Installer instructions

Wingo 3524 HS
Swing gate operator

E.T.
SYSTEMS
a company of **TheNiceGroup**

www.et.co.za

For any assistance with this product that is not covered in this manual please contact us on: 0860 109 238 (RSA) or via our online support facility at www.et.co.za

Be Safe!

WARNING!! These are the general safety obligations for the installers and users of ET Systems (Pty) Ltd automation equipment. A copy of this document also appears in the user instructions. Those instructions must be issued to the responsible end user during the handover and instruction meeting.

1. Only suitably qualified persons, may install, repair or service the product. Unless expressly indicated in the user instructions, no user serviceable components can be found inside any ET Systems (Pty) Ltd automation product.
2. It is important for personal safety to study and follow all the instructions carefully. Incorrect installation or misuse may cause serious personal harm.
3. Keep the instructions in a safe place for future reference.
4. This product was designed and manufactured, strictly for the use indicated in the accompanying documentation. Any other use not expressly indicated in the documentation, may damage the product and/or be a source of danger. ET Systems (Pty) Ltd cannot accept responsibility for improper use or incorrect installation of this product.
5. ET Systems (Pty) Ltd cannot accept responsibility if the principles of good workmanship are disregarded by the installer.
6. ET Systems (Pty) Ltd cannot accept responsibility regarding safety and correct operation of the automation, if other manufacturers' equipment is added to this product.
7. Do not make any modifications or alterations to this product. Do not substitute any component of this product with any other component not expressly designed into this product.
8. Anything other than expressly provided for in the accompanying instructions is not permitted.

Prior to installation:

1. All unnecessary ropes, chains and fasteners must be removed and all unnecessary latches or locks must be disabled from locking.
2. The gate or door must be balanced correctly where it, neither opens nor closes from any position under its own load. When operated by hand the gate or door should be free of hindrance and easily moved (In the case of a garage door if the balancing springs need to be adjusted the adjustment should only be carried out by a qualified and experienced person).
3. The construction of the gate or door must be sound and automatable. It is the responsibility of the installer to ensure that the mechanical components of the gate or door system are sufficient to withstand the necessary forces in cases of overload.
4. It is the responsibility of the installer to ensure the gate or door is sufficiently trapped within its range of travel by means of mechanical ends of travel stoppers.
5. Ensure all fixed mounting points, like the wall above the door in a garage door system or the posts in a swing gate system, are sound and strong enough to allow proper fixing of the operator.
6. It is the responsibility of the installer to ensure the installed position selected for this product, falls within the limitations of the products ingress protection rating.
7. Ensure the area of installation is not subject to explosive hazards. There should be no volatile gasses or fumes as these can present a serious safety hazard.
8. All ET Systems (Pty) Ltd garage door operators are supplied with a sealed 15A safety plug on lead for use in an electrical code of practice approved plug point. Do not extend, modify or replace the plug lead unless duly qualified as an electrician. Before installing the unit, ensure the mains supply is switched off.
9. ET Systems (Pty) Ltd gate operators are supplied with a terminal connection for the electrical supply beneath the screwed down cover of the operator. In the case of a model requiring 220Vac supply at the operator, an all pole negatively biased switch, with a contact opening of greater than 3mm must be installed within 1,5m of the operator. This switch must be clear of all workings of the system and must be in a position secure from public access. This switch and its connections must be inspected and passed by a certified electrician prior to using it.
10. It is the responsibility of the installer to ascertain that the designated persons (including children) intended to use the system, do not suffer reduced physical sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning the use of the system by a person responsible for their safety.
11. The drive may not be installed on a door incorporating a wicket door, unless the drive is disabled by the release of the wicket door. (Wicket door :- A pedestrian door within the main gate or door)

During installation:

1. Ensure the working area is clear of obstructions and obstacles.
2. Install the safety warning sticker within clear view of where the gate or door will be operated from. Typically this would be adjacent to any fixed trigger switches or on the gate or door itself.

3. The emergency manual release must be installed where it is no higher than 1.8m from the floor level. This would apply to the cord in a garage installation or the lockable lever in a gate installation.
4. Any additional fixed door control switches such as wall consoles or keypads, if installed, must be at a height of at least 1,5m, within clear sight of the gate or door and away from any moving components of the system.
5. It is highly recommended that a set of safety infra-red beams be used in conjunction with this product. The safety beams must be installed in such a way that the product is prevented from running when anything is in the path of the door or gate.
6. Over and above the recommendation to use safety infra-red beams with this product it is mandatory to install and use a safety beam set when using the automatic closing feature. It is recommended that a warning light be fitted to any automation system.
7. The gate or door warning labels must be installed in a prominent place and/or adjacent to any fixed controls that trigger the system. These must be in clear line of sight of the gate or door opening.
8. The emergency manual release instruction label must be installed on or adjacent to the emergency manual release mechanism.

After installation - It is the responsibility of the installer to ensure the users:

1. Is proficient in the use of the manual emergency release mechanism.
2. Is issued with the documentation accompanying this product.
3. Understands that the gate or door may not be operated out of clear sight.
4. Ensures that children are kept clear of the gate or door area at all times, and that children do not play with the remote transmitters or any fixed trigger switches linked to the system.
5. Is instructed not to attempt to repair or adjust the automation system and to be aware of the danger of continuing to use the automation system in an unsafe condition before a service provider attends to it.
6. Is proficient in testing the unit's safety obstruction sensing system.
7. Is aware of what to check for with regards to wear and tear that may need to be attended to from time to time by the service provider.
8. Is aware that a fatigued battery may not be disposed of in the general refuse and must be handed in at a battery merchant for safe disposal. Before removing the battery from the system the household mains must be disconnected. In the case of the motor unit being removed and scrapped, the battery must be removed first.

Technical specifications

Nice Wingo 3524 HS Motor Drive	
Maximum drive arm speed (No load)	40mm/sec
Approximate opening time through 90° *	<10sec
Maximum cycles per day*	720 per 24 hours at a maximum rate of 30 per hour
Maximum gate leaf length*	3,5m per gate leaf
Maximum gate mass*	500kg
Ingress protection	IP44
Operating voltage	24Vdc
Current consumption at rated load	3A
Current consumption at max load	5A
Maximum drive arm thrust	1500N
Operating temperature	-20 to 50 °C
Dimensions (mm)	98x95x920
Weight	6Kg

* Based on the premise that 440mm of stroke is utilised and that the gate is free and even in movement and that it meets the criteria specified in the demand index table on the following page and the mass to leaf length graph following that.

ET/Nice 24V Double Swing Control Unit	
Power supply at control box	29V AC via independent step down transformer(Low traffic applications only)
	230V AC (Mandatory for high traffic applications)
Power consumption	< 30W (250Vac)
Motor voltage	24V DC
Operating temperature range	-10 / +50° C
Anti-crushing safety sensing	Electronic load profiling
Auxiliary output for ancillaries (Peak)	24V DC at 300mA, Automatic electronic overload protection
Rated battery charging voltage	27.6V DC
Receiver format *	ET BLU MIX © backward compatible with ET BLUE (Rolling code)
Receiver frequency *	433.92MHz
Receiver channels	4 (CH1 = BT, CH2 = PED, CH3 = Aux relay, CH4 = Holiday lock-out)
Receiver memory *	64 x 4 channel users (Upgradable)

* This control card does not have a built in receiver but rather makes use of the NICE SM Snap fit receiver connection. The control card is compatible with all of the NICE SM Snap fit receivers as well as the ET SM Snap fit receivers. The NICE SM receiver's functions are not the same as the functions described in this manual. For the NICE receiver functionality please refer to the documentation that comes with the receiver.

ET SM Snap fit receivers come in two user options:
•   64 User memory (Standard in kits)
•   999 User memory (Optional upgrade)

440mm (Full travel distance - 470mm)

920mm

98mm

95mm
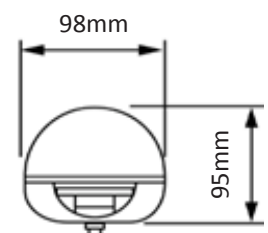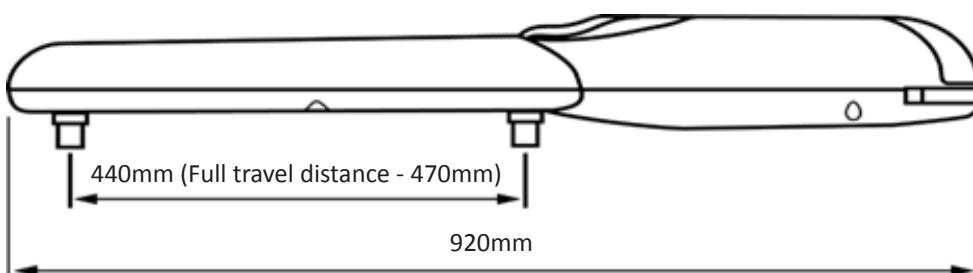
Product durability guide

Demand index table		
Gate leaf mass	>100 Kg	0%
	>200 Kg	10%
	>300 Kg	20%
	>400 Kg	30%
Gate leaf length	1 – 2m	0%
	2 – 3m	10%
	3 – 3.5m	20%
Operating temperature. Near minimum or near maximum.		20%
Cladded gate leaf		15%
Installation in windy area		20%

To determine the probable durability of the Wingo motor that you are installing, proceed to add up the percentage values, of each applicable aspect of the site, as indicated in the demand index table above here.

Once you have found the total percentage value, locate it on the probable durability graph, to the right here. Project a vertical line upwards to see where on the vector it intersects. By extending this intersection point horizontally left you will find the expected total number of operations of the motor in your application. In other words the probable lifespan of the motor measured in operations.

PROBABLE DURABILITY GRAPH

Expected total number of operations.

Demand index total percentage.
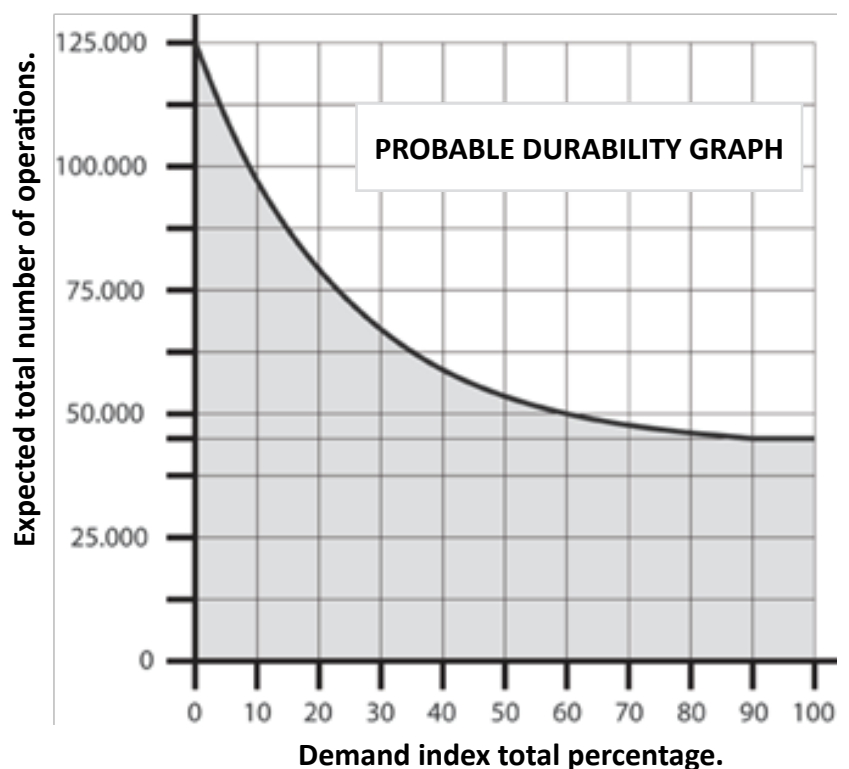
An example of how to use this product durability guide, above, is:

Gate leaf mass = 200Kg (Demand index = 10%) Gate leaf length = 2.5m (Demand index = 10%)
Gate installed in a windy environment (Demand index = 15%)
Total demand index = 35%
Estimated total number of operations = 62 500 operations

NB! The estimated durability calculation has been determined based on the results of a series of tests carried out on prototypes. It needs to be understood that the product durability is an estimation or guide, and is not a guarantee of the actual durability of the product.

Gate leaf length versus gate leaf mass

As the gate length increases, so how heavy the gate can be decreases. Please revert to the graph below for guidance on the limitations of the Wingo motor. In the example; A is acceptable. B is not.

