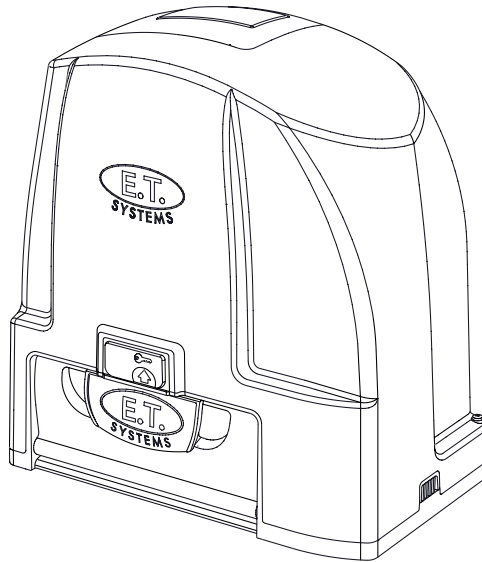


Installer Instructions



High Traffic 1000kg Slide Gate Operator



a company of TheNiceGroup



www.et.co.za

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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, such as 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.



Continued overleaf.....

- 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.
- 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.
- 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.
- 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:

- Is proficient in the use of the manual emergency release mechanism.
- Is issued with the documentation accompanying this product.
- Understands that the gate or door may not be operated out of clear sight.
- 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.
- 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.
- Is proficient in testing the unit's safety obstruction sensing system.
- 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.
- 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.

TECHNICAL SPECIFICATIONS		
Technical Data	Low traffic option Plug in transformer (Not included in kit)	High traffic ACDC Standard kit
Rated gate mass.	1000kg	1000kg
Maximum gate travel.	40m	40m
Primary power supply to gate.	29Vac @ 1A 50Hz – 60Hz	220 – 240Vac @ 50Hz – 60Hz
Peak power consumption at gate.	30W	350W
Electrical class.	Class 3 	Class 1 
Motor voltage.	24Vdc	24Vdc
Motor current.	Current limited to 13A.	Current limited to 13A.
Duty cycle maximum. See determining your duty cycle on PG (7)	25% with 220Vac present	98% with 220Vac present
Number of operations on battery reserve. (Battery health and charge level at time of power failure dependent. Calculated on a 5m gate with rolling resistance of <15kgf)	100 using the standard 5Ah battery. This can be upgraded to 150 by installing 2 x 3.5Ah batteries.	100 using the standard 5Ah battery. This can be upgraded to 150 by installing 2 x 3.5Ah batteries.
Gate speed At rolling resistance of <15kgf	Up to 28m/min. Can be adjusted down.	Up to 28m/min. Can be adjusted down.
Rated Load	600N	600N
Operating temperature range	-10 to 50° C (14F to 122F)	-10 to 50° C (14F to 122F)
Anti-crushing safety sensing	Yes – Electronic gate profiling	Yes – Electronic gate profiling
Auxiliary supply output	12Vdc @ 400mA	12Vdc @ 400mA
Built in battery charger.	Multiple stage auto-calibrating 500mA	Multiple stage auto-calibrating 500mA
Receiver format	ET BLU MIX © backward compatible with ET BLUE (Rolling code)	ET BLU MIX © backward compatible with ET BLUE (Rolling code)
Receiver frequency	433.92MHz	433.92MHz
Receiver channels	4CH (BT, PED, Aux relay, Holiday lock-out)	4CH (BT, PED, Aux relay, Holiday lock-out)
Receiver memory capacity	1023 users	1023 users
All users can be allowed control of all channels	Yes	Yes
Ingress protection	IPX4	IPX4
Physical dimensions	See next page.	See next page.

Component identification and descriptions.

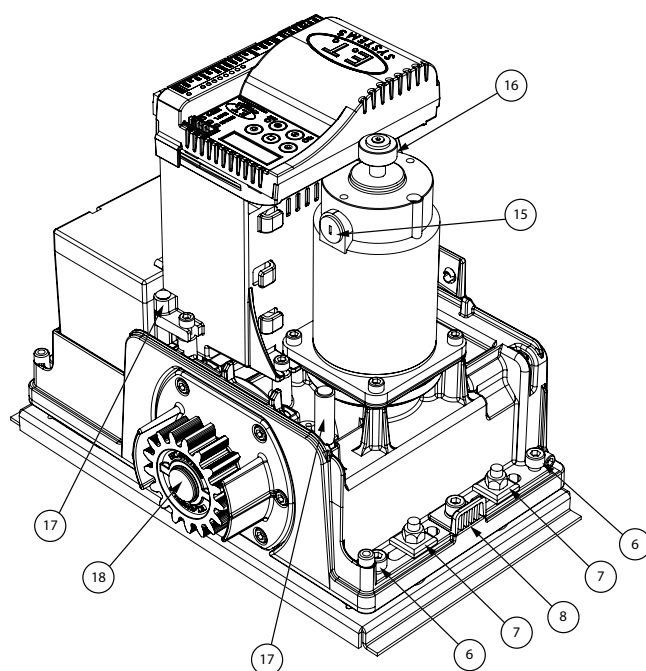
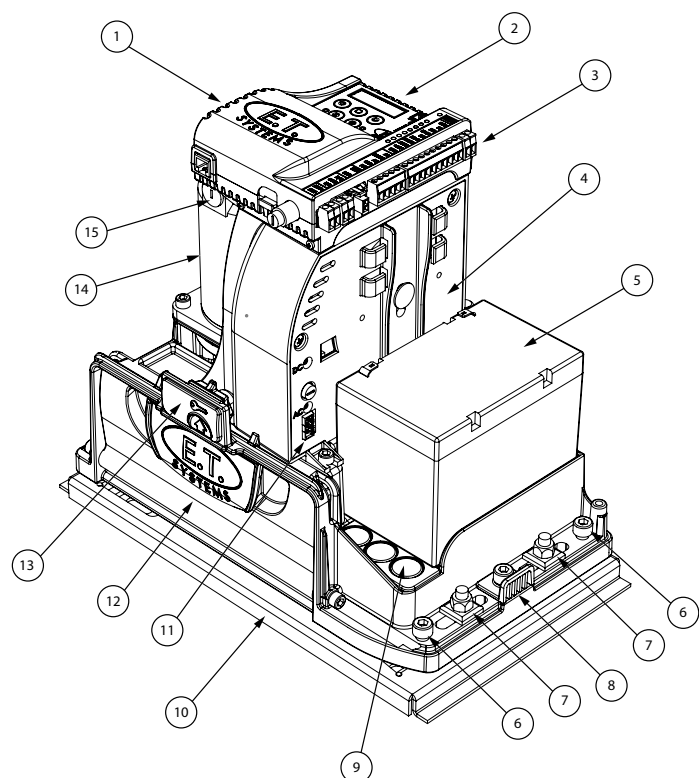
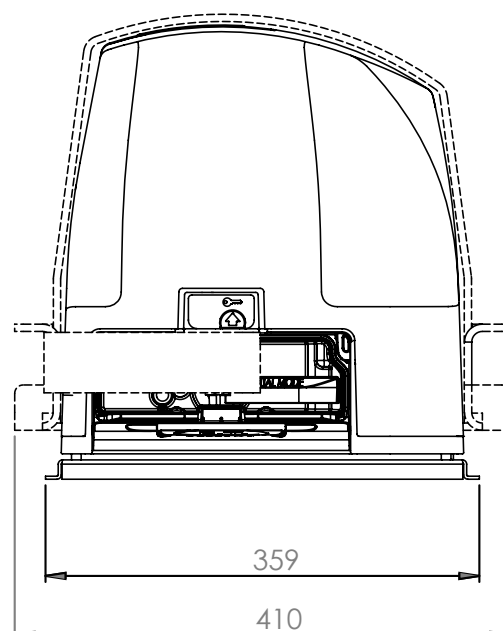
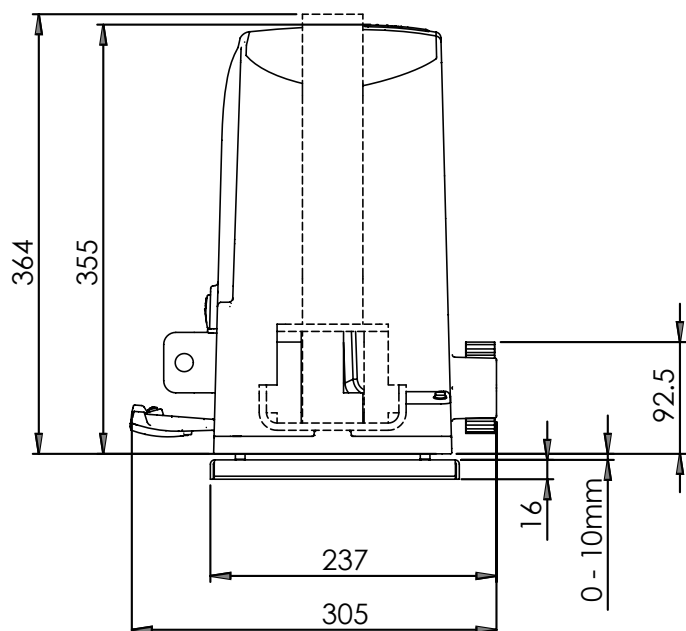


Diagram number	Description	Diagram number	Description
1	Control card	10	Baseplate
2	Dashboard	11	ACDC power pack 220Vac input
3	Plug-in terminal connectors	12	Manual override access hatch
4	ACDC power pack	13	Manual override access hatch lock
5	Battery	14	Electric motor
6	Levelling and height adjusting bolts	15	Electric motor brush ports
7	Mounting bolts and nuts	16	Revolution counter ring magnet
8	Security bracket kit mounting point	17	Ends of travel limits, reed switches
9	Cable inlets	18	Output drive pinion



BEFORE ATTEMPTING TO INSTALL A SLIDE GATE OPERATOR, PLEASE BE CERTAIN YOU HAVE READ AND UNDERSTOOD THE FOLLOWING TO ENSURE CONTINUED SATISFACTORY SAFE SERVICE FROM THIS PRODUCT:

1. Gate mechanics.
2. Duty cycle.
3. Where to position the gate motor with regards to ingress protection.
4. Cabling requirements.

