding the panel from the sun.

Specifications

The specifications shown below are typical. Certain figures will change depending on size of gate.

SPECIFICATION	*Vector 400*	*Vector 500*
Power Supply[1]	220V ±10% 50Hz[2], 170mA AC current draw	
Standby current	48mA DC for controller with auxiliaries	
Motor voltage	12Volts DC nominal	
Max motor current	15Amps DC (fused with 15A ATO fuse)	
Rated output force	300kgf	
Gate speed (nominal)	14 seconds	17.5 seconds
Max. operations (day)	100 (domestic charger) 200 (light industrial charger)	
Max. number of continuous operations	Unlimited	
Operating temperature range	-10 +50°C	
Anti-crushing sensing	Electronic	
Mass of kit	2.7kg (excluding battery)	
Gate size per leaf	Dependant on construction of gate and wind loading	
Maximum gate mass and corresponding leaf length (90° opening)	500kg/1.5m	750kg/1.5m
Maximum gate leaf length and corresponding mass	250kg/4m	310kg/4m
Maximum solenoid current draw	2 Amps DC	
Maximum auxiliary current draw	3 Amps DC (protected by PTC)	

1 Other Voltage options available.
2 Alternative source of supply is a solar charger.

Troubleshooting Guide

This is a basic checklist for your gate automation system. Should you experience a fault with the system, see if the symptom corresponds to any given in the list below. For each symptom listed, the probable cause and action to be taken is given. Terminals and LED's referred to in the fault-finders table usually refer to those found on the Vector controller in the enclosure that is usually mounted on the gate pillar closest to the Master Vector operator.

In the event of the symptom not being listed, consult your installer, or Centurion Systems, for assistance.

⚠ CAUTION PRIOR TO WORKING INSIDE THE CONTROL CARD ENCLOSURE, ENSURE THAT THE MAINS SUPPLY TO THE SYSTEM HAS BEEN ISOLATED.

As this product is used outside of the control of the manufacturer, CENTURION SYSTEMS (PTY) LTD, it cannot be held responsible for consequential damage as a result of the end user attempting to maintain the unit without the assistance of a qualified installer.

SYMPTOM	CAUSE	ACTION
• Gate does not open, or close, fully, or gate moves a short distance and then stops.	• There is an object obstructing the movement of the gate.	• INDICATION: STATUS LED will be flashing 4 times per 2 seconds and the LCD will show "Collision Detected - Trig to reset" • Clear any obstructions from the gate.
	• Anti-crushing device setting is too sensitive	• Disconnect the Vector from the gate by removing the pin from the gate bracket. Check that the motor operates correctly without the gate connected. Consult your installer should there still be a problem.
	• Position control system is malfunctioning.	• Check that the cables from the Vector actuator are terminated correctly and making good contact. Consult your installer should there be a problem. • Consult your installer should there be a problem.
	• Battery voltage is low and the battery low protection has activated.	• INDICATION: STATUS LED will be flashing 3 times per 2 seconds & LCD display will indicate "Battery-Low" symbol. • Check that the battery is charging. (Check LCD display for correct "Charging" symbol.

SYMPTOM	CAUSE	ACTION
		• Check that the mains supply to the system is connected and switched on. The red, gate status LED either on the Vector controller, or inside the house, will flash twice every 2 seconds if the mains supply is not present & the LCD display will indicate "No Mains" symbol • Check that battery connections are tight and that there is no corrosion. • When was the battery last changed?
† The life span of the 7A/H maintenance free battery supplied with the system is typically up to three years.		
• Gate does not operate but you hear a relay click (the LCD display may indicate the Gate is opening)	• Motor fuse blown on the control card	• Replace blown fuse • 15A ATO type fuse (typically used in motor cars). Make sure that the motor fuseholders are making good contact.
	• Battery voltage is low	• See action earlier in this troubleshooting guide for Battery voltage is low and the battery low protection is being activated.
	• Gate lock not releasing (usually applies to single-gate installation where a solenoid or magnetic lock has been fitted)	• Solenoid Lock: Check that the lock is trying to release. It will make a distinctive "click" sound when energised. Then check that the lock is not being mechanically held due to misalignment, dirt etc. • Magnetic Lock: Pull on the lock when activating the gate to release and feel whether the lock is releasing. Try disconnecting the lock (remove wire from terminal marked "Sol") • Consult your installer if there is a problem