Gate leaf length in meters.
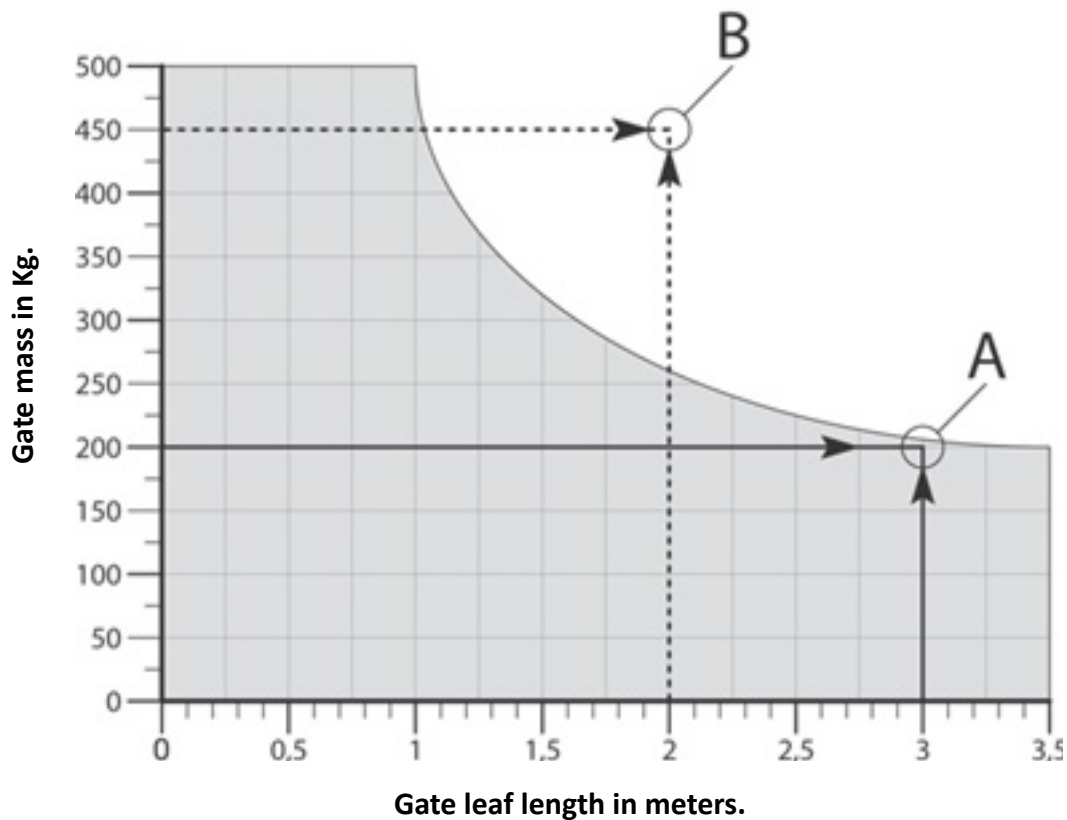
Space limitation

In the case of an inward opening gate, there needs to be enough space allowed for the motor to swing into and the hinge cannot be set too deep into the opening along the column. The diagram below shows the limitations of these space requirements. The minimum space requirement between the hinge and any wall running adjacent to the driveway (F) is 290mm. The maximum depth of the gate hinge to the inside mounting surface of the column the gate is hanging off (C) is 250mm
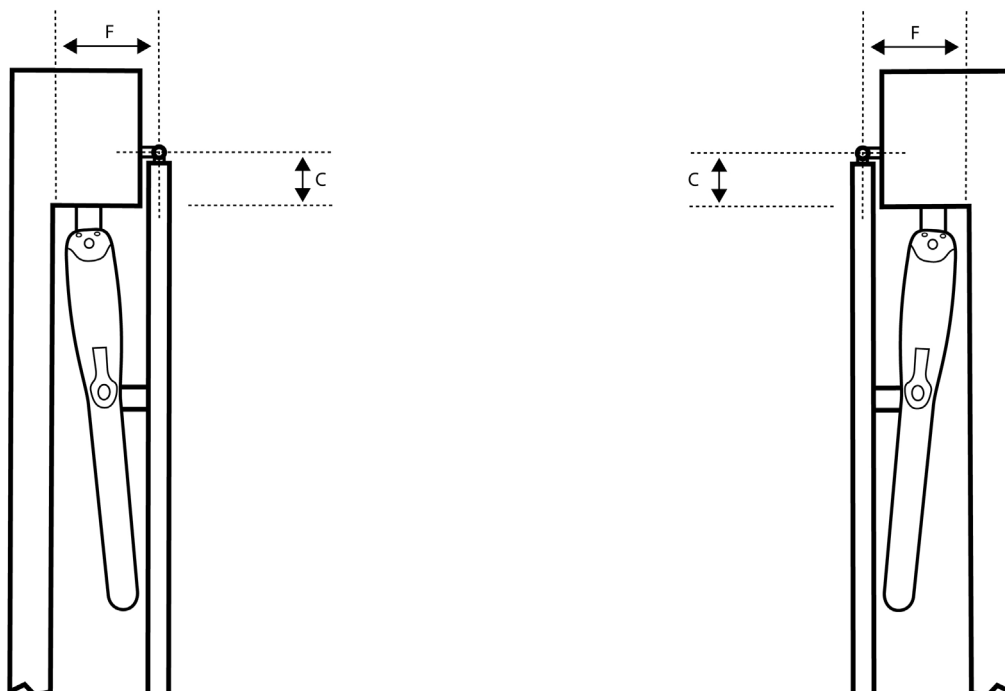
Cabling requirements
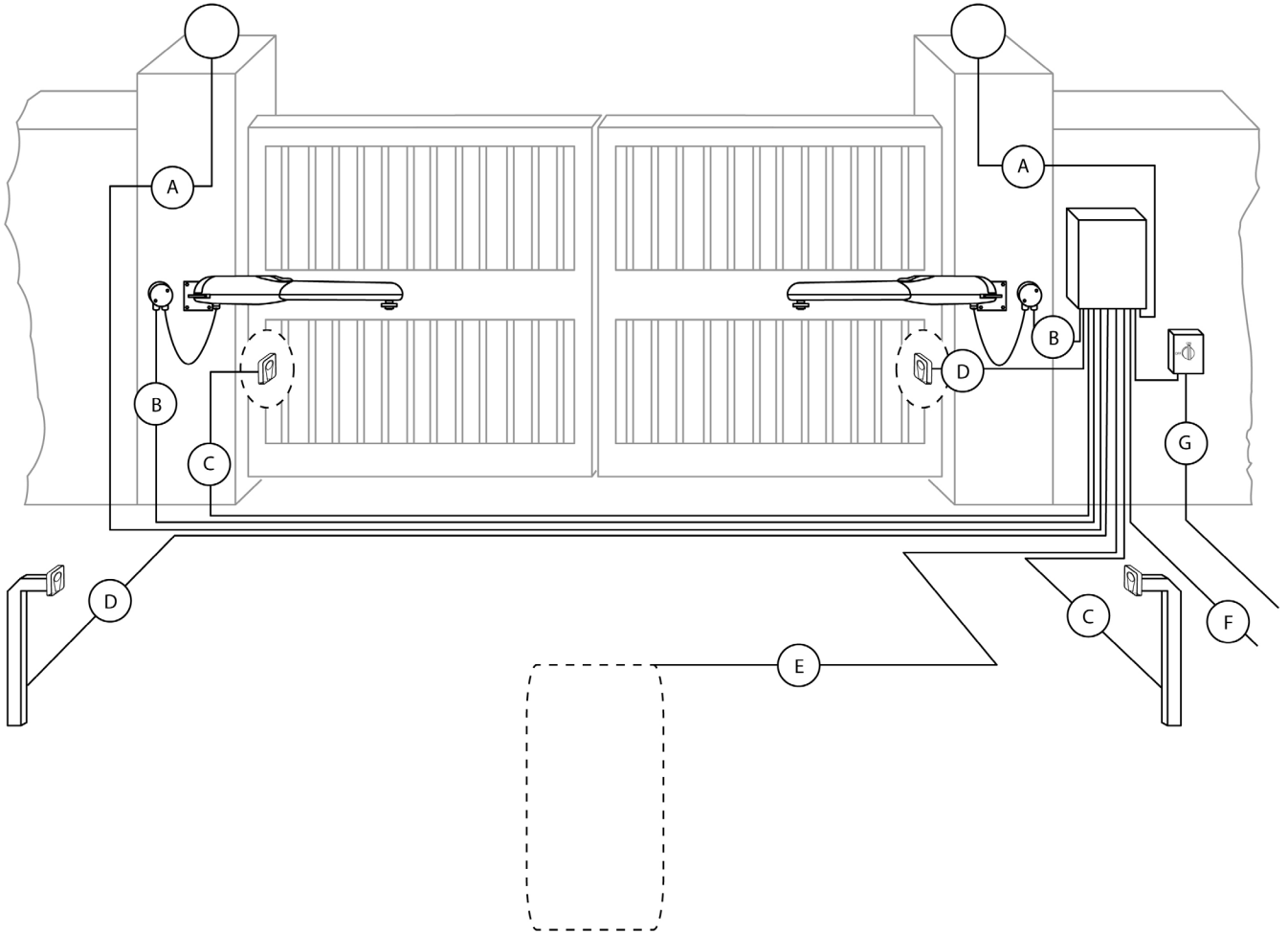
A	Courtesy Light	2 + Earth 1mm (3 Amp max load)
B	Motor 1 and 2 wiring (Maximum cable distance 20m) (5 core Cabtyre)	2 x 1.5mm - Motor, 2 x 1.5mm - encoder, 1 x 1.5mm – Earth.
C	Infra-red safety beams TX (Maximum cable distance 100m)	2 x 0.5mm
D	Infra-red safety beams RX (Maximum cable distance 100m)	4 x 0.5mm
E	Metal loop detector's loop (Maximum cable distance 50m)	1 x 1.5mm silicone panel flex
F	Triggers and status LED to and from house (Maximum cable distance 100m)	1 x 0.5mm – LED, 1 x 0.5mm – Common , 1 x 0.5mm – Button trigger, 1 x 0.5mm – Pedestrian trigger.
G	VAC supply from house	2 + Earth 2.5mm

Determining the motor mounting positions and installing the motors

There is one common factor in all swing gate applications that is unchanging. This factor is the hinges that the gates swing on. No matter the column, style, post or wall that the hinges are fastened to, the gate will always swing on these fixed pivot points. For this reason we take all of the measurements necessary to determine the gate motor positioning from the hinge centers.

The origin line "A" is the shortest distance between the hinge centers "H" on either side of the driveway.

When the gates are closed, they form the origin line.

180mm - 230mm   180mm - 230mm

The inset line "B" is the line, which is inset into the property, that the motor head pivot points will line up on. The inset line should always be parallel to the origin line. In the case of the Wingo motors the inset line can be between **180 and 230 mm from the origin line**.

The origin line and inset line are the same in both inward opening gate and outward opening gate applications.

Once you have found your origin line and you have measured and marked your inset line, you can continue on to the next step in determining your motor mounting positions.

Inward opening gates

180mm - 230mm   180mm - 230mm

Outward opening gates

180mm - 230mm   180mm - 230mm
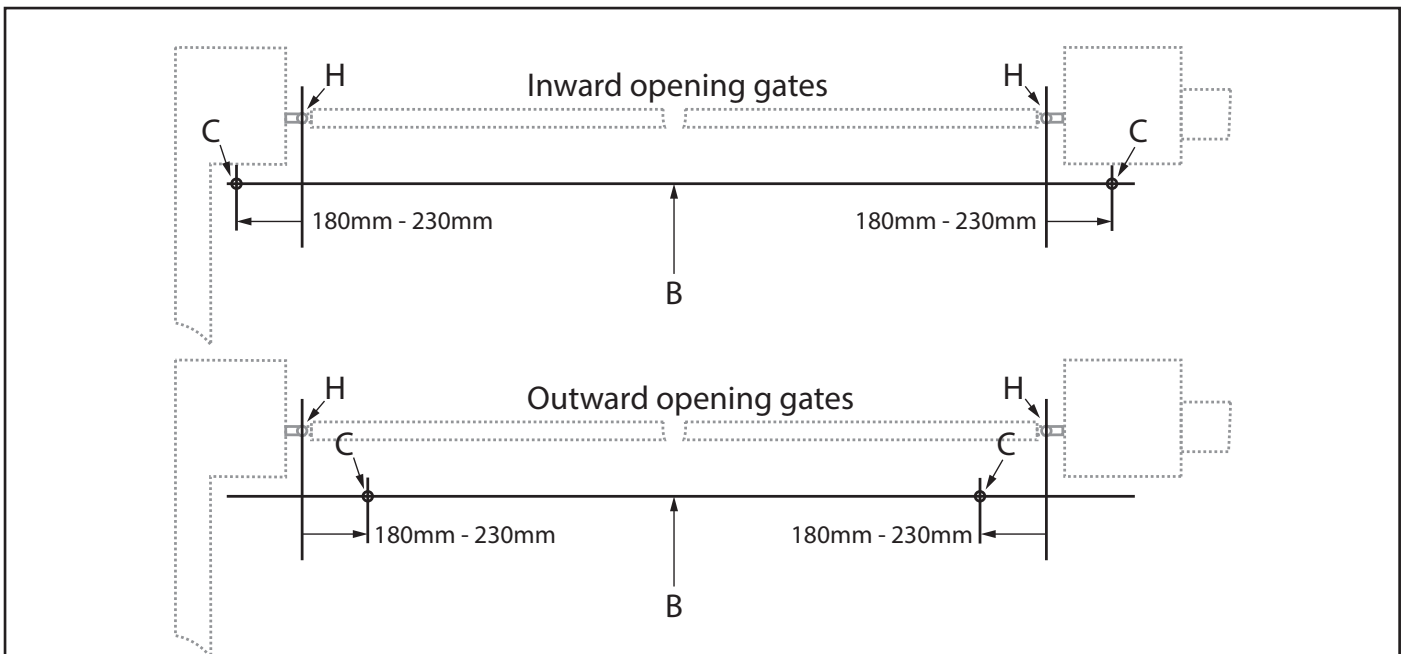
The motor head pivot points "C" are simple to determine once your inset line is in place. It is at this step that inward opening and outward opening gate installations begin to differ. Once again you will need to use the hinge centers "H" as your starting points when measuring for the motor head pivot point positions.
Measure along the inset line and mark off the exact same distance that you used between your origin line and inset line previously, to find the motor head pivot positions "C" as shown here.

NB! Note the difference between inward opening and outward opening positions.