Gate mechanics.

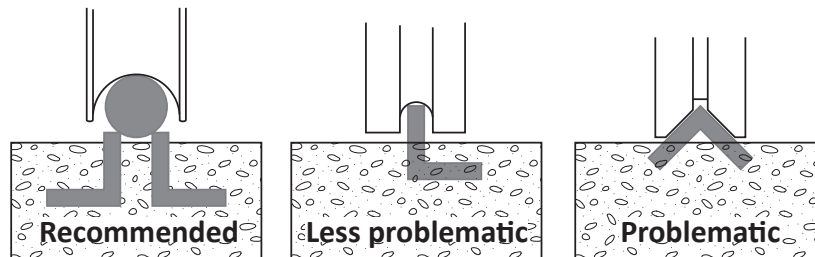
Gate Leaf:

Gate leaf must be sound and of sufficient construction to accommodate an operator of this type (see technical specifications). Gate leaf should be straight and true with minimal deviation to the fascia that the rack must attach to (no 'banana-effect').

Wheels and Track:

The track must be secure, straight, level and free of all obstructions.

Recommended wheel type and size for this automation is steel or steel alloy, machined or cast wheels of at least 100mm diameter using sealed roller bearings. The larger the wheel the less rolling resistance generated. Larger wheels also maintain their plumb and momentum longer. When wheels are fixed in the gate, and not able to pivot, binding can occur if the gate is bowed. (Banana effect) For wheel profile and matching track types, see the three examples below:



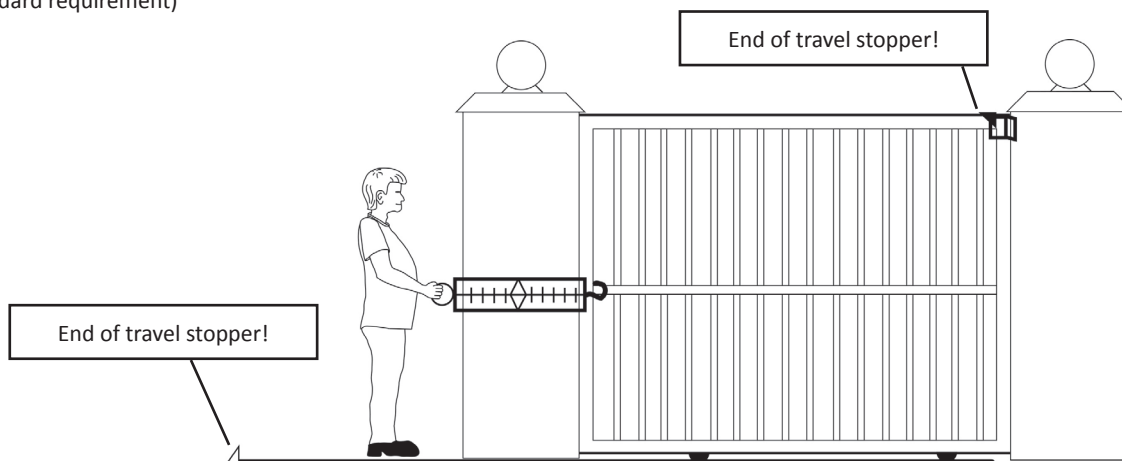
Guides:

- It is recommended that a roller guide consisting of a sealed roller bearing clad in nylon be used.
- The guidance system should be installed at the top edge of the gate whenever possible. In cases where this is not possible the guidance system should never be below the halfway point of the total gate height when the gate is in position on its track.
- In the case of a single guide roller running in a guide channel, ensure the guide never touches both inside walls of the channel simultaneously. This causes the roller to snag as it tries to roll in both directions at once.
- In the case of 2 guide rollers being used on either side of the gate leaf, ensure that both wheels never touch the leaf simultaneously.
- Avoid using more than 1 guide roller on the same side of the gate leaf to prevent binding.
- As with the wheels the larger the guide the less rolling resistance generated.

Gate Travel:

Using a fisherman's pull scale, as shown below, pull the gate fully open and fully closed at approximately the same speed as the operator you intend to use (see technical specifications). For optimum performance, ensure that the maximum resistance does not exceed 40kgf starting and 30kgf running. The starting resistance should fall away within 300 to 500mm. Note the recommended track, wheel and guide types mentioned b) and c) above.

NB! Install physical stoppers at the ends of the gate travel to prevent the gate over-running the ends of the track as shown here. (National safety standard requirement)



Duty cycle.

The Formula used to determine duty cycle is:

$$\frac{\text{Run time}}{\text{Run time} + \text{rest time}} \times 100 = \text{Duty cycle}$$

Working example 1: (Low duty cycle)

Run time: 17 seconds.

Rest time: 20 seconds.

$$17 \div 37 \times 100 = 45.94$$

Thus the duty cycle in example 1 is said to be 45.94%

Working example 2: (High duty cycle)

Run time: 17 seconds.

Rest time: 1 second.

$$17 \div 18 \times 100 = 94.44$$

Thus the duty cycle in example 2 is said to be 94.44%

The above examples do not factor in resistance and gate mass. These two elements contribute greatly to the amount of heat generated in your gate automation system.

Below are the maximum allowed duty cycles based on the gate mass and rolling resistance for the ET motor models. These are calculated to conform to the standards set out in the SANS 60335-95-1:2011 safety code.

Duty cycle capabilities guideline of the ET Drive series motor models:

Model	Gate Mass	Starting Resistance	Rolling Resistance	Max Duty Cycle
Drive 1000 - ACDC option	≤ 1000 kg	≤ 40 kgf	≤ 30 kgf	98%
Drive 1000 - Battery dependent option.	≤ 1000 kg	≤ 40 kgf	≤ 30 kgf	25%

Where to position the gate motor.

Liquid ingress:

The ET Drive series motor models all carry an ingress protection rating of IPX4. This means they are protected from splashing water. They are not water tight as there are sensitive electronic and electrical circuits that require uninhibited airflow to remain cool and dry.

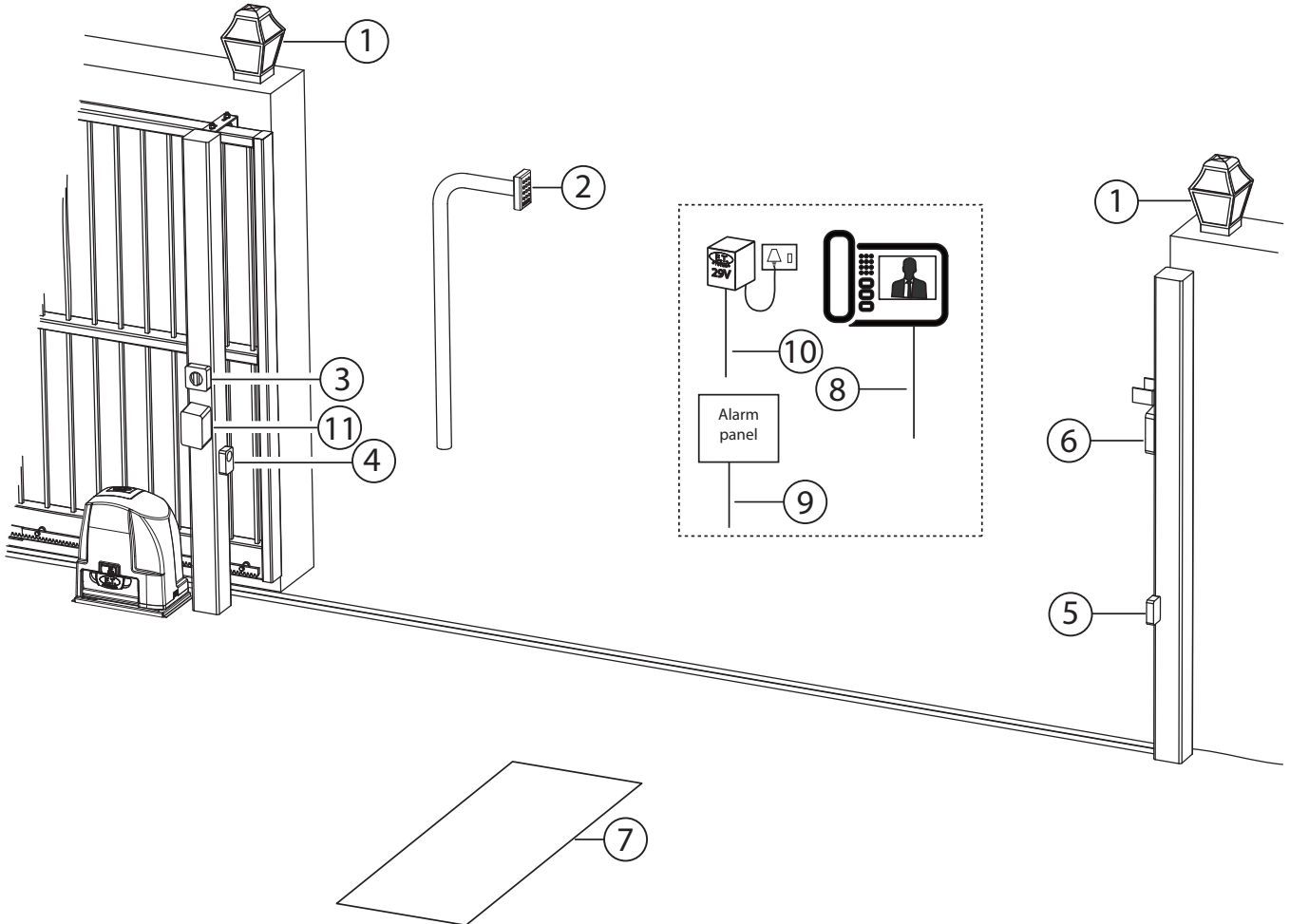
When deciding on an installation position, be aware of water collection points around and near the desired mounting position of the motor unit. If the water does not flow away quick enough, it can seep into the system and cause expensive and possibly hazardous damage. Always install the unit higher than the highest level, any water flowing past the motor unit can reach.