SYMPTOM	CAUSE	ACTION
• Gate does not operate and there is no reaction from any of the relays on the Vector controller either. (If the remote transmitter is pressed, only the radio receiver relay "clicks")	• There is an incorrect trigger input to the controller causing it to malfunction	• Check that the GREEN ("Safe CLS" & "Safe OPN") LED's on the Vector controller are ON. • Check that the GREEN "LCK/STP" (holiday lockout/emergency stop) LED is ON • Check that the other RED input LED's (e.g. "TRG", "PED", "FRX", etc) are OFF. They must only light up when the corresponding input is activated. • Try operating the system using the RUN (▶) pushbutton on the control card. • Consult your installer if there is a problem.
• Gate does not auto-close	• Infra red beam(s) (if fitted) is(are) faulty • Check that the auto-close override facility is not being operated	• Check that the GREEN LED's adjacent the "Safe CLS" & "Safe OPN" inputs are ON when the infra-red beams are clear. • ·Check that beam is correctly aligned. It should be possible to hear the relay within the "receiver" side of the infra-red beam "click" as the beam is broken and cleared. • Ensure that nobody is mistakenly pressing and holding down the gate-release pushbutton on, either the remote, or intercom for too long when activating the unit. Refer section Auto-close override in User Guide.

SYMPTOM	CAUSE	ACTION
• Gate starts closing but stops and re-opens	• Intermittent operation of infra red beam if fitted • Anti-crushing device is set too sensitively.	• Check the GREEN "Safe CLS" LED on controller. It must remain ON if beam is clear. • Consult your installer if there is a problem • Disconnect the Vector from the gate by removing the pin from the gate bracket. Check that the operator runs correctly when not loaded by the gate. Consult your installer if there is a problem.
• Operator drives too far and does not stop in the correct open and closed positions.	• Origin system not functioning correctly. • Origin position has been shifted.	• Check that the cables from the Vector actuator are terminated correctly and making good contact. Consult your installer should there be a problem. • Make sure that the origin clamp has not shifted position on the piston. Consult your installer should this be suspected.
• Gate opens on it's own.	• Permanent input on one of the trigger lines to the controller. • Faulty trigger line cables.	• Check that the RED LED's adjacent each trigger input on the controller ("TRG","FRX","PED") are OFF and only switch ON when that input is activated. • Consult your installer.
• Radio transmitter has poor range.	• Transmitter battery flat. • Radio receiver cannot receive transmitter signal properly.	• Check that the fault only occurs with one of the transmitters. Replace battery. • For optimum range performance, the receiver should be mounted in an elevated position, housed in a weatherproof, non-ferrous enclosure. • Make sure that the aerial is straight. • Consult your installer.

SYMPTOM	CAUSE	ACTION
• Master gate opens to pedestrian and closes.	• Key-switch used for activating pedestrian facility is faulty where applicable. • Anti-crushing device is set too sensitively.	• Check for corrosion of the wire terminations behind the key-switch. Consult your installer should there be a problem.
• External gate courtesy/pillar-light does not operate.	• Light fuse blown. • Light bulb blown.	• Replace fuse - 220V 3A Fast Blow. (CAUTION 220V, make sure supply to system is isolated) • Pillar light terminal plug-socket is not plugged in correctly • Check that the lamp load does not exceed 500W. • Check the bulb and replace if necessary. Make sure that the bulb is making good electrical contact in its holder. • Consult your installer should there be a problem.

Notes

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