Determining the motor mounting positions and installing the motors

With the motor head pivot positions determined, the next step is to prepare and install the motor head mounting brackets.
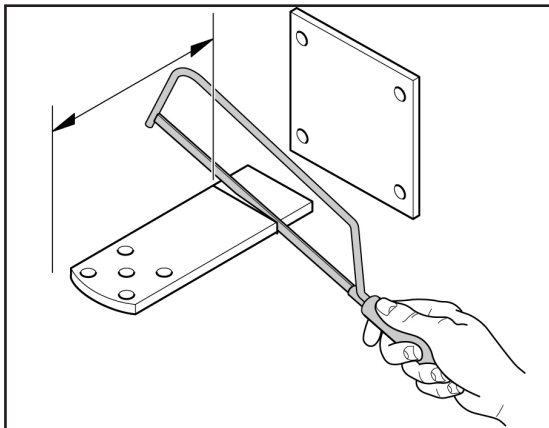
The success or failure of your new swing gate installation hinges on how well you prepare and install your motor mounting brackets. The following points are crucial when preparing your mountings;

•Double check your measurements before trimming any of the brackets.

•Whatever you intend to mount the bracket to, must be able to withstand forces in excess of 1500N. If necessary spread the load delivered through the bracket by adding a larger mounting plate.

•The gate mount bracket should never be mounted directly to a single upright or picket. Rather install a horizontal cross member, from one end of the gate leaf to the other, to spread the forces across the entire gate leaf. Without this cross member the pickets/uprights will bend and bow over time.

•The gate mount bracket should not be trimmed unless you have double checked that the gate does not touch the front of the motor as they swing together all the way through 90⁰.

•Avoid installing the motor head mounting bracket on fiber cement (Vibracrete) or cinder brick walls and columns. Rather install an additional style (post) for the motor head bracket to mount on.

•Do not use self-drilling "TEK" screws to mount any of the brackets.
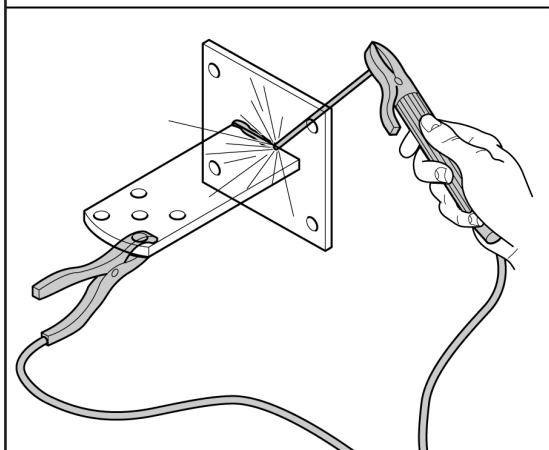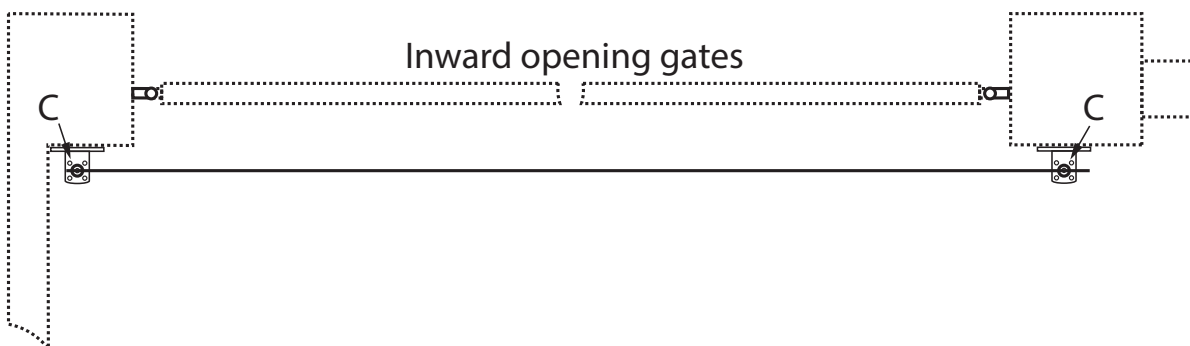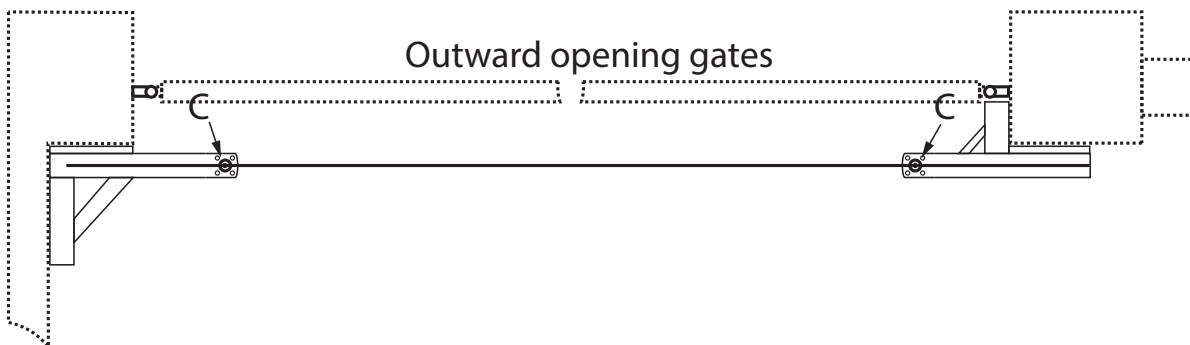
Prepare and install the motor mounting brackets so that the motor head pivot point on the brackets line up with the previously determined positions "C".
NB! In the case of an outward opening installation, you will need to extend and reinforce the brackets. The image shows a couple of examples.

Determining the motor mounting positions and installing the motors
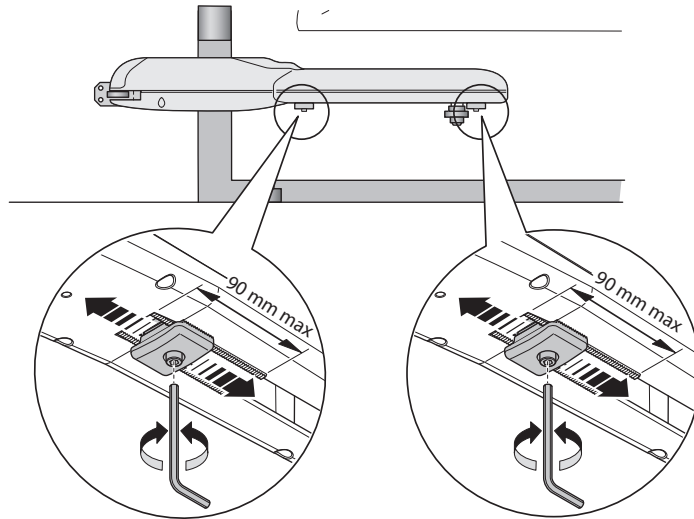
Before continuing to the next step, prepare the ends of travel stoppers on the motor. Each stopper should be positioned to approximately the middle of their range. The maximum range of each stopper is 90mm as indicated in the image here. You will need to use a 5mm Allen® hex key here.

NB! Be careful at this step as the motor is only fastened at one end. Provide sufficient temporary support at the gate mount end of the motor to prevent any possible damage to the motor.

Using a Phillips ® screw driver, loosen the two self-tapping screws holding the motor head cover in place and remove the cover. Using the supplied nut, bolt and washer, mount the motor onto your newly installed motor head mounting bracket as shown here. The nut should not be tightened hard up against the casing but rather just be turned on until it reaches the casing. You will need a 17mm spanner or socket for this.
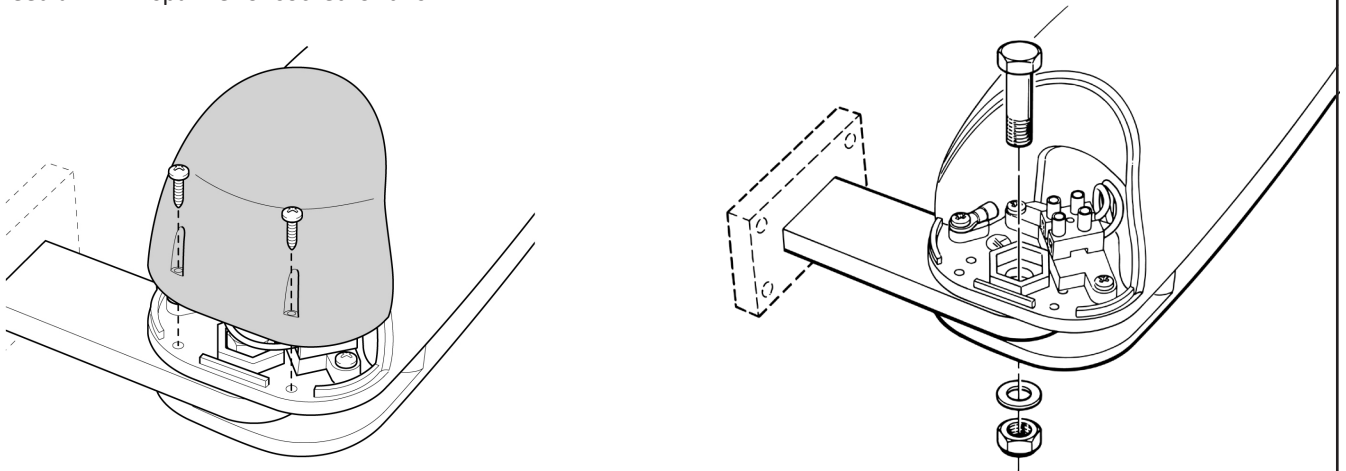
NB! Be careful at this step as the motor is only fastened at one end. Provide sufficient temporary support at the gate mount end of the motor to prevent any possible damage to the motor.
Using the supplied bolt and washer, mount the gate mounting bracket as shown here. You will need a 13mm spanner or socket for this.
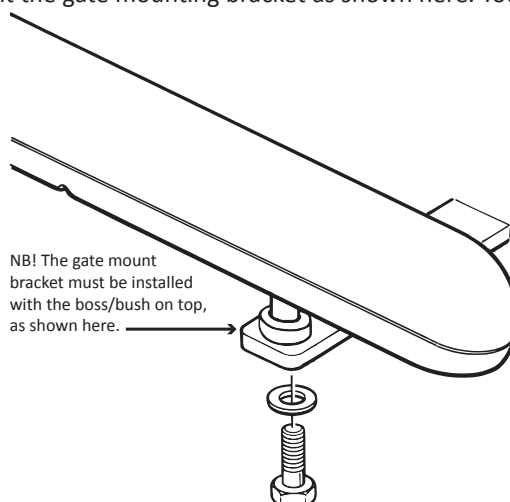
NB! The gate mount bracket must be installed with the boss/bush on top, as shown here.

Determining the motor mounting positions and installing the motors

For an inward opening installation, move the gate mount bracket and traveler up to the end stopper furthest away from the motor head.

For an outward opening installation, move the gate mount bracket and traveler up to the end stopper nearest to the motor head.

NB! To move the traveller at this stage, run the motor directly off the battery with the gearbox engaged.

Swing the motor to the gate in the closed position, so that the back of the gate mount bracket rests flush against the gate "D". As indicated below. Mark the gate at this point.

Remove the gate mount bracket from the motor again and then weld the bracket onto the gate where you made your markings. In the cases where it is not possible to weld the bracket directly onto the gate, then a small backing plate must be welded onto the gate mount bracket so that the backing plate can be fastened onto the gate. Do not trim the gate mount bracket unless absolutely certain the front of the motor will not touch the gate at any point in the travel through 90°.

NB! Please note the 30mm height difference between the motor head bracket and the gate bracket as shown here.

Inward opening gates

Outward opening gates

30mm
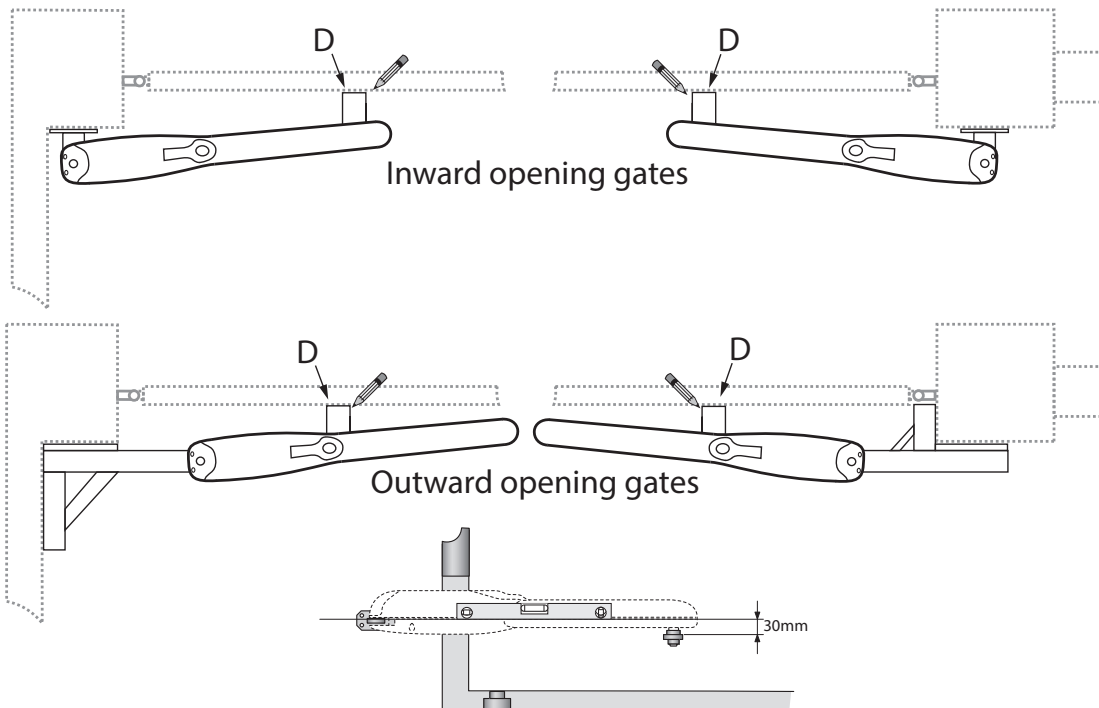
Wiring connections

Feed your cabtyre via the cable gland at the base of the motor head into the terminal connection chamber. Following the label inside the terminal connection chamber, connect up your cabling.