Physical protection:

Whenever possible, always install the gate motor on the opposite side of the gate's guide/emergency post, to the driveway itself. This way it is out of the path of the motor vehicles as they pass through the entrance/exit.

Cabling requirements.

- Before mounting the operator ensure your cables and conduiting are in place to prevent any inconvenience at a later stage.
- All 220Vac mains cabling and circuits need to be installed by a qualified electrician and signed off by a registered electrician.
- Allow for spare cabling in case of faulty cable & breakages (especially important when using low specification cable).
- As automation systems vibrate when in use, it is highly recommended that only multi-stranded, flexible cables be used.
- If installing an intercom, remember to allow for sufficient cable cores for all the users of the system as per manufacturers cabling requirements.
- The Drive 1000 motor is designed to facilitate three 20mm conduits going directly into its housing from below. If more cabling needs to be routed to the motor, we suggest that a weatherproof electrical box be installed as a distribution box. All of the circuits can then be extended to the distribution box and terminated there.



1.	Courtesy lights twin + earth 1.0mm back to motor housing and isolator switch.	7.	Free exit loop 1.5mm silicone insulated single core flexible stranded cable back to loop detector that is typically installed in the motor housing.
2.	Intercom gate station (check with intercom supplier for cable specifications)	8.	From intercom internal equipment (check with intercom supplier for specifications) + 5 cores 0,5mm stranded for status LED, BT and Pedestrian triggers.
3.	ACDC model (220Vac) - twin + earth: 2.5mm stranded (An all pole negatively biased isolator must be installed within 1,5m of the motor unit, in circuit with the 220Vac supply)	9.	Alarm monitoring circuit. 2 cores 0.5mm stranded back to motor housing.
4.	Safety infra-red beam RX power & switch. 4 cores 0,5mm stranded back to motor housing.	10.	Optional plug in transformer for low traffic sites (29Vac) - twin + earth. Min 0,5mm stranded (1Amp)
5.	Safety infra-red beam TX power. 2 cores 0.5mm stranded back to motor housing.	11.	Lock power supply. Twin + earth 2.5mm stranded from isolator switch.
6.	Electric lock power. 2 cores 0,5mm stranded back to independent lock power supply via motor housing.		

Baseplate and fastener kit assembly.

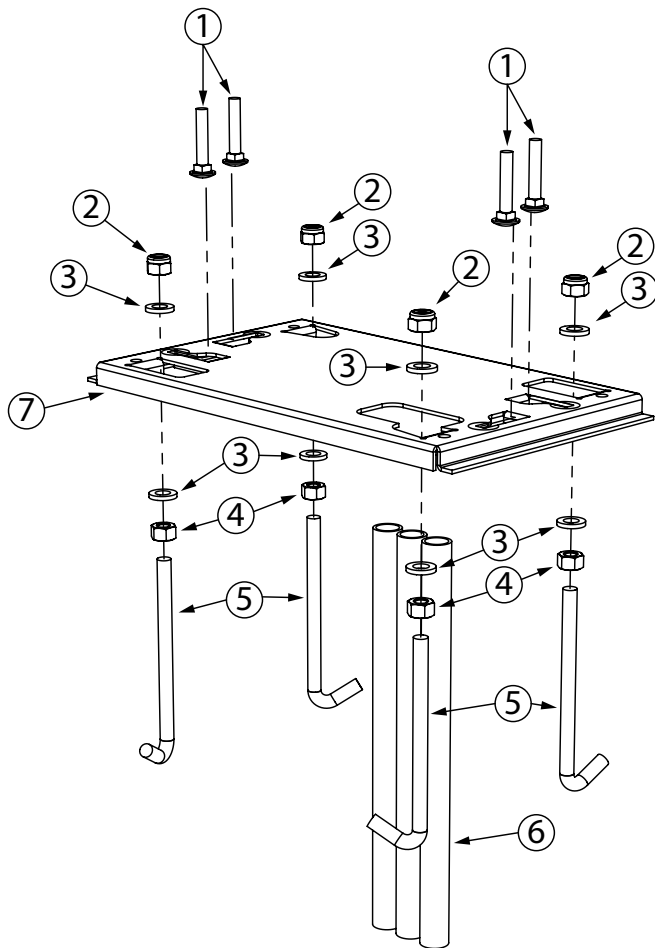
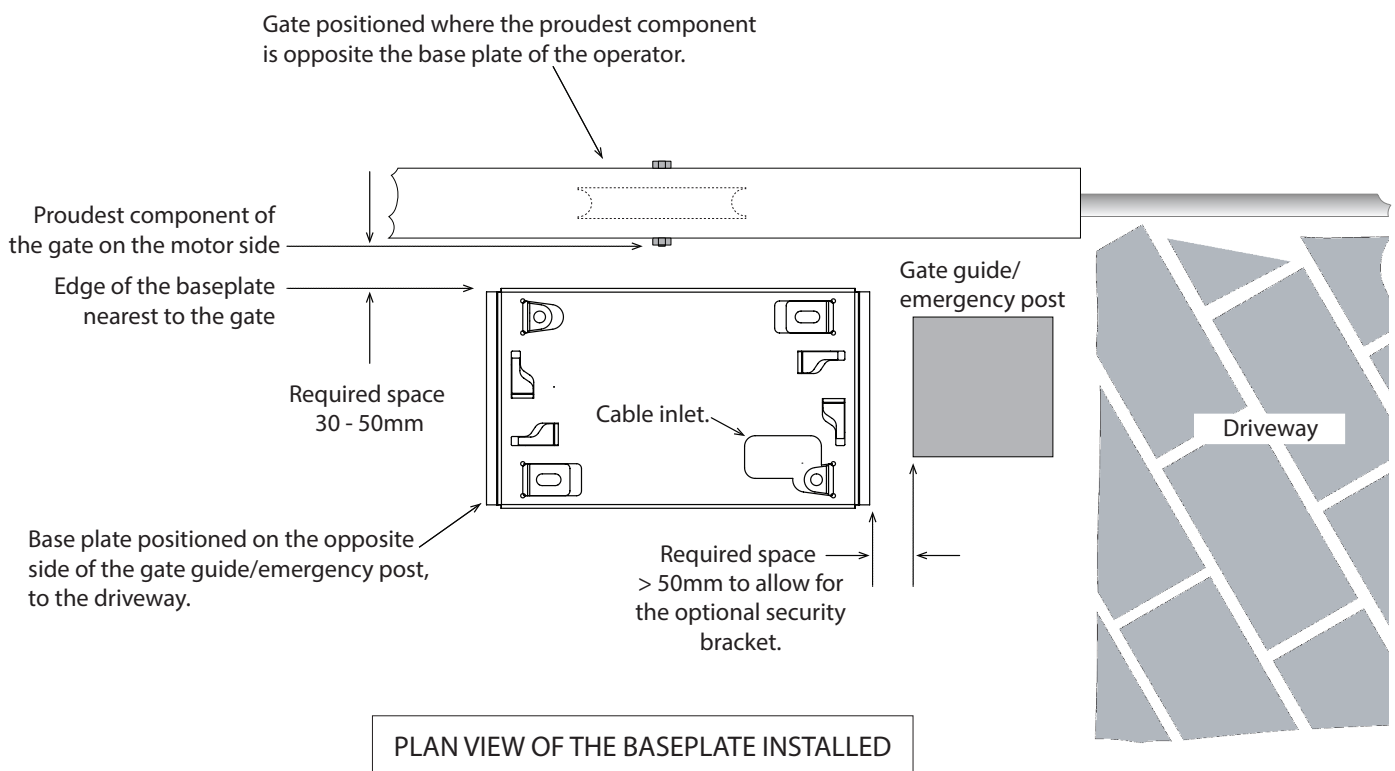


Diagram number	Description
1	Custom cup bolts for fastening the gearbox to the baseplate.
2	M10 Nylock nuts.
3	M10 Flat washers.
4	M10 Machine nuts.
5	M10 J-Bolts for concrete casting method.
6	Cabling conduit piping.
7	Baseplate.

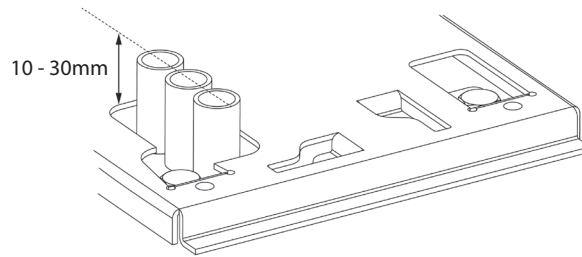
Installing the baseplate.

There are a number of different fastening techniques that can be used to fasten the baseplate in position. The standard kit is supplied with J-bolts so that the baseplate can be cast in concrete. While this method offers a nice solid base it takes more than 48hrs to install as the concrete must cure properly before continuing with the installation. Whichever mounting method you opt for, the position of the base plate will always remain the same. Here are the dimensions to use when positioning the base plate. The baseplate should be installed above the highest point of flooding that may occur with the run off of water down the driveway.



Cabling conduits height:

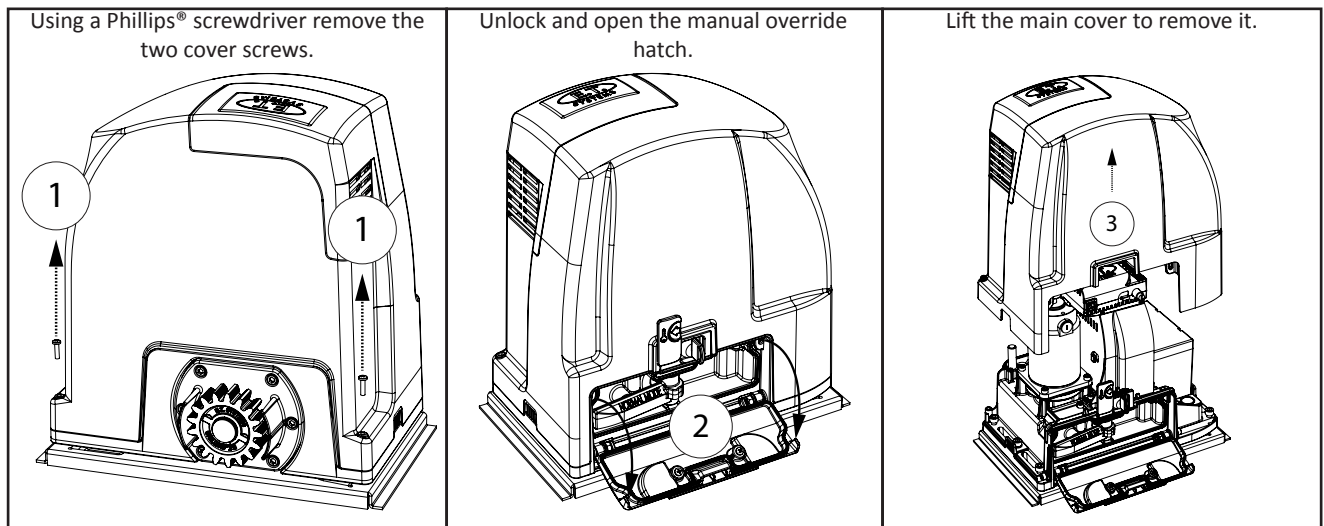
The cabling conduits should protrude more than 10mm above the top surface of the baseplate to afford better weather proofing. To avoid them snagging on the bottom of the gearbox when the gearbox position is adjusted backward and forward, and to allow sufficient space for the cables to be routed into the motor housing, they should not protrude more than 30mm.



Mounting the operator onto the baseplate.

Removing the cover:

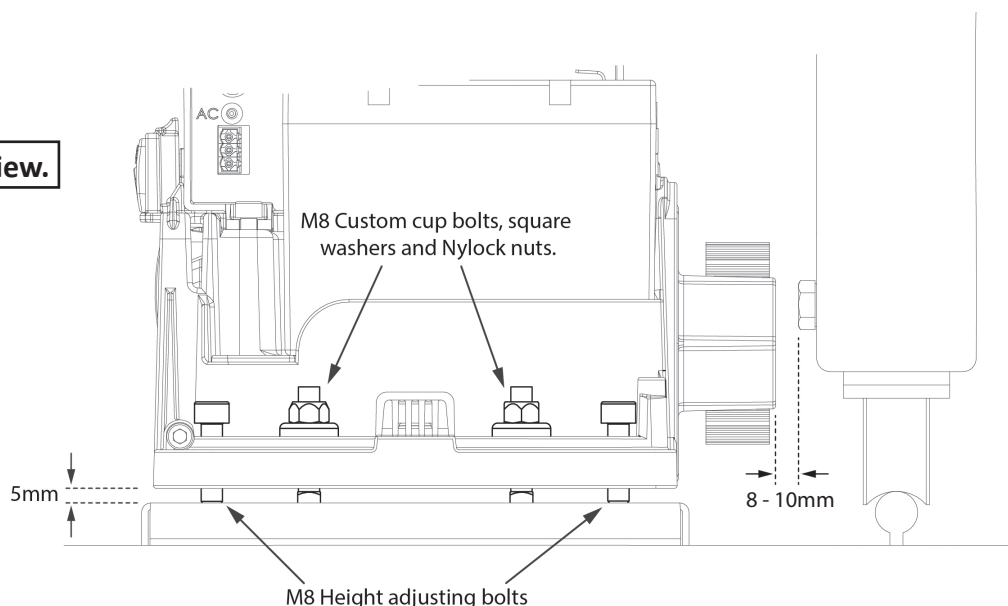
The cover is secured in place by means of two screws and a pair of locking tabs on the manual override hatch.



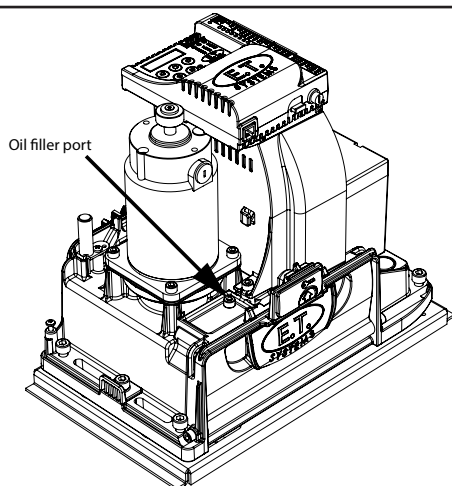
Mounting the gearbox: (You will need a 13mm socket or spanner and a 5mm Allen® hex key)

The gearbox is fastened onto the baseplate by means of the 4x M8 Custom cup bolts, square washers and M8 Nylock nuts. The gearbox distance from the gate can be adjusted backwards and forwards by up to 30mm. Remember to ensure that there is enough space allowed between the fascia of the pinion and the proudest part of the gate that passes the pinion. This is to prevent any part of the gate snagging on the pinion as the gate runs. Before tightening the gearbox down on the baseplate, ensure you have left approximately 5mm between the baseplate and the bottom of the gearbox. This will allow for adjustment of the rack to pinion spacing later on.

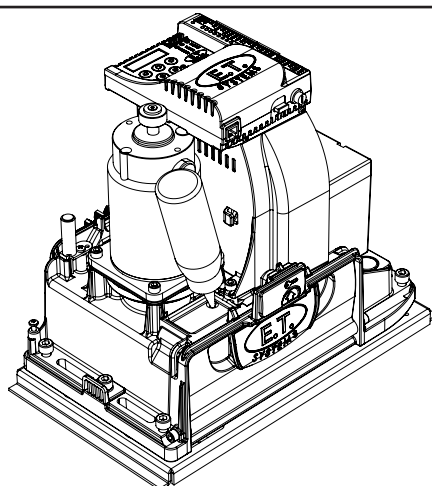
Side view.



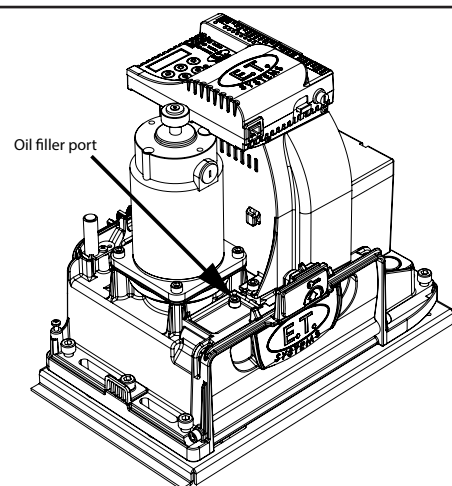
Decanting the oil into the gearbox.



Remove oil filler port plug.



Decant all 100ml of the 80W90 oil into the gearbox.

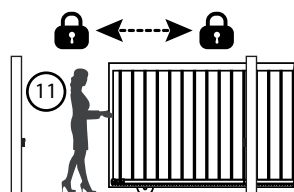
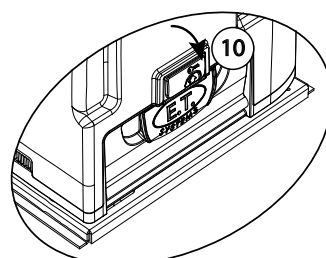
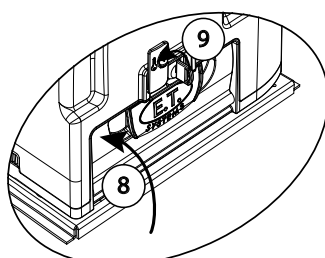
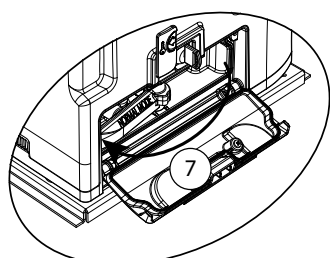
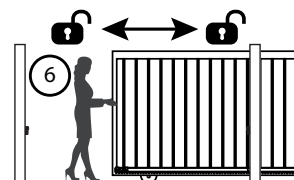
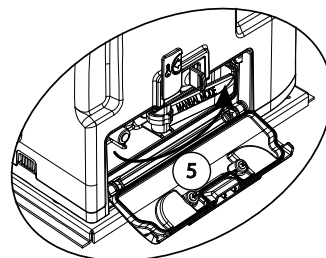
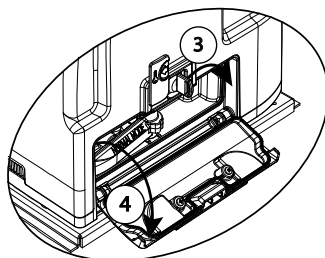
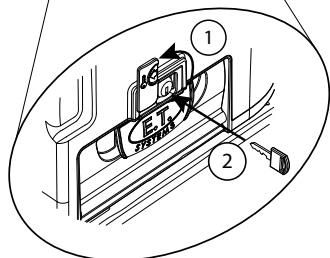
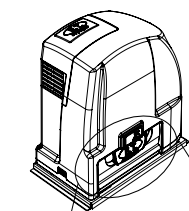


Replace oil filler port plug.