• The encoder wiring is not polarity sensitive thus the encoder wiring can be connected either way around.
• The motor wiring direction is tested when the runtime and profiling setup routine is carried out. If your wiring is the wrong way around at this stage it is not critical as you can correct it when you reach that step in the setup.

ET SYSTEMS
MD2010

PRESENCE MODE

COM
N/O
N/C

0V
16 - 24Vac
12 - 24Vdc

LOOP

Safety Beam
TX

\+ -

Safety Beam
RX

\+ -
N/O
Com
N/C

100Ω

NB! The end of line 100 ohm
resistor supplied, must be fitted
in the beam receiver as shown here.

Status LED

Ped trigger
N/O
N/C

Button trigger
N/O
N/C

Relay
\+ -
N/O
Com
N/C

See next
page for
example

Motor 2 Encoder

Motor 2

Motor 1 Encoder

Motor 1

See next page
for AUX relay
wiring options.

Additional battery
terminals are for use when
connecting solar or
extended battery kits.

230Vac

29Vac

Earth

+24V
GND
BT
PED
MD
BM
ALM
ST
GND
+24V
GND
ENC2
M2
M2
GND
ENC1
M1
M1
N/C
COM
N/O
BAT
GND
BAT+
AC
E
AC

BT
PED
MD
BM
ALM
ST
24v
ENC2
ENC1

ET-NICE RECEIVER

ET-NICE SWING v3 2015

M2 FUSE
M1 FUSE
RLY FUSE

M1 CLOSING
M1 OPENING
M2 CLOSING
M2 OPENING

UP
DOWN

BAT
PWR

SET
EXIT

AC
E
AC

Courtesy light wiring

AUX Relay Fuse F3
5 Amp Fast blow

M1 LO
LED

BAT
Conn10
Conn5
AUX relay
C   NO COM NC   M1+ M1-
Conn7

Live

Minimum 1,5mm
cross section wire.

Neutral

220V non-inductive
light bulb/s.
3A continuous.
5A peak.

Magnetic lock wiring

AUX Relay Fuse F3
5 Amp Fast blow

M1 LO
LED

BAT
Conn10
Conn5
AUX relay
C   NO COM NC   M1+ M1-
Conn7

+
0V

Battery back-up
power-supply rated
to match the lock
load.

IN4007 back
EMF diode.

0V   +

Magnetic lock.

Strike lock wiring

AUX Relay Fuse F3
5 Amp Fast blow

M1 LO
LED

BAT
Conn10
Conn5
AUX relay
C   NO COM NC   M1+ M1-
Conn7

+
0V

Battery back-up
power-supply rated
to match the lock
load.

IN4007 back
EMF diode.

0V   +

Strike lock.

Alarm relay wiring

The Alarm output will go low in an alarm
condition.
The circuit below is an example using an
audible sounder. This output can be linked
to the household alarm system, a LED or one
of the garden lights even.

ST   ALM BM   MD   PED BT
GND ST   ALM BM   MD   PED BT   GND +24V

Power
supply
+   -

+
-
N/O   Relay
Com
N/C

NB! Before continuing ensure all wiring and connections are correct and firm. All switching input circuits should be tested using their LED indicators to ensure they are switching correctly and that they are not false triggering.

NB!! A linear type motor such as the Wingo swings in conjunction with the gate while it is operating. This means the cable transferring the motor and encoder circuits to and from the motor must also move. If sufficient slack is not allowed for the cable to flex and move, the cabled circuits can and will be damaged in this section of the circuit.

- Ensure that you have allowed enough cable length so that the cable does not pull taught at any point in the gate travel.
- Do not cable tie, tape or fasten the cables to any fixed point. Always allow the cables to hang naturally and free.
- Ensure the cables do not snag or catch on anything as the gates swing back and forth.

How To Use The Manual Override.	
To manoeuvre the gates manually by hand, you need to disengage the gearboxes by completing the following steps.	
Putting the motors into manual override.	
Slide the lock cover open.	
Insert key and turn to unlock.	
Lift the manual override lever.	
You are now able to manoeuvre the gates to any position by hand.	
Engaging the motors after manual override.	
Lower the manual override lever back down.	
Using the key lock the lever in place.	
Cover the lock again by sliding the lock cover over it.	
You are now able to use the gate automation again.	
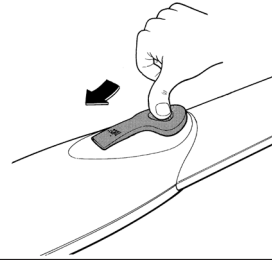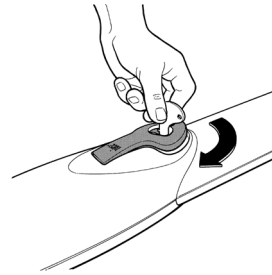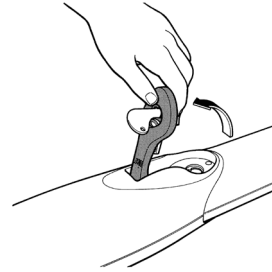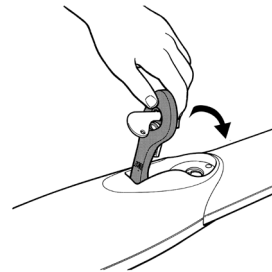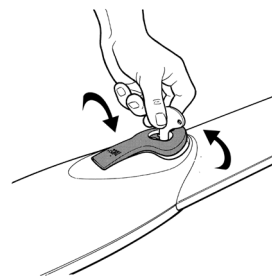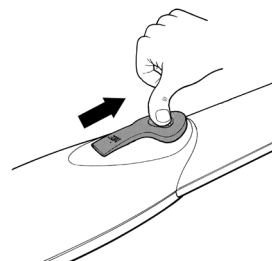
Adjusting and setting the mechanical ends of travel stoppers.

Before continuing to the next step, ensure the ends of travel stoppers on each motor is adjusted to the final ends of travel positions for both the open and closed direction. When satisfied, make sure the stoppers are fastened firmly in place.

90 mm max

90 mm max
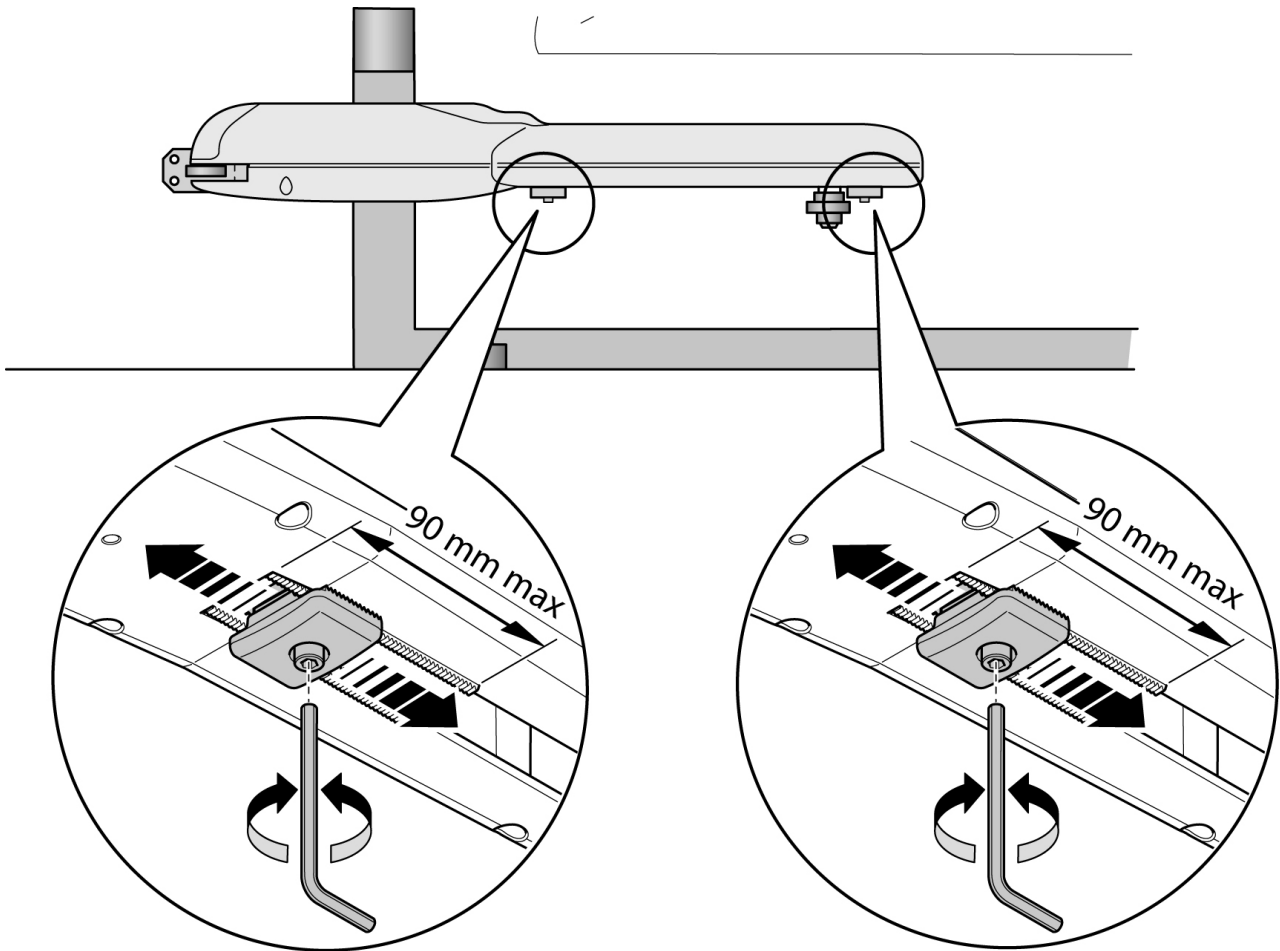
NB!! If either of the stoppers shifts, or is moved after the initial runtime and profiling routine has been completed then the motors will not run correctly and the software will constantly try to reference the gate travel. In lighter material gates or longer gate leaves, that present flexing in the gate leaf itself, adding ground stoppers will provide greater security as the gates will have more to positively close against. If ground stoppers are in place it is still imperative that the mechanical ends of travel stoppers on the motor themselves are in the correct position and sufficiently fastened.

rdY — Ready state

Prg — Programming menu

Page 18 — **run** — Runtime setup

Page 19 — **typ** — Motor type selection
- **001** — Wingo
- **002** — Toona

Page 26 — **PSu** — Power supply setup
- **Ac** — AC monitoring
- **chr** — Charger On/Off

Page 23 — **SLo** — Slow down distance

Page 25 — **LPt** — Loop detector trigger setup

Page 22 — **PEd** — Pedestrian open setup

Page 21 — **bt** — Button trigger setup
- **con** — Condominium mode
- **Aut** — Simple auto-close mode
- **Std** — Standard mode

Page 25 — **PcL** — Positive close mode

Page 24 — **rLY** — Auxiliary relay setup
- **Lit** — Courtesy light mode
- **rc** — Receiver relay
- **Lc2** — Mag-lock mode
- **Lc1** — Strike lock mode

Page 19 — **dLY** — Gate delay setup

Page 20 — **irb** — Safety beam setup

Page 20 — **For** — Collision force setup

Page 27 — **rc** — Receiver setup.
- **Lrn** — Learn menu
  - **inF** — Version information
  - **diA** — Diagnostic tool
  - **ErA** — Erase menu
    - **ALL** — Erase all
    - **Adr** — Erase address
  - **cor** — Corresponding button learn
  - **hoL** — Holiday lock-out channel
  - **rLY** — Auxiliary relay channel
  - **PEd** — Pedestrian channel
  - **bt** — Button trigger channel

Programming dashboard

Pressing and releasing exit once at any stage of the menu, takes you back one level in the menu.
For example if you want to exit back to "rdy" status from strike lock mode setup. Press exit twice.
Pressing exit while busy with the runtime setup routine will cancel the setup and no runtime or load profiling will be stored in memory. You will not be able to operate the gates until this routine has been completed.
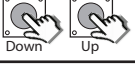
SET | **UP**
**Exit** | **DOWN**

Battery power button.

In cases where the battery is connected before the VAC supply is, it is possible to power up and test the control card by simply pressing and holding the BAT PWR button for 5 seconds.

BAT PWR

UP
EXIT — SET
DOWN
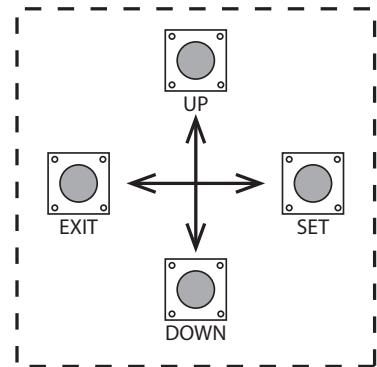
run	Setting up the gates' runtime. (Mandatory)

| From Ready status	rdY	Before continuing with the runtime setup; the mounting brackets installation must be completed properly and the ends of travel stoppers must be installed as per page 16. In the case of a single swing installation, the motor must be connected to M1. Begin with the gates engaged and in the middle of travel.