How to use the manual override.

Move gate open and closed by hand.

NB! The gearbox can be left in manual mode with the manual override hatch closed and locked up.



To disengage the gearbox (Manual mode)

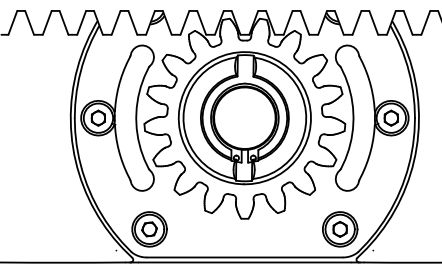
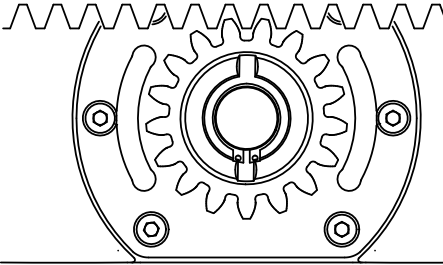
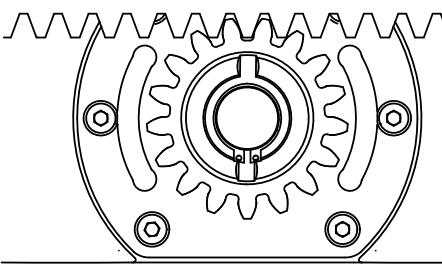
1. Raise lock cover.
2. Insert the key.
3. Turn the key clockwise.
4. Open the manual override hatch.
5. Swing manual override lever to the right.
6. Manoeuvre the gate by hand.

To re-engage the gearbox (Normal mode)

7. Swing the manual override lever to the left.
8. Close the manual override hatch.
9. Turn the key counter clockwise.
10. Lower the lock cover.
11. Ensure the gearing is engage by pushing or pulling the gate until the gearing "clicks" in.

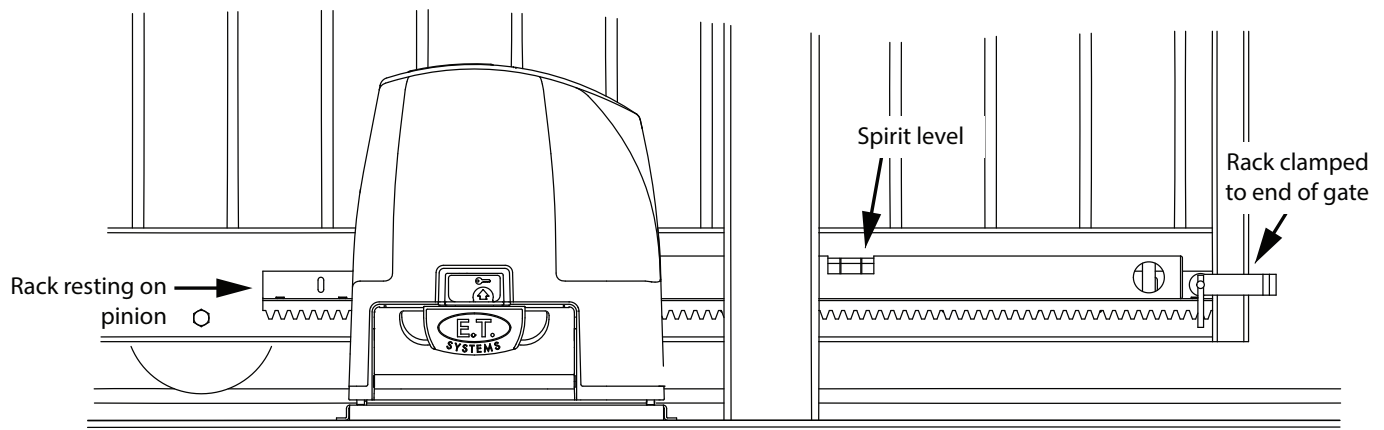
Installing the rack.

Rack to pinion spacing.

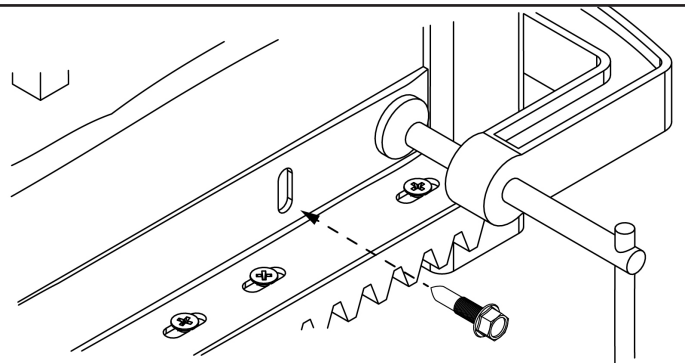
Correct.	Incorrect!	Incorrect!
<p>The driving surfaces of each tooth are 1 to 2mm apart. Allowing for slight variance in the height of the rack when the wheels shrink in colder conditions or where the gate flexes and the rack is no longer square to the pinion.</p> <p style="text-align: center;">✓ Correct</p>	<p>This will cause skipping of teeth at the slightest resistance to the gate travel, resulting in the motor control going out of synchronization to the gate position. The long term damage here will be stripped teeth.</p> <p style="text-align: center;">✗ Too loose</p>	<p>This will cause unwanted rolling resistance especially in colder conditions. Where the wheel shrinkage will cause the gate to sit heavier on the pinion or when the rack is no longer square to the pinion due to gate flex. (False safety sensing activation)</p> <p style="text-align: center;">✗ Too tight</p>
		

The following shows a simple method of installing a rack that ensures you achieve the correct fit between the rack and pinion.

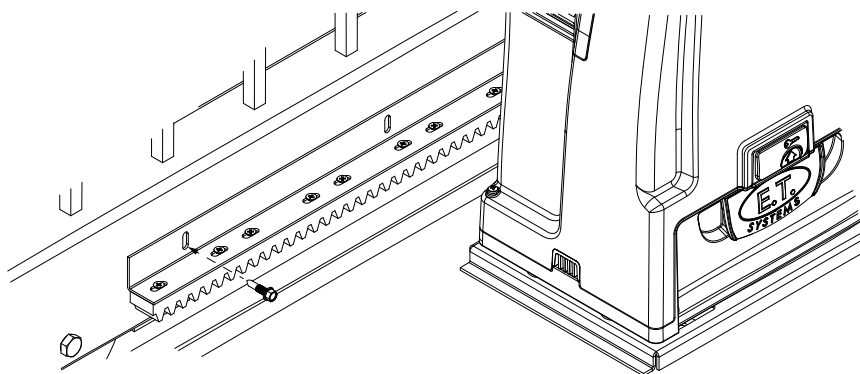
- Begin by double checking you have adjusted the height adjusting bolts so that there is about 5mm between the gearbox base and the baseplate.
- Clamp the end of the first length of rack's end to the closing edge of the gate.
- Rest the other end of the length on the pinion as shown here.
- Use a spirit level to ensure the rack remains true.



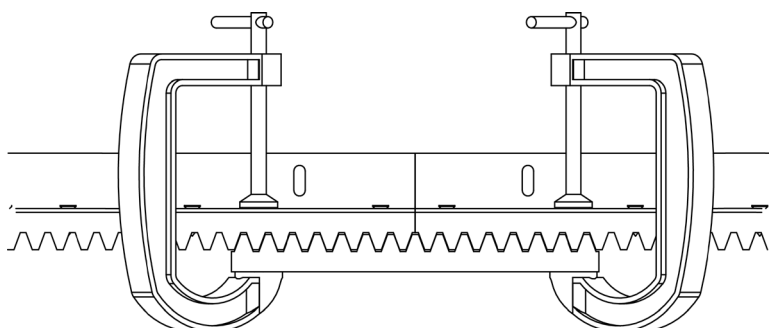
- If satisfied with the rack level fasten the first "TEK" screw (supplied) in the middle of the slot nearest the closing edge of the gate.



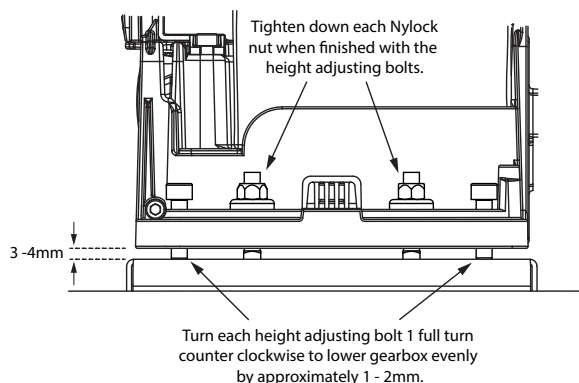
- Move the gate towards the open position. Far enough that you can access the last mounting slot at the opposite end of the length of rack to the end already fastened. Fasten the next “TEK” screw here while the rack still rests atop the pinion.