Action		Response			
		Description	Display	Buzzer	Gate/s
To enter the program menu. Press and hold SET until buzzer beeps.	SET	Display changes to "Prg" and buzzer beeps.	Prg	))) x2	
Press and release the down button once to scroll to "run"	Down	Display changes with each button press.	run		
With "run" on the display, press and release SET.	SET	Buzzer beeps once and "CL1" displays to indicate motor 1 wiring configuration needs to be tested.	CL1	))) x1	
Press and hold the UP button to ensure gate 1 runs closed.	UP	"CL1" remains displayed and the motor connected to motor 1 output begins running closed.	CL1		
Release the up button after confirming that gate 1 has begun running closed. If gate 1 did not close, correct your wiring.					
Press and release SET button to advance to the next stage of runtime setup.	SET	Buzzer beeps once and "CL2" displays to indicate motor 2 wiring configuration needs to be tested.	CL2	))) x1	
Press and hold the UP button and ensure gate 2 runs closed.	UP	"CL2" remains displayed and the motor connected to motor 2 output begins running closed.	CL2		
Release the up button after confirming that gate 2 has begun running closed. If gate 2 did not close, correct your wiring.					
Press and release SET button to begin the learn gate travel distances.	SET	"Lrn" displays. Motor 2 closes until its gate surges closed.	Lrn	))) On/off...	
		"Lrn" displays. Motor 1 closes until its gate surges closed.	Lrn	))) On/off...	
		"Lrn" displays. Motor 1 runs until its gate surges open.	Lrn	))) On/off...	
		"Lrn" displays. Motor 2 runs until its gate surges open.	Lrn	))) On/off...	
		"Lrn" displayed. Motor 2 runs fully closed at normal speed.	Lrn	))) On/off...	
		"Lrn" displayed. Motor 1 runs fully closed at normal speed.	Lrn	))) On/off...	
Gate 1 reaches closed position.		Buzzer silences and display reverts to "Prg"	Prg		
Scroll up or down to next program option.	Down Up	OR	EXIT back to Ready status	Exit	rdY
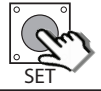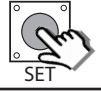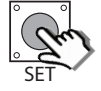
Selecting the motor type. (Mandatory)					ᵗYᴾ (tYP)
From Ready status		rdY	The gates can be in any position when performing this routine. The factory default is TYPE 001 Wingo. The motor types that can be used on this control card are: Wingo or Toona.		

Action		Response			
		Description	Display	Buzzer	Gate/s
To enter the program menu. Press and hold SET until buzzer beeps.	SET	Display changes to "Prg" and buzzer beeps.	Prg	x2	Not applicable.
Use the UP or Down buttons and scroll until "tyP" displays	Down Up	Display changes with each button press.	tYP		Not applicable.
With "tyP" on the display, press and release SET.	SET	Current selection displays and buzzer beeps.	001	x1	Not applicable.
Use the UP or Down buttons to select the required motor type group.	Down Up	Wingo	001		Not applicable.
		Toona	002		Not applicable.
With required motor type group displayed, press and release SET	SET	Display reverts to "Prg" and buzzer beeps twice.	Prg	x2	Not applicable.
Scroll up or down to next program option.	Down Up	OR	EXIT back to Ready status	Exit	rdY
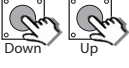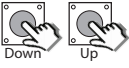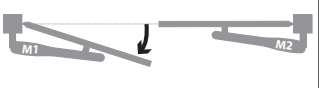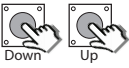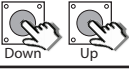
Setting up the delayed start between the two gates					dLY
From Ready status		rdY	The gates can be in any position when performing this routine. The factory default is delay mode off. The available time range is 1-20 seconds.		

Action		Response			
		Description	Display	Buzzer	Gate/s
To enter the program menu. Press and hold SET until buzzer beeps.	SET	Display changes to "Prg" and buzzer beeps.	Prg	x2	Not applicable.
Use the UP or Down buttons and scroll until "dLy" displays	Down Up	Display changes with each button press.	dLY		Not applicable.
With "dLy" on the display, press and release SET.	SET	Current selection displays and buzzer beeps.	oFF	x1	Not applicable.
Use the UP or Down buttons to select the required delay time.	Down Up	Display changes by 1 second with each button press.	003		Not applicable.
With required time displayed, press and release SET	SET	Display reverts to "Prg" and buzzer beeps twice.	Prg	x2	Not applicable.
Scroll up or down to next program option.	Down Up	OR	EXIT back to Ready status	Exit	rdY

For	Adjusting the safety level of the collision force sensing.
From Ready status — rdY	This sets the amount of collision force before the safety overload routines trigger. The gates can be in any position when performing this routine. The factory default level is 003. The available range is 009. Levels 001 -003 are calibrated to conform to the CE safety standards.

Action		Response			
		Description	Display	Buzzer	Gate/s
To enter the program menu. Press and hold SET until buzzer beeps.	SET	Display changes to "Prg" and buzzer beeps.	Prg	x2	Not applicable.
Use the UP or Down buttons and scroll until "For" displays	Down Up	Display changes with each button press.	For		Not applicable.
With "For" on the display, press and release SET.	SET	Current selection displays and buzzer beeps.	003	x1	Not applicable.
Use the UP or Down buttons to select the required safety level.	Down Up	Display changes with each button press.	004		Not applicable.
With required level displayed, press and release SET	SET	Display reverts to "Prg" and buzzer beeps twice.	Prg	x2	Not applicable.
Scroll up or down to next program option.	Down Up	OR	EXIT back to Ready status	Exit	rdY
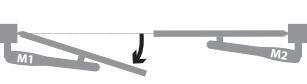
irb	Switching the safety beam input on, for use in Standard BT mode.
From Ready status — rdY	The factory default is off. The gates can be in any position when performing this routine. PLEASE NOTE!!! If any trigger option, that makes use of an automatic closing timer, is used then the safety beam input becomes active for that transaction.

Action		Response			
		Description	Display	Buzzer	Gate/s
To enter the program menu. Press and hold SET until buzzer beeps.	SET	Display changes to "Prg" and buzzer beeps.	Prg	x2	Not applicable.
Use the UP or Down buttons and scroll until "irb" displays	Down Up	Display changes with each button press.	irb		Not applicable.
With "irb" on the display, press and release SET.	SET	Current selection displays and buzzer beeps.	oFF	x1	Not applicable.
Use the UP or Down buttons to change between either on or off.	Down Up	Display changes with each button press.	on		Not applicable.
With required selection displayed, press and release SET	SET	Display reverts to "Prg" and buzzer beeps twice.	Prg	x2	Not applicable.
Scroll up or down to next program option.	Down Up	OR	EXIT back to Ready status	Exit	rdY

NB! The End of line 100Ω resistor must be installed in the safety beam receiver as shown on page 13 to allow the gates to close.
The safety beam function on this control card conforms to the CE safety standards.

Selecting a BT operating mode and adjusting the auto-close time for it.		bt

From Ready status	rdY	The factory default is standard 4 step logic mode. The factory default auto-close time is 15 seconds. The time range is 1 - 255 seconds. **PLEASE NOTE!! If any trigger option that makes use of an automatic closing timer is used then the infra-red safety beam input becomes active for that transaction. A set of infra-red safety beams must be installed using the technique indicated in this manual to allow the gates to closed. The safety beam function and automatic closing functions on this control card conform to the CE safety standards.**

Action		Response			
		Description	Display	Buzzer	Gate/s
To enter the program menu. Press and hold SET until buzzer beeps.	SET	Display changes to "Prg" and buzzer beeps.	Prg	x2	Not applicable.
Use the UP or Down buttons and scroll until "bt" displays	Down Up	Display changes with each button press.	bt		Not applicable.
With "bt" on the display, press and release SET.	SET	Current selection displays and buzzer beeps.	Std	x1	Not applicable.
Use the UP or Down buttons to select the required delay time.	Down Up	Display changes by 1 second with each button press.	Std Aut con		Not applicable.
With required setting displayed, press and release SET	SET	If Std was selected, then the buzzer beeps twice and the display reverts to "Prg"	Prg	x2	Not applicable.
		If Aut or con were selected, then the buzzer beeps once and the current auto-close time will display.	015	x1	Not applicable.
If the auto-close time is displayed, then adjust the time with the UP and DOWN buttons if necessary.	Down Up	Display changes in seconds with each button press.	020		Not applicable.
With required setting displayed, press and release SET	SET	Display reverts to "Prg" and buzzer beeps twice.	Prg	x2	Not applicable.
Scroll up or down to next program option.	Down Up	OR	EXIT back to Ready status	Exit	rdY

PEd	Adjusting the opening distance and auto-close time for the pedestrian trigger.

From Ready status	rdY	This routine can only be carried out in the closed position. The factory default opening is +/-900mm and the auto-close time is 3 seconds. Pedestrian opening is limited to gate 1 only. The opening distance range is any distance up to and including full open. The pedestrian auto-close timer range is 1 - 255 seconds.

| Action		Response			
		Description	Display	Buzzer	Gate/s
To enter the program menu. Press and hold SET until buzzer beeps.	SET	Display changes to "Prg" and buzzer beeps.	Prg	x2	
Use the UP or Down buttons and scroll until "PEd" displays	Down Up	Display changes with each button press.	PEd		
With "PEd" on the display, press and release SET.	SET	Display shows the current Ped auto-close time and buzzer beeps once	003	x1	
Use the UP or Down buttons to select the required delay time.	Down Up	Display changes by 1 second with each button press.	004		
With required setting displayed, press and release SET	SET	Display changes to "AdJ"	AdJ		
Press and hold the UP button to run gate 1 open. Release the button at the required opening.	UP	Gate 1 runs so long as the UP button is being pressed.	AdJ		
Fine tune the opening position using the UP and DOWN buttons, if required.	Down Up	Gate 1 moves open or closed respectively	AdJ		
When satisfied with the opening distance, press and release SET.	SET	"CL1" displays and gate 1 closes slowly.	cL1		
Gate 1 reaches the closed position.		Display reverts to "Prg" and buzzer beeps twice.	Prg	x2	
Scroll up or down to next program option.	Down Up	OR	EXIT back to Ready status	Exit	rdY

Adjusting the position the gates begin slowing down from at the ends of travel.	SLo

From Ready status	rdY	The gates must be in the closed position to carry out this routine. This automatically sets the slowdown position for both gates in both directions even though you are only setting gate 1 closing direction slow down distance. NB! To conform to the CE Safety standards collision sensing criteria, the slow down distance cannot be adjusted when collision sensing safety level 1 or 2 have been selected.

Action		Response			
		Description	Display	Buzzer	Gate/s
To enter the program menu. Press and hold SET until buzzer beeps.	SET	Display changes to "Prg" and buzzer beeps.	Prg	◁))) x2	
Use the UP or Down buttons and scroll until "Slo" displays	Down Up	Display changes with each button press.	SLo		
With "Slo" on the display, press and release SET.	SET	Display changes to "AdJ"	AdJ	◁))) x1	
Press and hold the UP button to run gate 1 open. Release the button at the position the gates must begin slowing down from, for the closing direction.	UP	Gate 1 runs so long as the UP button is being pressed.	AdJ	
Fine tune the position using the UP and DOWN buttons, if required.	Down Up	Display changes to "AdJ"	AdJ	
When satisfied with the position, press and release SET.	SET	"CL1" displays and gate 1 closes slowly.	cL1	
Gate 1 reaches the closed position.		Display reverts to "Prg" and buzzer beeps twice.	Prg	◁))) x2	
Scroll up or down to next program option.	Down Up	OR	EXIT back to Ready status	Exit	rdY

rLy	Selecting the Auxiliary relay's mode of operation.

From Ready status	rdY	The gates can be in any position when performing this routine. The factory default is Lc1 Strike-lock mode.

Action		Response			
		Description	Display	Buzzer	Gate/s
To enter the program menu. Press and hold SET until buzzer beeps.	SET	Display changes to "Prg" and buzzer beeps.	Prg	x2	Not appicable.
Use the UP or Down buttons and scroll until "rLy" displays	Down Up	Display changes with each button press.	rLy		Not appicable.
With "rLy" on the display, press and release SET.	SET	The current setting is displayed and buzzer beeps once	Lc1	x1	Not appicable.
Use the UP or Down buttons to select the required relay mode.	Down Up	Strike-lock mode	Lc1		Not appicable.
		Mag-lock mode	Lc2		
		Receiver relay mode	rc		
		Courtesy light mode	Lit		
With required selection displayed, press and release SET	SET	If Lc1, Lc2 or Lit modes were selected, the buzzer beeps twice and Prg is displayed.	Prg	x2	Not appicable.
		If rc was selected, the buzzer beeps once and the current 1 second relay pulse setting is displayed.	001	x1	Not appicable.
Use the UP or DOWN buttons to change the relay pulse length or to select latch mode	Down Up	Latch mode.	LAt		Not appicable.
		Minimum pulse length in seconds.	001		
		Maximum pulse length in seconds.	255		
With required selection displayed, press and release SET	SET	Display reverts to "Prg" and buzzer beeps twice.	Prg	x2	Not appicable.
Scroll up or down to next program option.	Down Up	OR	EXIT back to Ready status	Exit	rdY
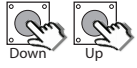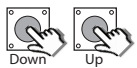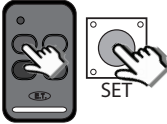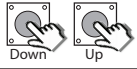
Selecting the positive close mode. `PcL`

From Ready status	`rdY`	The gates can be in any position when performing this routine. The factory default is off.		

Action		Response			
		Description	Display	Buzzer	Gate/s
To enter the program menu. Press and hold SET until buzzer beeps.	SET	Display changes to "Prg" and buzzer beeps.	`Prg`	x2	Not appicable.
Use the UP or Down buttons and scroll until "PcL" displays	Down Up	Display changes with each button press.	`PcL`		Not appicable.
With "PcL" on the display, press and release SET.	SET	The current setting is displayed and buzzer beeps once	`oFF`	x1	Not appicable.
Use the UP or Down buttons to select the required positive close setting.	Down Up	Positive close mode off.	`oFF`		Not appicable.
		Positive close mode on.	`on`		
With required selection displayed, press and release SET	SET	The buzzer beeps twice and Prg is displayed.	`Prg`	x2	Not appicable.
Scroll up or down to next program option.	Down Up	OR	EXIT back to Ready status	Exit	`rdY`

Adjusting the loop detector trigger mode auto-close time. `LPt`

From Ready status	`rdY`	The gates can be in any position when performing this routine. The factory default time is 15 seconds. The time range is 1 - 255 seconds.		

Action		Response			
		Description	Display	Buzzer	Gate/s
To enter the program menu. Press and hold SET until buzzer beeps.	SET	Display changes to "Prg" and buzzer beeps.	`Prg`	x2	Not appicable.
Use the UP or Down buttons and scroll until "LPt" displays	Down Up	Display changes with each button press.	`LPt`		Not appicable.
With "LPt" on the display, press and release SET.	SET	The current setting is displayed and buzzer beeps once	`015`	x1	Not appicable.
Use the UP or Down buttons to select the required time.	Down Up	Minimum time.	`001`		Not appicable.
		Maximum time.	`255`		
With required selection displayed, press and release SET	SET	The buzzer beeps twice and Prg is displayed.	`Prg`	x2	Not appicable.
Scroll up or down to next program option.	Down Up	OR	EXIT back to Ready status	Exit	`rdY`

PSu	Switching the AC Monitoring and/or built-in charger on or off.				
From Ready status		rdY	The gates can be in any position when performing this routine. **The factory default is:** **AC Monitoring - On** **Charger - On**		

Action		Response			
		Description	Display	Buzzer	Gate/s
To enter the program menu. Press and hold SET until buzzer beeps.	SET	Display changes to "Prg" and buzzer beeps.	Prg	x2	Not appicable.
Use the UP or Down buttons and scroll until "PSu" displays	Down Up	Display changes with each button press.	PSu		Not appicable.
With "PSu" on the display, press and release SET.	SET	Display changes to "chr" and buzzer beeps.	chr	x1	Not appicable.
Use the UP or Down buttons to select the required option you would like to change.	Down Up	Charger.	chr		Not appicable.
		AC Monitoring.	Ac		
With required selection displayed, press and release SET	SET	The current setting for that option is displayed and buzzer beeps once	on	x1	Not appicable.
Use the UP or DOWN buttons to select the required setting.	Down Up	Display changes with each button press.	oFF		Not appicable.
With required selection displayed, press and release SET	SET	Display reverts to either "chr" or "Ac"and buzzer beeps.	Ac	x1	Not appicable.
			chr		
Scroll up or down to next program option.	Down Up	OR	EXIT back to Ready status	Exit	rdY

Receiver setup - Learning remote button codes into the receiver memory. Independent button into independent channel method.					Lⁿn

From Ready status	rdY	The gates can be in any position when performing this routine. Please note that if an ET BLU MIX © transmitter is being used and not all of the buttons have been set to the same format, then the receiver will allocate 2 user addresses for the various buttons. 1 for the buttons set to ET BLU MIX© and 1 for the buttons set to ET BLUE.

Action		Response			
		Description	Display	Buzzer	Gate/s
To enter the program menu. Press and hold SET until buzzer beeps.	SET	Display changes to "Prg" and buzzer beeps.	Prg	x2	Not appicable.
Use the UP or Down buttons and scroll until "rc" displays	Down Up	Display changes with each button press.	rc		Not appicable.
With "rc" on the display, press and release SET.	SET	"Lrn" is displayed and buzzer beeps once	Lⁿn	x1	Not appicable.
With "Lrn" on the display, press and release SET.	SET	"bt" is displayed and buzzer beeps once	bt	x1	Not appicable.
Use the UP or Down buttons to select the required channel. NB! Corresponding 4 channel learn option is explained in the next instruction table on the next page.	Down Up	Button trigger channel.	bt		Not appicable.
		Pedestrian trigger channel.	PEd		
		Auxiliary relay channel.	rLY		
		Holiday lock-out channel.	hoL		
		Corresponding 4 channel learn option.	cor		
With the required channel displayed, begin transmitting with the new remote button for that function.					Not appicable.
While still transmitting with the remote button, press and release SET.	SET	After the SET button has been released, the user address for that transmitter displays and the buzzer beeps once.	001	x1	Not appicable.
Release the transmitter button.					
Repeat the last 4 steps for additional remotes or press and release EXIT once to go back one level to the main receiver setup options.	Exit	"Lrn" displays and buzzer beeps once.	Lⁿn	x1	Not appicable.
Scroll up or down to next program option.	Down Up	OR	EXIT back to Ready status	Exit	rdY

cor	Receiver setup - Learning remote button codes into the receiver memory. Automatic 4 corresponding channel allocation method.

From Ready status	r d Y	The gates can be in any position when performing this routine.

Action	Response			
		Description	Display	Buzzer	Gate/s
To enter the program menu. Press and hold SET until buzzer beeps.	SET	Display changes to "Prg" and buzzer beeps.	Prg		Not appicable.
Use the UP or Down buttons and scroll until "rc" displays	Down Up	Display changes with each button press.	rc	x2	Not appicable.
With "rc" on the display, press and release SET.	SET	"Lrn" is displayed and buzzer beeps once	Lrn	x1	Not appicable.
With "Lrn" on the display, press and release SET.	SET	"bt" is displayed and buzzer beeps once	bt	x1	Not appicable.
Use the UP or Down buttons to select "cor" corresponding 4 channels learn.	Down Up	Corresponding 4 channel learn option.	cor		Not appicable.
With the "cor" displayed, begin transmitting any button on the new remote transmitter.					Not appicable.
While still transmitting with the remote button on the transmitter, press and release SET.	SET	After the SET button has been released, the user address for that transmitter displays and the buzzer beeps once.	001	x1	Not appicable.
Release the transmitter button.					
Each button on that remote transmitter has been allocated to the channels on the receiver. Please see below for the automatic button to receiver channel allocations.					
Repeat the last 4 steps for additional remotes or press and release EXIT once to go back one level to the main receiver setup options.	Exit	"Lrn" displays and buzzer beeps once.	Lrn	x1	Not appicable.
Scroll up or down to next program option.	Down Up	OR	EXIT back to Ready status	Exit	r d Y

ET BLU MIX ©

Blue - BT Channel
Green - PED Channel
Red - RLY Channel
Grey - HOL Channel

ET BLUE

Blue - RLY Channel
Green - HOL Channel
Red - PED Channel
Grey - BT Channel
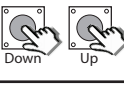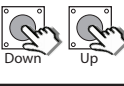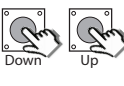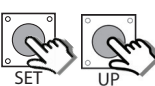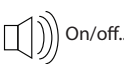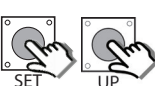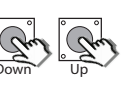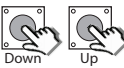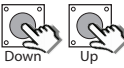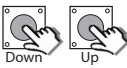
All buttons should be set to either ET BLUE format or ET BLU MIX © format for this to work as shown here.
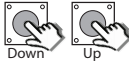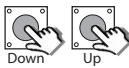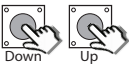
Receiver setup - Erasing options. Erasing a single user address.					Adr

From Ready status	rdY	The gates can be in any position when performing this routine.

Action		Response			
		Description	Display	Buzzer	Gate/s
To enter the program menu. Press and hold SET until buzzer beeps.	SET	Display changes to "Prg" and buzzer beeps.	Prg	x2	Not appicable.
Use the UP or Down buttons and scroll until "rc" displays	Down Up		rc		Not appicable.
With "rc" on the display, press and release SET.	SET	Display changes to "Lrn" and buzzer beeps once	Lrn	x1	Not appicable.
Use the UP or Down buttons to select "ErA"	Down Up	Display changes with each button press.	ErA		Not appicable.
With "ErA" on the display, press and release SET.	SET	Display changes to "Adr" and buzzer beeps once.	Adr	x1	Not appicable.
With "Adr" on the display, press and release SET.	SET	Display changes to "001" and buzzer beeps once.	001	x1	Not appicable.
Use the UP or Down buttons and scroll until the user address to be erased displays	Down Up	Display changes with each button press.	015		Not appicable.
With the correct user address displayed, press and hold SET.	SET	User address begins flashing off and on.	015		Not appicable.
While still hold SET, press and release UP.	SET UP	Display changes to "dnE" and buzzer beeps once to indicate done.	dnE	x1	Not appicable.
Release the SET button		Non flashing user address displays.	015		Not appicable.
Repeat if the last 4 steps if there are other user addresses to be erased or press and release EXIT to return one level.	Exit	"ErA" displays and buzzer beeps once.	ErA	x1	Not appicable.
Scroll up or down to next program option.	Down Up	OR	EXIT back to Ready status	Exit	rdY

ALL	Receiver setup - Erasing options. Master erase - Erasing all of the codes from the memory.			

From Ready status	rdY	The gates can be in any position when performing this routine.

Action		Response			
		Description	Display	Buzzer	Gate/s
To enter the program menu. Press and hold SET until buzzer beeps.	SET	Display changes to "Prg" and buzzer beeps.	Prg	x2	Not appicable.
Use the UP or Down buttons and scroll until "rc" displays	Down Up		rc		Not appicable.
With "rc" on the display, press and release SET.	SET	Display changes to "Lrn" and buzzer beeps once	Lrn	x1	Not appicable.
Use the UP or Down buttons to select "ErA"	Down Up	Display changes with each button press.	ErA		Not appicable.
With "ErA" on the display, press and release SET.	SET	Display changes to "Adr" and buzzer beeps once.	Adr	x1	Not appicable.
Use the UP or Down buttons and scroll until "ALL" displays	Down Up	Display changes with each button press.	ALL		
With "ALL" on the display, press and hold SET.	SET	"ALL" remains displayed	ALL		Not appicable.
While still hold SET, press and hold UP.	SET UP	Buzzer begins beeping intermittently and "ALL" begins flashing. NB! Releasing either button at this point will "Can" cancel the master erase.	ALL	On/off...	Not appicable.
Keep holding the buttons.	SET UP	Display changes to "---" and buzzer silences. The master erase has begun.	---		Not appicable.
Release the buttons.		Buzzer beeps once and "dnE" displays to indicate master erase is done.	dnE	x1	Not appicable.
Press and release EXIT to return to the main receiver programming menu.	Exit	Display changes to "ErA" and buzzer beeps once	ErA	x1	
Scroll up or down to next program option.	Down Up	OR	EXIT back to Ready status	Exit	rdY

Receiver setup. Using the diagnostics feature.					d iA

From Ready status		rdY	The gates can be in any position when performing this routine.		

Action		Response			
		Description	Display	Buzzer	Gate/s
To enter the program menu. Press and hold SET until buzzer beeps.	SET	Display changes to "Prg" and buzzer beeps.	Prg	x2	Not appicable.
Use the UP or Down buttons and scroll until "rc" displays	Down Up		rc		Not appicable.
With "rc" on the display, press and release SET.	SET	Display changes to "Lrn" and buzzer beeps once	Lrn	x1	Not appicable.
Use the UP or Down buttons to select "diA"	Down Up	Display changes with each button press.	d iA		Not appicable.
With "diA" on the display, press and release SET.	SET	Display changes to the signal strength indicator and buzzer beeps once	I	x1	Not appicable.
In the case of any transmitter on the same frequency as the receiver, being active in the area, the signal strength guide will display how strong the incoming interfering signal is.		Weak signal	I		Not appicable.
		Low signal.	II		Not appicable.
		Low/medium signal	III		Not appicable.
		Medium signal	IIII		Not appicable.
		Medium/strong signal	IIIII		Not appicable.
		Strong signal	IIIIII		Not appicable.
Press and release a remote transmitter button already learnt into the receiver memory.		Buzzer beeps once and user address display momentarily.	008	x1	Not appicable.
		Followed by the channel that button is learnt into.	bt		Not appicable.
		Followed by the signal strength of the transmission.	IIIIII		Not appicable.
When done testing remotes, press and release EXIT to return to the main receiver programming menu.	Exit	Display changes to "diA" and buzzer beeps once	d iA	x1	Not appicable.
Scroll up or down to next program option.	Down Up	OR	EXIT back to Ready status	Exit	rdY

Receiver setup. Viewing the receiver version and information. "inF"				inF

From Ready status	rdY	The gates can be in any position when performing this routine.

Action		Response			
		Description	Display	Buzzer	Gate/s
To enter the program menu. Press and hold SET until buzzer beeps.	SET	Display changes to "Prg" and buzzer beeps.	Prg	x2	Not appicable.
Use the UP or Down buttons and scroll until "rc" displays	Down Up	Display changes with each button press.	rc		Not appicable.
With "rc" on the display, press and release SET.	SET	Display changes to "Lrn" and buzzer beeps once	Lrn	x1	Not appicable.
Use the UP or Down buttons to select "inf"	Down Up	Display changes with each button press.	inF		Not appicable.
With "inF" on the display, press and release SET.	SET	Buzzer beeps once and the display scrolls through the receiver information. Note the position of the decimal point each time the display changes.		x1	Not appicable.
		Number of users already in memory	010		Not appicable.
		Memory capacity.	064		Not appicable.
		Software version.	0.02		Not appicable.
		Hardware version.	00.3		Not appicable.
		Device identification.	002.		Not appicable.
When done, press and release EXIT to return to the main receiver programming menu.	Exit	Display changes to "inf" and buzzer beeps once	inF	x1	Not appicable.
Scroll up or down to next program option.	Down Up	OR	EXIT back to Ready status	Exit	rdY

Basic operating features	Manual overide and end of travel referencing.	User manual reference - Page 6

The ends of travel are consistently being monitored by the gate movement profiling software routine. Whenever the gates are placed in manual override (Gates free to be manoeuvred by hand) the chances of engaging them again in the exact same position is nearly impossible. For this reason the software will automatically go into an end of travel referencing operation.