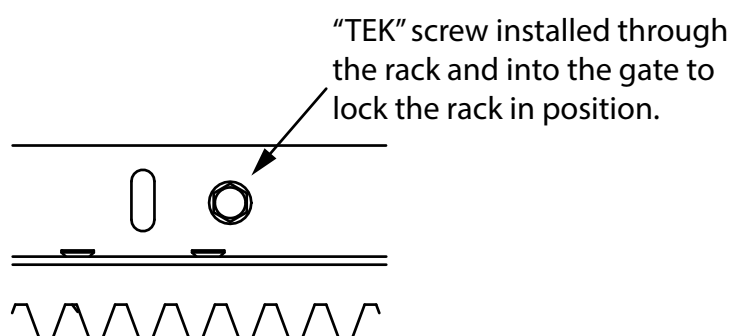
- To install additional lengths of rack, move gate closed until the next length of rack meets the first length and the opposite end once again rests on the pinion.
- To ensure the 2 lengths of rack marry correctly use an off cut of rack clamped upside down across the join of the 2 lengths.
- Continue to fasten the “TEK” screws as before



- When finished installing sufficient rack to allow for the full travel of the gate plus enough to allow for the limit actuator (as shown in the next section) lower the gearbox by turning each height adjusting screw 1 full turn counter clockwise.



- Test the meshing of the rack and pinion. (See pictures of rack to pinion spacing on previous page).
- If satisfied fasten a “TEK” screw directly through both the rack angle and the gate so that you have 5 “TEK” screws per length of rack evenly spaced.



Electrical and electronic installation and setup.

As a gate motor vibrates when in use, it is strongly recommended that only multiple strand flexible cables be used.

Before closing the unit, always remember to double check that all connections are securely made, that there are no stray strands flaring out that can short circuit against other adjacent connections or bared wires and that no cables will be pulled loose when the cover is replaced on the unit.

Double check the battery connections as loose connections can cause arcing and corrosion of the battery terminals.

Terminating the AC voltages:

Please note the input voltages can differ but the control card, is the same for all the models.

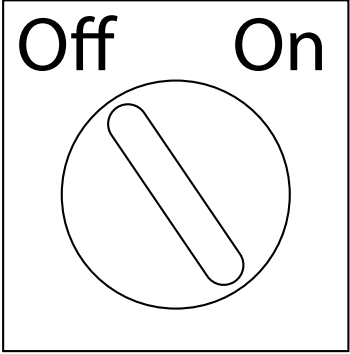
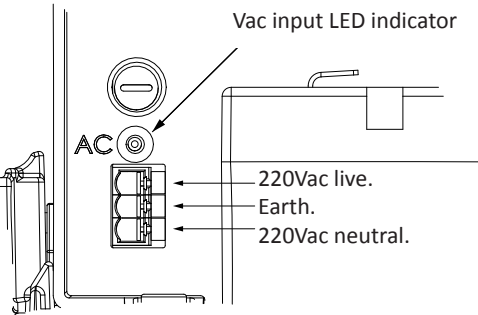
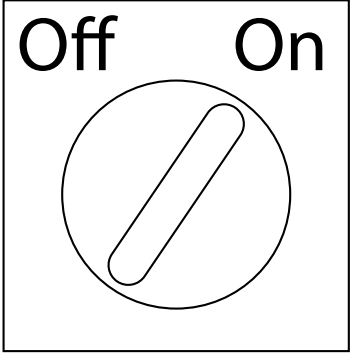
The ACDC power supply requires 220Vac at the gate motor. This 220Vac must be circuited through a weatherproof all pole isolator switch. This isolator switch must be installed within 1,5m of the unit, must not be installed within the workings of the system (the gate may not pass in front of it) and must be positioned so that it cannot be tampered with for the outside of the property. This circuit must be certified by way of a C.O.C. (certificate of compliance) by a registered electrician.

In the case of the plug-in transformer being used, where the low voltage 29Vac is run to the gate, there is no need for the all pole isolator at the gate and the circuit does not need to be certified by a registered electrician*. The cable however must still be installed in its own dedicated conduit pipe and the basic principles of electrical safety standards should still be followed when selecting, working with and installing the cable for this circuit.

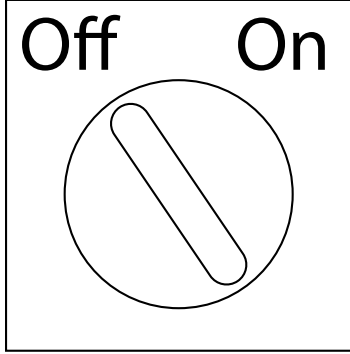
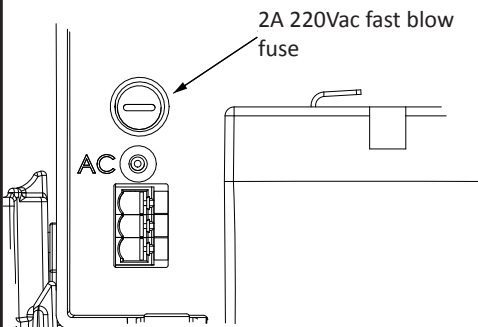
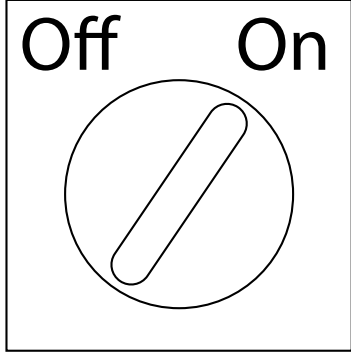
* Some municipalities may require certification of all domestic electrical circuits including those below 50V.

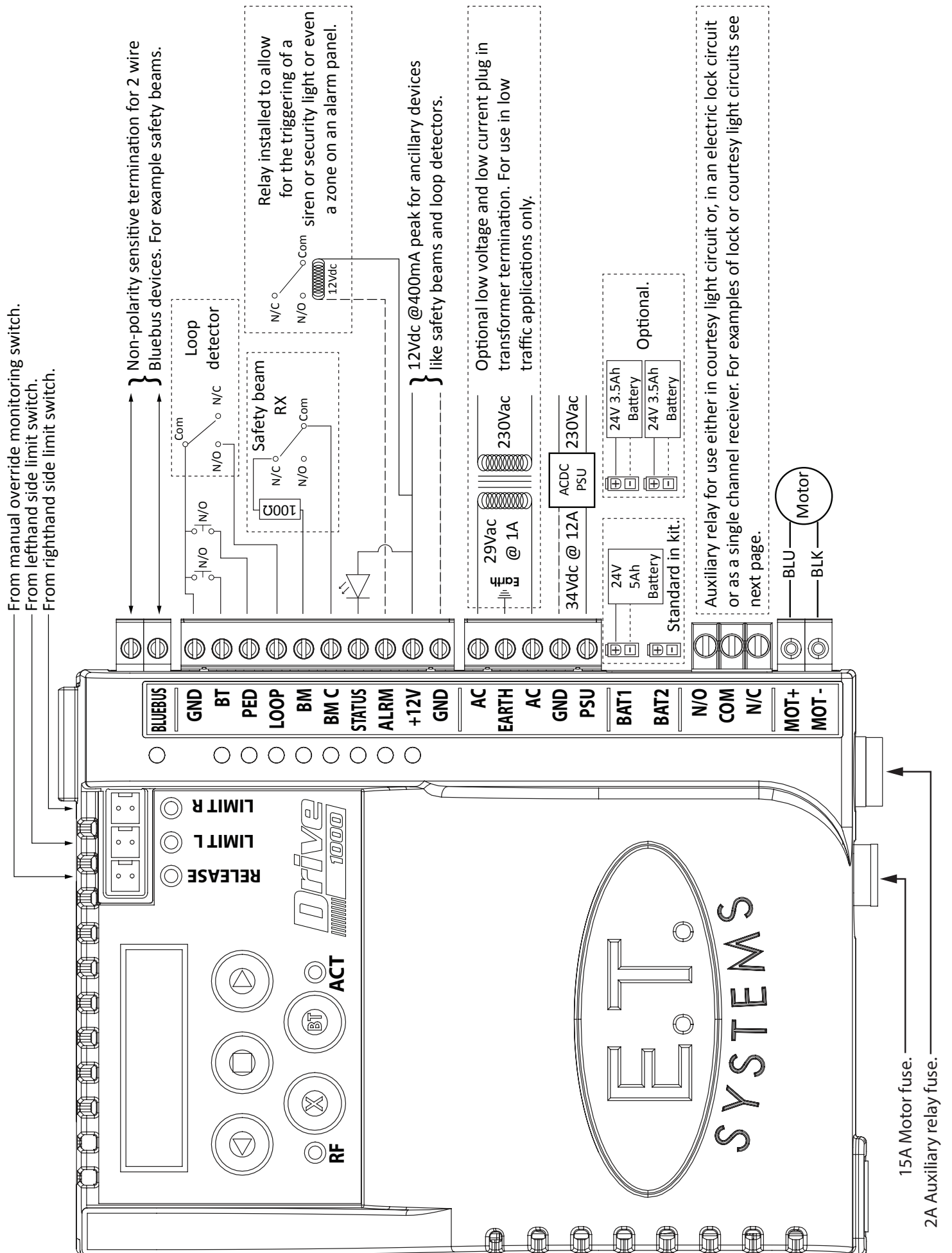
The following shows the wiring of the 220Vac to the ACDC power supply and how to access the 2A fast blow 20mm x 5mm fuse located within the power supply module.