NB! A momentary trigger on the BT, PED or BM inputs will pause the referencing routine. A repeat BT or PED trigger will allow it to resume.

Action		Response		
Engage the motors again after moving the gates.		No gate movement	No Buzzer tones.	
Momentary BT trigger		Gates begin closing if the last operation before moving them was an opening operation. If the gates were closing before the manual manoeuvre, then they will begin opening.	No Buzzer tones.	
Gates run up hard onto the end stops as they are out of reference with the last position memorized by the control card.		Safety overload routine runs. See next page.	Buzzer beeps confirmation of which gate, overloaded. See trouble shooting guide.	
As soon as the first gate passes the point at which it was re-engaged the control card will know it is out of reference to the gate positions.		Buzzer begins beeping intermittently. Display shows rEF. Gate 1 continues to open slowly searching for the open stopper.	On/off... rEF	
Gate 1 reaches the open stopper and surges up.		Buzzer continues beeping and display continues showing rEF. Gate 2 begins opening slowly.	On/off... rEF	
Gate 2 reaches the open stopper and surges up.		Buzzer gives 3 x 1 second beeps and then continues intermittent beeping. Display continues showing rEF. The system now waits for an instruction before referencing closing direction.	x3 rEF	‖ Pause
Momentary BT or PED trigger.		Buzzer continues beeping and display continues showing rEF. Gate 2 begins closing	On/off... rEF	
Gate 2 reaches closed position.		Buzzer continues beeping and display continues showing rEF. Gate 1 begins closing	On/off... rEF	
Gate 1 reaches the closed position.		Buzzer silences and display reverts to ready.	rdY	
The system is now ready for normal use.				

In the case of one of the gates colliding with an obstruction such as a person passing through the entrance way, the collision sensing will automatically detect the collision and the system will run a safety overload routine.

Safety overload routine while gates are opening.

Action	Response

Gates busy running open.	

Gates collided with pedestrian for example.		Both gates stop running.	Gate 1 collided	◁))) x1
			Gate 2 collided	◁))) x2
		The gate that was obstructed, backs away from the point of collision and stops.	No buzzer tones	
		Both gates remain stopped and the system waits for the next trigger to close.	No buzzer tones	

Safety overload routine while gates are closing.

Action	Response

Gates busy running closed.	

Gates collided with pedestrian for example.		Both gates stop closing and begin opening imediately.	Gate 1 collided	◁))) x1
			Gate 2 collided	◁))) x2
		Both gates stop in the open position and the system waits for the next trigger to close.	No buzzer tones	

If the safety beam input has been switched on, the control card will constantly monitor to ensure a set of safety beams is installed.

NB! If the BT input mode has been set to either simple auto-close or condominium mode, the safety beam input is forced on.
If the BT input has been set to standard mode and either the loop detector or pedestrian input is activated, the safety beam input is forced on for that transaction only.

Below is an example of how the gates will behave whenever the safety beam input is activated.

Action		Response		
Momentary BT trigger.		Gates begin opening.	No buzzer tones.	
Safety beam input momentarily triggered.		Gates continue opening.	No buzzer tones.	
At full open position.		Gates stop.	No buzzer tones.	
Momentary BT trigger.		Gates begin closing.	No buzzer tones.	
Safety beam input triggered.		Gates stop closing and begin opening immediately.	No buzzer tones.	
At Full open position. Safety beam input triggered.		Gates stop.	No buzzer tones.	
Momentary BT trigger. Safety beam input still triggered.		Gates remain open.	No buzzer tones.	
Momentary BT trigger. Safety beam input no longer triggered.		Gates begin closing.	No buzzer tones.	
At full closed position.		Gates stop.	No buzzer tones.	

Basic operating features	"BT" Button triggers. Standard mode.	User manual reference - Page 9

The BT functions are the primary full gate opening functions for motor vehicle access.
There are two ways of activating the "BT" functions on this control card. Either via the hardwired BT input or the BT receiver channel.

In Standard mode the gates respond to each BT trigger.
In Standard mode you have access to the following advanced features: - Holiday lock-out and Party mode.

Action		Response		
Momentary BT trigger.		Gates begin opening.	No buzzer tones.	
At full open position.		Gates stop.	No buzzer tones.	
Momentary BT trigger.		Gates begin closing.	No buzzer tones.	
Momentary BT trigger.		Gates stop closing and begin opening immediately.	No buzzer tones.	
Momentary BT trigger.		Gates stop.	No buzzer tones.	
Momentary BT trigger.		Gates begin closing.	No buzzer tones.	
At full closed position.		Gates stop.	No buzzer tones.	

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Basic operating features	"BT" Button triggers. Simple auto-close mode.	User manual reference - Page 10

The BT functions are the primary full gate opening functions for motor vehicle access.
There are two ways of activating the "BT" functions on this control card. Either via the hardwired BT input or the BT receiver channel.

Simple auto-close mode functions exactly the same as standard mode except that the gates will close automatically after the programmed BT auto-close timer has timed out.
In Standard mode you have access to the following advanced features: - Holiday lock-out and Party mode.

NB! For any auto-close feature to work, a pair of safety infra-red beams must be installed and functioning correctly. If no safety infra-red beams are installed then the gates will open but not close again.

Action		Response		
Momentary BT trigger.		Gates begin opening.	No buzzer tones.	
At full open position.		Gates stop.	No buzzer tones.	
Momentary BT trigger or auto-close timer times out.	0 / 20 sec.	Gates begin closing.	No buzzer tones.	
Momentary BT trigger.		Gates stop closing and begin opening immediately.	No buzzer tones.	
Momentary BT trigger.		Gates stop.	No buzzer tones.	
Momentary BT trigger or auto-close timer times out.	0 / 20 sec.	Gates begin closing.	No buzzer tones.	
At full closed position.		Gates stop.	No buzzer tones.	

The BT functions are the primary full gate opening functions for motor vehicle access.
There are two ways of activating the "BT" functions on this control card. Either via the hardwired BT input or the BT receiver channel.

In Condominium auto-close mode, all BT triggers are treated as open, keep opening, keep open or re-open triggers. The gates will only close once the BT auto-close timer has timed out.
In Condominium auto-close mode the following advanced features are not available: - Holiday lock-out and Party mode.

NB! For any auto-close feature to work, a pair of safety infra-red beams must be installed and functioning correctly. If no safety infra-red beams are installed then the gates will open but not close again.

Action		Response		
Momentary BT trigger.		Gates begin opening.	No buzzer tones.	
Momentary BT trigger.		Gates continue opening.	No buzzer tones.	
At full open position.		Gates stop.	No buzzer tones.	
Auto-close timer times out.	0 / 20 sec.	Gates begin closing.	No buzzer tones.	
Momentary BT trigger.		Gates stop closing and begin opening immediately.	No buzzer tones.	
Momentary BT trigger.		Gates continue opening.	No buzzer tones.	
Momentary BT trigger or auto-close timer times out.	0 / 20 sec.	Gates begin closing.	No buzzer tones.	
At full closed position.		Gates stop.	No buzzer tones.	

The PED trigger is a higher security option and is used when access to or from the property is limited to exclude motor vehicles. Pedestrian mode makes use of a mandatory auto-close timer that prevents the gate from being left open after each transaction.

There are two ways of activating the "PED" functions on this control card. Either via the hardwired PED input or the PED receiver channel.

NB! For any auto-close feature to work, a pair of safety infra-red beams must be installed and functioning correctly. If no safety infra-red beams are installed then the gates will open but not close again.

Action		Response		
Momentary PED trigger.		Gates remain closed.	x3	
Wait for warning tones to finish.		Gate 1 begins opening.	No buzzer tones.	
At preprogramed pedestrian open position.		Gate stops.	No buzzer tones.	
Pedestrian auto-close timer times out.	0 / 5 sec.	Gate remains at pedestrian opening.	x3	
Wait for warning tones to finish.		Gate begins closing.	No buzzer tones.	
Momentary PED trigger.		Gate stops and immediately begins opening.	No buzzer tones.	
At preprogramed pedestrian open position.		At preprogramed pedestrian open position.	No buzzer tones.	
Pedestrian auto-close timer times out.	0 / 5 sec.	Gate remains at pedestrian opening.	x3	
Wait for warning tones to finish.		Gate begins closing.	No buzzer tones.	
At full closed position.		Gate stops.	No buzzer tones.	

The Loop trigger mode is exactly the same as Condominium auto-close mode.

The only way to trigger loop detector mode is via the hardwired LPT input.

In Loop detector mode, a LPT trigger is treated as open, and any BT or LPT trigger is treated as a keep opening, keep open triggers or re-open trigger while the gates are running. The gates will only close once the LPT auto-close timer has timed out. The loop mode transaction will only clear once the gates reach the closed position again.

NB! For any auto-close feature to work, a pair of safety infra-red beams must be installed and functioning correctly. If no safety infra-red beams are installed then the gates will open but not close again.
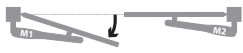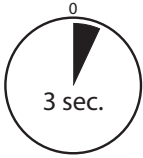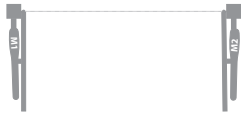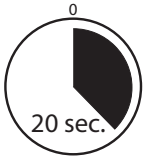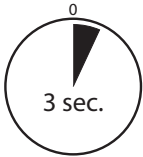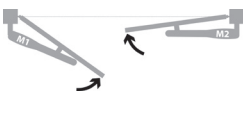
Action		Response		
LPT trigger.		Gates begin opening.	No buzzer tones.	
LPT trigger.		Gates continue opening.	No buzzer tones.	
At full open position.		Gate stops.	No buzzer tones.	
LPT auto-close timer times out. (Any BT, LPT or safety beam trigger while the timer is counting down, resets the timer)	5 sec.	Gates begin closing.	No buzzer tones.	
LPT trigger.		Gates stop closing and immediately begin opening.	No buzzer tones.	
At full open position		Gates stop.	No buzzer tones.	
LPT auto-close timer times out. (Any BT, LPT or safety beam trigger while the timer is counting down, resets the timer)	5 sec.	Gates begin closing.	No buzzer tones.	
At full closed position.		Gates stop.	No buzzer tones.	

Overlapping gates, delay mode can be set to work with any other mode of operation.

When active, gate 1 will always open first and then gate 2 will follow. Gate 2 will always close first and gate 1 will follow.

Below is an example of delay mode working when Condominium mode is active.

Action		Response		
Momentary BT trigger.		Gate 1 begins opening.	No buzzer tones.	
After preprogramed overlapping gate delay time.	3 sec.	Gate 2 begins opening.	No buzzer tones.	
At full open position.		Gates stop.	No buzzer tones.	
BT auto-close timer times out. (Any BT trigger or safety beam trigger while the timer is counting down, resets the timer)	20 sec.	Gate2 begins closing.	No buzzer tones.	
After preprogramed overlapping gate delay time.	3 sec.	Gate 1 begins closing.	No buzzer tones.	
At full closed position.		Gates stop.	No buzzer tones.	

With "Lc1" Strike lock mode selected, the auxiliary relay will pulse for 1 second, half a second before the gates open from any position.

Whenever a lock is installed with the system, a separate battery backed up power supply matching the lock load must be installed. Failure to do this can damage the charger and battery of the control unit.

Below is an example of "Lc1" Strike lock mode working when Condominium mode and delay mode is active.

Action		Response		
Momentary BT trigger.		Auxiliary relay activates.	No buzzer tones.	**ON** N/C Com N/O
Half a second after the auxiliary relay has switched on.	0.5 sec.	Gate 1 begins opening.		
Half a second after gate 1 starts opening.	0.5 sec.	Auxiliary relay deactivates.		**OFF** N/C Com N/O
After preprogramed overlapping gate delay time.	3 sec.	Gate 2 begins opening.	No buzzer tones.	
At full open position.		Gates stop.	No buzzer tones.	
BT auto-close timer times out. (Any BT trigger or safety beam trigger while the timer is counting down, resets the timer)	20 sec.	Gate2 begins closing.	No buzzer tones.	
After preprogramed overlapping gate delay time.	3 sec.	Gate 1 begins closing.	No buzzer tones.	
At full closed position.		Gates stop.	No buzzer tones.	

With "Lc2" Mag-lock mode selected, the auxiliary relay will switch on half a second before the gates open and remain on until the gates have closed again.

Whenever a lock is installed with the system, a separate battery backed up power supply matching the lock load must be installed. Failure to do this can damage the charger and battery of the control unit.

Below is an example of "Lc1" Strike lock mode working when Condominium mode and delay mode is active.

Action		Response		
Momentary BT trigger.		Auxiliary relay activates.	No buzzer tones.	**ON** — N/C, Com — N/O
Half a second after the auxiliary relay has switched on.	0.5 sec.	Gate 1 begins opening.		
After preprogramed overlapping gate delay time.	3 sec.	Gate 2 begins opening.	No buzzer tones.	
At full open position.		Gates stop.	No buzzer tones.	
BT auto-close timer times out. (Any BT trigger or safety beam trigger while the timer is counting down, resets the timer)	20 sec.	Gate2 begins closing.	No buzzer tones.	
After preprogramed overlapping gate delay time.	3 sec.	Gate 1 begins closing.	No buzzer tones.	
At full closed position.		Gates stop.	No buzzer tones.	
Half a second after gate 1 has reached the closed position.	0.5 sec.	Auxiliary relay deactivates.	No buzzer tones.	**OFF** — N/C, Com — N/O

With **"LIT" Courtesy light mode** selected, the auxiliary relay will switch on half a second before the gates open and remain on for three minutes after the gates have closed again.

Below is an example of **"LIT" Strike lock mode** working when Condominium mode and delay mode is active.