Connecting the 220Vac supply to the ACDC power supply:

 <p>Ensure the 220Vac has been isolated.</p>	 <p>Terminate the 220Vac and earth as shown here.</p>	 <p>Switch the 220Vac back on.</p>
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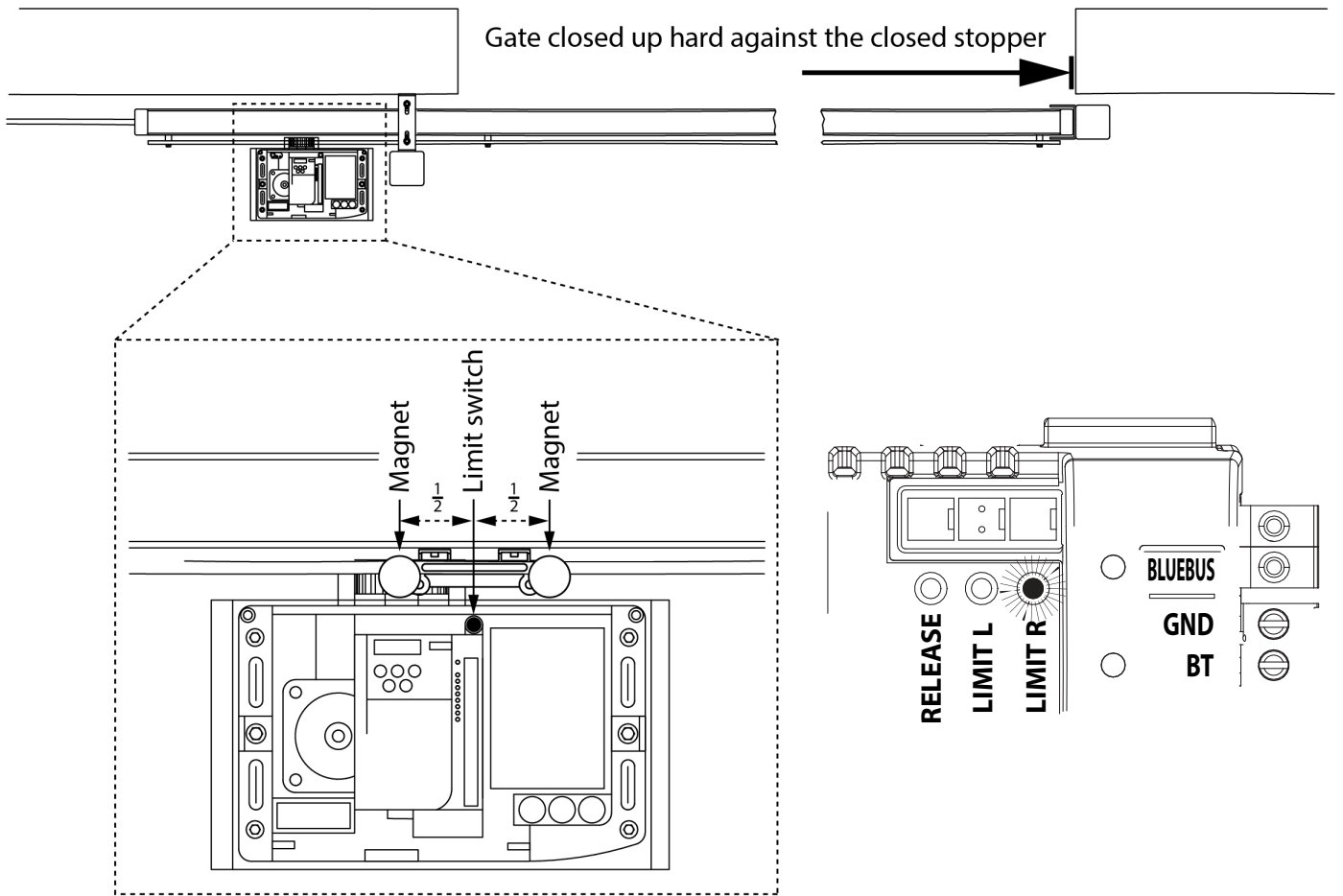
Accessing the 220VAC 2A fuse in the ACDC power supply in the case of a burnt out fuse:

 <p>Ensure the 220Vac has been isolated.</p>	 <p>Replace the 2A 220Vac fuse here.</p>	 <p>Switch the 220Vac back on.</p>
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Installing the limit actuator.

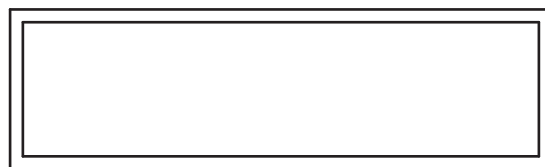
This diagram depicts how to install the limit actuator.



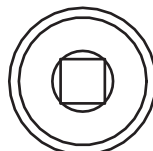
1. Push the gate up against the closed stopper.
2. Remove the rack screw (holding the nylon teeth to the steel angle) closest to being in line with the limit switch. Or in the case of steel rack, weld a M4 x 20 machine bolt upside down on top of the spine of the rack in line with the limit switch.
3. Fasten the actuator down onto the rack using either the M4 x 20mm self-tapping screw supplied with the kit or with a nut in the case of steel rack.
4. Adjust the actuator so that it is approximately halfway across the limit switch.
5. Move the gate open and then closed again. Ensure the limit LED comes on before the gate impacts with the closed stopper. Positive closed mode will always close the gate the last 50mm if selected in programming.

Using the control card display and dashboard.

The Drive 1000 is equipped with a LCD display and interactive keys for simplified programming and diagnostics. All setup, of the various features, requires that the control card dashboard be used. Below are the functions of each key on the dashboard.



Navigate backward in menus, decrease values, indicate lefthand closing gate in runtime setup function or enter diagnostics menu while in standby.



Navigate forward in menus, increase values, indicate righthand closing gate in runtime setup function or enter diagnostics menu while in standby.

Radio activity indicator.



RF



ACT

Processor activity indicator.

Exit menu levels without saving.










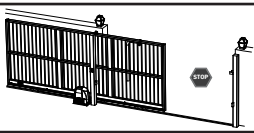



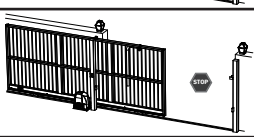



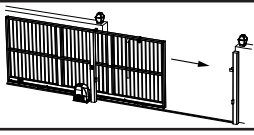
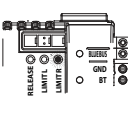

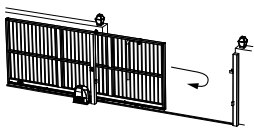




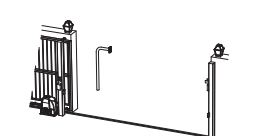



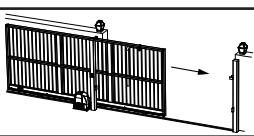
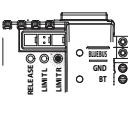

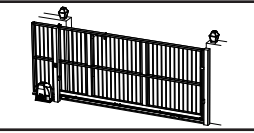

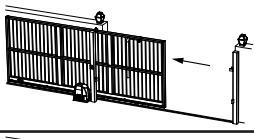
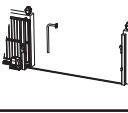
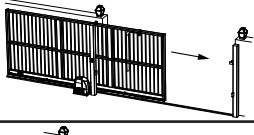
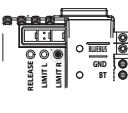

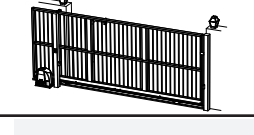



Enter programming, advance to next level of option on display, save value on display.




















Test BT mode when in standby or exit all the way back to standby without saving when in programming.

















Control card programming and setup.




















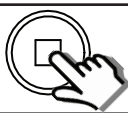





Programming menu quick reference guide:
























1. Runtime setup. - Page 18.
2. Collision force sensing. Safety level setup. - Page 19.
3. Safety beam setup. - Page 19.
4. BT triggers operating mode selection and setup. - Page 20.
5. Pedestrian operation setup. - Page 21.
6. Receiver setup.
 - a. Learn remotes. - Pages 22, 23 and 24.
 - b. Erase remotes. - Pages 25 and 26.
 - c. Diagnose remotes. - Page 27.
 - d. Receiver information. - Page 28.
7. Advanced menu. - Pages 29 and 30.
 - a. Crawl distance.
 - b. Quick stop distance.
 - c. Gate speed.
 - d. Positive close mode.
 - e. Auxiliary relay setup.
 - f. Blue BUS setup.
 - g. Power settings.
 - h. Controller setup.
 - i. Controller information.
 - j. IEC Standards mode. Enable/disable. (Safety beams must be installed and configured before you can enable this mode)
 - k. Reset and restore.




