Action		Response		
Momentary BT trigger.		Auxiliary relay activates.	No buzzer tones.	ON N/C Com N/O
		Gates begin opening.		
At full open position.		Gates stop.	No buzzer tones.	
BT auto-close timer times out. (Any BT trigger or safety beam trigger while the timer is counting down, resets the timer)	20 sec.	Gate2 begins closing.	No buzzer tones.	
At full closed position.		Gates stop.	No buzzer tones.	
Half a second after gate 1 has reached the closed position.	0.5 sec.	Auxiliary relay deactivates.	No buzzer tones.	OFF N/C Com N/O

If the gates are closed and any remote button learnt into the "rLY" auxiliary relay channel is pressed momentarily, the following will occur.
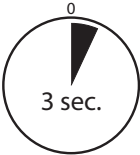
Auxiliary relay status	Action		Response		
OFF N/C Com N/O	Momentary "RLY" trigger.		Auxiliary relay switches on for 1 hour.	No buzzer tones.	ON N/C Com N/O
ON N/C Com N/O	Momentary "RLY" trigger.		Auxiliary relay switches off.	No buzzer tones.	OFF N/C Com N/O

With "rc" receiver relay mode selected, the auxiliary relay will operate in exactly the same way as a single channel receiver would, whenever a transmitter button programmed into the "RLY" receiver channel is pressed and released.

Latch mode.
The transmitter must be released and pressed again to reactivate the relay each time.

Action		Response		
Momentary RLY trigger.		Auxiliary relay switches on.	No buzzer tones.	**ON** ○N/C Com○——○N/O
Momentary RLY trigger.		Auxiliary relay switches off.	No buzzer tones.	**OFF** ○N/C Com○ ○N/O

One shot pulse mode.
The transmitter must be released and pressed again to reactivate the relay each time.

Action		Response		
Momentary RLY trigger.		Auxiliary relay switches on.	No buzzer tones.	**ON** ○N/C Com○——○N/O
Momentary RLY trigger.	0 / 3 sec.	Auxiliary relay switches off.	No buzzer tones.	**OFF** ○N/C Com○ ○N/O

With "PCL" the gates will surge up hard onto their closed position stoppers.

This mode is useful when installing an electric lock as it ensures the lock physically locks each time.

Below is an example of "PCL" Positive close mode working when condominium mode, delay mode and strike lock mode are active.

Action		Response		
Momentary BT trigger.		Auxiliary relay activates.	No buzzer tones.	ON N/C Com N/O
Half a second after the auxiliary relay has switched on.	0 0.5 sec.	Gate 1 begins opening.		
Half a second after gate 1 starts opening.	0 0.5 sec.	Auxiliary relay deactivates.		OFF N/C Com N/O
After preprogramed overlapping gate delay time.	0 3 sec.	Gate 2 begins opening.	No buzzer tones.	
At full open position.		Gates stop.	No buzzer tones.	
BT auto-close timer times out. (Any BT trigger or safety beam trigger while the timer is counting down, resets the timer)	0 20 sec.	Gate2 begins closing.	No buzzer tones.	
After preprogramed overlapping gate delay time.	0 3 sec.	Gate 1 begins closing.	No buzzer tones.	
At full closed position.		Gates momentarily surge onto the closed stoppers..	No buzzer tones.	

This feature is useful at times when access to the property needs to be disallowed to secondary level key holders, such as housekeepers or the garden service company, for extended periods of time. An example of when the holiday lock-out function would be useful is when the home owner is away on holiday. With holiday lock-out mode active, any trigger on any input will simply result in the control card beeping to indicate the gates are being kept locked intentionally. As soon as the holiday lock-out mode is deactivated, the system will resume normal operation.

Holiday lock-out will only work in the closed position.
Holiday lock-out is not available in condominium mode.

Action		Response	
Momentary trigger from any transmitter button programmed into hoL channel.		Buzzer begins toning and status LED comes on.	x 5 sec. On
BT button while buzzer is sounding to confirm that you want to activate holiday lock-out. If no BT button is pressed during this 5 second window, the holiday lock-out status will not change.		Buzzer and status LED beep/flash rapidly and display changes to "hoL"	x 5 rapid. On Off On Off On Off On Off On Off hoL
Any BT, LPT or PED triggers.		Gates do not open. Buzzer, status LED and display confirm holiday lock-out is active.	x 5 rapid. On Off On Off On Off On Off On Off hoL
Momentary trigger from any transmitter button programmed into hoL channel.		Buzzer begins toning and status LED comes on.	x 5 sec. On
BT button while buzzer is sounding to confirm that you want to deactivate holiday lock-out. If no BT button is pressed during this 5 second window, the holiday lock-out status will not change.		Buzzer beeps, status LED reverts to gates running indication and gates begin opening.	x1 On Off On Off On Off 1 sec 1 sec 1 sec 1 sec 1 sec 1 sec
Gates running open.		Normal operation is now functional.	

Advanced features.	"PAr" Auto-close override/Party mode.	User manual reference - Page 21

This feature is useful at times when the gates must be kept open for extended periods of time. In an office park during business hours for instance. With auto-close override/party mode active any trigger on any input will simply result in the control card beeping to indicate the gates are being kept open intentionally. As soon as auto-close override/party mode has been deactivated, the system will resume normal operation.

Auto-close override/party mode will work in any position except the closed position.
Auto-close override/party mode is not available in condominium mode.

Gates in any position except closed
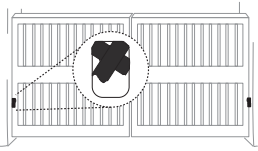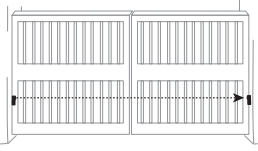
Action		Response	
Momentary trigger from any transmitter button programmed into hoL channel.		Buzzer begins toning and status LED comes on.	x 5 sec.
BT button while buzzer is sounding to confirm that you want to activate auto-close override/party mode. If no BT button is pressed during this 5 second window, the auto-close override/party mode status will not change.		Buzzer and status LED beep/flash rapidly and display changes to "PAr"	x 5 rapid. PAr
Any BT, LPT or PED triggers.		Gates do not run. Buzzer, status LED and display confirm auto-close override/party mode is active.	x 5 rapid. PAr
Momentary trigger from any transmitter button programmed into hoL channel.		Buzzer begins toning and status LED comes on.	x 5 sec.
BT button while buzzer is sounding to confirm that you want to deactivate auto-close override/party mode If no BT button is pressed during this 5 second window, the auto-close override/party mode status will not change.		Buzzer beeps, status LED reverts to gates running indication and gates begin closing.	x1
Gates running open.		Normal operation is now functional.	

Advanced features.	Safety beam input tampering alarm.	User manual reference - Page 22

In cases where the safety beams have been tampered with, the safety protocols will still allow the gates to open but will not allow the gates to close. This safety feature can be turned into a security risk by anyone with ill intention. The safety beam input tampering alarm feature gives you a ealry warning of any tampering that may have occured while you were away from the property. If the gates are in the closed position and the safety beam input is trigger for longer than 20 seconds, then the alarm output will become active. This output would usually be connected to a visual warning device such as a light or to a zone on the household alarm system.

In the case of a light being used, on approach to the entrance the user is alerted to the attempt to compromise their security. Our advise is that the user not trigger the gates to open, in this situation, but rather to continue driving to their nearest armed response standby point or to the nearest police station. This way they can ask for an escort onto the property.

Safety beam alarm mode is available in all modes of operation so long as a set of safety beams is installed.

Action			Response		
Safety beam equipment tampered with while gates are in the closed position.			Alarm output remains in standby status.	Off	
20 seconds after safety beam equipment has been tampered with.	20 sec.		Alarm output activates.	On	
Safety beam equipment returned to normal functioning status.			Alarm output returns to standby.	Off	

Status LED indications guide.

Description	Visual confirmation	Reason
Static off.	Off	Gates fully closed.
Flashing slow 1 second on and 1 second off.	On (1 sec) Off (1 sec) On (1 sec) Off (1 sec) On (1 sec) Off (1 sec)	Gates running normally.
Static on.	On	Gates open.
Flashing rapidly. 250ms on 250ms off continuously.	On Off On Off On Off On Off ...	One of the gates has collided with an obstruction.
2 x 500ms flashes followed by a 2 second pause.	On Off On Off Pause On Off On Off Pause ...	AC mains off. Restore AC as soon as possible.
4 x 500ms flashes followed by a 2 second pause.	On Off On Off On Off On Off Pause ...	Battery low. Allow at least 8 – 10hr uninterrupted charge before checking again.
5 x 125ms second rapid flashes each time a trigger is received.	On Off On Off On Off On Off On Off	A lock-out mode is active. Press and release any holiday lock-out button to deactivate.

Trouble shooting guide.

Action	Display	Buzzer	Status LED	Reason	Resolve by	Reference page
Any trigger	hoL	5 x 125m/sec rapid beeps.	See previous table.	Holiday lock-out active.	Deactivate Holiday lock-out.	Page 47.
Any trigger	PAr	5 x 125m/sec rapid beeps.	See previous table.	Party mode/auto-close override active.	Deactivate Party mode/auto-close override.	Page 48.
For 5 minutes after any operation.	Ac	1 x 125m/sec beep every 15 seconds.	See previous table.	Household VAC mains failure.	Restore VAC mains supply as soon as possible or disable AC monitoring.	Page 26.
No user action. System automatically tests.	bAt	None	See previous table.	Battery level low under load.	Allow 8 – 10 hours uninterrupted recharge. If the battery level does not recover, replace the battery.	
Any trigger	rEF	Continuous repetitive 1 second beeps.	None.	Motor position reference out of sync.	Complete the end of travel reference routine.	Page 33.
Any trigger	run	5 x 1 second slow beeps.	None.	Runtime setup not completed properly.	Complete all the steps of the runtime setup routine.	Page 18.
Set button during runtime setup.	E1	10 x 125ms	None.	No encoder connected to M1 or gate is hard up against the closed stopper.	Check motor 1 encoder wiring and connections.	Page 13.
Set button during runtime setup.	E2	10 x 125ms	None.	No encoder connected to M2 or gate is hard up against the closed stopper.	Check motor 2 encoder wiring and connections.	Page 13.

				Trouble shooting guide. (Continued)		
Action	Display	Buzzer	Status LED	Reason	Resolve by	Reference page
Set button during runtime setup.	E3	10 x 125ms	None.	No motor connected to M1 or motor fuse blown.	Replace fuse and check motor wiring and connections.	Page 13.
Set button when trying to enter a program option.	E4	1 x 1 second beep.	None.	The gates must be closed to carry out this setup routine.	Run gates closed before trying to enter this setup routine again.	
While setting up the pedestrian opening distance.	E5	10 x 125ms	None.	Gate 1 physically obstructed.	Exit programming. Clear the obstruction and complete a reference routine before attempting to setup pedestrian again.	
While "rEF" routine is running.	E6	5 x 1 second slow beeps.	None.	Physical ends of travel stoppers shifted or moved after runtime programming was completed.	If any of the ends of travel stoppers were moved, reprogram the runtime.	Page 16 and 18.
				Wired encoder circuit intermittent.	Ensure both the motors' encoder circuits are sufficiently terminated and insulated. Once the wiring has been repaired, press and release any BT to run the referencing routine again.	Page 13.
				One of the gates collided with an obstruction while referencing.	Clear obstruction. Once the obstruction has been cleared, press and release any BT to run the referencing routine again.	
When trying to learn a remote code in.	FuL	1 x 1 second beep.	None.	Receiver memory full.	If using a 64 user model, upgrade to the 999 user option.	
When trying to learn a remote code in.	duP	1 x 1 second beep.	None.	Remote button code already in memory.	Delete the remote user address and learn that remote button in again.	Page 29.
When trying to learn a remote code in.	to	1 x 1 second beep.	None.	Time out. No remote code seen in specified time.	The remote maybe faulty or a non compatible fixed format remote may have been used.	
When trying to learn a remote code in.	dEc	1 x 1 second beep.	None.	Decoding error.	Another transmitter may have interfered. Try again. If the problem persists then the remote control is faulty or a non compatible rolling code remote may have been used.	

WARRANTY:

1. All goods manufactured by ET Systems (Pty) Ltd carry a 12 month factory warranty from date of invoice.
2. All goods are warranted to be free of faulty components and manufacturing defects.
3. Faulty goods will be repaired or replaced at the sole discretion of ET Systems (Pty) Ltd free of charge.
4. This warranty is subject to the goods being returned to the premises of ET Systems (Pty) Ltd.
5. The carriage of goods is for the customer's account.
6. This warranty is only valid if the correct installation and application of goods, as laid out in the applicable documentation accompanying said goods, is adhered to.
7. All warranty claims must be accompanied by the original invoice.
8. All claims made by the end user must be directed to their respective service provider/installer.

The following conditions will disqualify this product from the warranty as laid out above. These conditions are non-negotiable.

1. Any unauthorized non-manufacturer modifications to the product or components thereof.
2. Any modification to the installation methods described in the installation instructions.
3. Any application or use of the product other than the intended use and application described in the product documentation.

The following items are not included in the warranty or they carry a special warranty condition of their own.

1. The battery (Limited 6 month warranty)
2. The motor brushes.
3. Damage resultant of wind and other climatic influences such as lightning strikes.
4. Damage due to high voltage surges on the household mains or short circuiting of the gates to the electric fencing.
5. Damage due to infestation i.e. Ants nesting…
6. Water damage. It is the responsibility of the installer to ensure the product is installed in a location that is protected from water ingress. The ingress protection rating is specified in the accompanying documentation. Housings that require that cable entries are made by the installer do not carry an ex-factory ingress protection rating as it is the responsibility of the installer to seal the cable entry points after installation of the cabling.