Runtime Setup		Setting up the gate runtime. (Mandatory)			
From Standby status		- Standard mode - - Standby	Before continuing with the runtime setup ensure the limit actuator has been installed correctly as per page 16 in this manual. Begin with the gate midway in its travel. NB. To speed up the gate while running during this procedure, press and hold either the < or > buttons.		
Action		Response			
		Description	Display	Buzzer	Gate
To enter the program menu. Press and hold the  button until buzzer beeps.		Display and buzzer confirms.	Programming menu <or> for options	 x2	
Scroll < or > to select the runtime setup option.	 	Display scrolls through options.	Runtime setup <Limits NOT set>		
Press and release the  button to select runtime setup.		Display asks you to confirm the gate is engaged midway in travel.	Move gate midway then press 	 x1	
Press and release the  button to confirm the gate is midway.		Display asks you to select the gate closing direction.	Set Close Direct Press < or >	 x1	
Confirm gate closing direction by pressing and releasing either the < or > button.	 	Gate closes slowly. Display and buzzer confirms.	Finding closed limit	 x1	
When the closed position is reached and the closed limit is triggered. LED on.		Gate stops and starts opening. Display prompts you to stop the gate in the open position.	Learning length Press  at open		
Press and release the  button to stop the gate at the required open position.		Gate stops opening. Display asks you to fine tune the open position if required and then confirm the position.	Fine Adjust <or> Then press 	 x1	
Press and release the  button to save the required open position.		Gate closes slowly. Display and buzzer confirms.	Verifying length	 x1	
When the closed position is reached and the closed limit is triggered. LED on.		Gate stops. Display and buzzer warn the profiling is about to begin.	WARNING! Profiling.	 x1	
Once warning tone has stopped.		Gate begins running open at full speed. Display confirms.	Opening. Profiling.		
When the previously programmed open position is reached.		Gate stops and begins closing again at full speed. Display confirms.	Closing. Profiling.		
When the closed position is reached and the closed limit is triggered. LED on.		Gate stops. Display and buzzer confirms.	Runtime setup. <Limits set>	 x1	
Scroll left or right to next program option.		  OR EXIT back to standby status	 "Selected" mode - Standby		




















Selecting a safety level.				Overload Setting	
From Standby status		- “Selected” mode - - Standby	This adjusts the force level, over and above the nominal gate resistance, needed to trigger the safety overload routines. Level 1 being the most sensitive and 8 being the least sensitive. The factory default is level 3.		
Action		Response			
		Description	Display	Buzzer	Gate
To enter the program menu. Press and hold the  button until buzzer beeps.		Display and buzzer confirms.	Programming menu <or> for options	 x2	
Scroll < or > to select the runtime setup option.		Display scrolls through options.	Overload Setting <  = change >		
With “Overload Setting” on the display, press and release  .		Display shows current option status.	Overload Setting <  >	 x1	
Scroll < or > to the required setting.		Display changes respectively.	Overload Setting <  >	 x1	
With required setting displayed, press and release  .		Display briefly shows the new setting is saved.	Overload Setting Saved = 2	 x2	
After display confirms new setting.	Overload Setting <  = change >	Display returns to programming menu options list.	Overload Setting <  = change >		
Scroll left or right to next program option.			OR	EXIT back to standby status	
					“Selected” mode - Standby

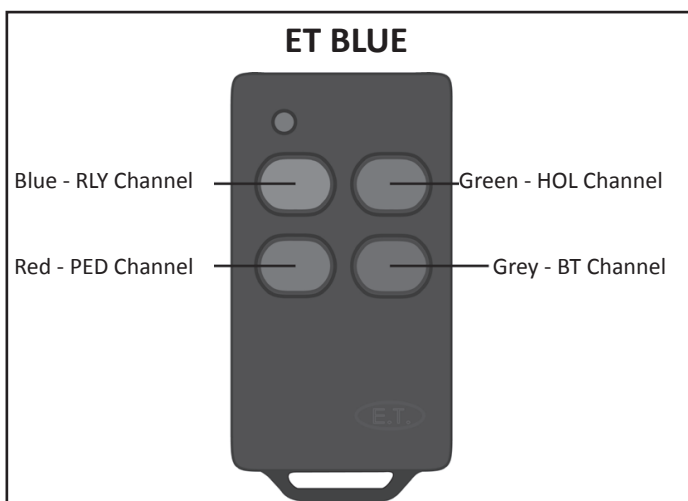
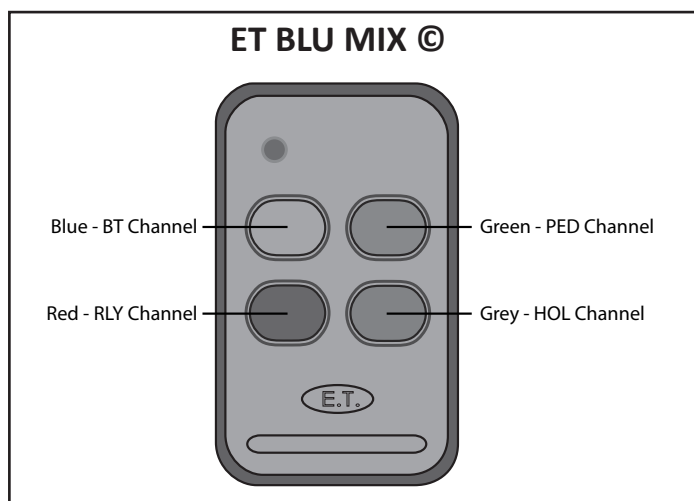
Safety infra-red beams setup.				Beam Setup.	
From Standby status		- “Selected” mode - - Standby	Use this option to enable the safety beam circuit for use in standard BT mode. (See page 20)		
Action		Response			
		Description	Display	Buzzer	Gate
To enter the program menu. Press and hold the  button until buzzer beeps.		Display and buzzer confirms.	Programming menu <or> for options	 x2	
Scroll < or > to select the beam setup option.		Display scrolls through options.	Beam Setup <  = change >		
With “Beam Setup” on the display, press and release  .		Display shows current option status.	Beam Setup Disabled	 x1	
Scroll < or > to toggle between “Enabled” and “Disabled”.		Display changes respectively.	Beam Setup Enabled	 x1	
With required setting displayed, press and release  .		Display briefly shows the new setting is saved.	Beam Setup Enabled Saved	 x2	
After display confirms new setting.	Beam Setup Enabled Saved	Display returns to programming menu options list.	Beam Setup <  = change >		
Scroll left or right to next program option.			OR	EXIT back to standby status	
					“Selected” mode - Standby

BT Mode Setting		Selecting a BT operating mode and adjusting the BT auto-close time.			
From Standby status		- “Selected” mode - - Standby	The factory default is standard 4 step mode. The factory default auto-close time is 15 seconds. The timer range is 1 – 254 seconds. PLEASE NOTE!! If any trigger option, that makes use of an automatic closing timer, is used then the infra-red safety beams input becomes active for that transaction. A set of safety infra-red beams must be installed using the technique indicated in this manual to allow for gate closing. The safety beam function on this control card conforms to the CE safety standards.		
Action		Response			
		Description	Display	Buzzer	Gate
To enter the program menu. Press and hold the  button until buzzer beeps.		Display and buzzer confirms.	Programming menu <or> for options	 x2	
Scroll < or > to select the beam setup option.	 	Display scrolls through options.	BT Mode Setting <  = change >		
With “BT Mode Setting” on the display, press and release  .		Display shows current option status.	BT Mode Setting < Standard >	 x1	
Scroll < or > to the required BT mode option.	 	Display changes respectively.	BT Mode Setting < Standard >	 x1	
			BT Mode Setting < Auto-close >		
			BT Mode Setting < CONDO >		
			BT Mode Setting < P.I.R.A.C. >		
With required setting displayed, press and release  .		If Standard mode was selected, the display and buzzer will confirm the setting is saved. Display then reverts to programming options list.	BT Mode Setting Standard - Saved	 x2	
		If Auto-close, CONDO or P.I.R.A.C. were selected, then the buzzer beeps once, and the display prompts you to select the required auto-close time.	Set Auto-close time = 15s	 x1	
Scroll < or > to the required setting.	 	Display changes respectively.	Set Auto-close time = 20s		
With required setting displayed, press and release  .		Display briefly shows the new setting is saved.	Set Auto-close Saved = 20s	 x2	
After display confirms new setting.	Set Auto-close Saved = 15s	Display returns to programming menu options list.	BT Mode Setting <  = change >		
Scroll left or right to next program option.		 	OR	EXIT back to standby status	
					“Selected” mode - Standby


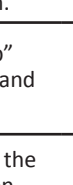

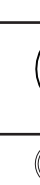







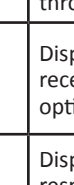
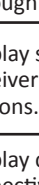

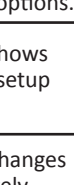

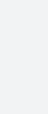





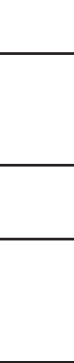
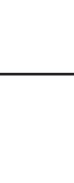
Setting up the pedestrian open distance and pedestrian auto-close time.				Ped Setting	
From Standby status		- “Selected” mode - - Standby	NB! The runtime setup must be completed first before the pedestrian setup can be attempted. The factory default pedestrian opening is 1 meter. The factory default auto-close time is 2 seconds. The timer range is 1 – 254 seconds. PLEASE NOTE!! If no safety beams are installed then the pedestrian mode reverts to 4 step mode where the gate will not auto-close. A set of safety infra-red beams must be installed using the technique indicated in this manual to allow for auto-closing in pedestrian mode. The safety beam function on this control card conforms to the CE safety standards.		
Action		Response			
		Description	Display	Buzzer	Gate
To enter the program menu. Press and hold the  button until buzzer beeps.		Display and buzzer confirms.	Programming menu <or> for options	 x2	
Scroll < or > to select the pedestrian setting option.	 	Display scrolls through options.	Ped Mode Setting <  = change >		
With “Ped Setting” on the display, press and release  .		Display shows current pedestrian opening distance.	Pedestrian open distance: 1000mm	 x1	
Scroll < or > to the required setting.	 	Display changes respectively.	Pedestrian open distance: 1200mm	 x1	
With required setting displayed, press and release  .		Display briefly shows the new setting is saved and then prompts you to set the pedestrian auto-close time if safety beams have been installed and setup correctly.	Pedestrian Setting Auto-close = 5s		
Scroll < or > to the required setting if necessary.	 	Display changes in seconds with each button press.	Pedestrian Setting Auto-close = 3s		
With required setting displayed, press and release  .		Display briefly shows the new setting is saved.	Pedestrian Setting Saved = 3s	 x2	
After display confirms new setting.	Beam Setup Enabled Saved	Display returns to programming menu options list.	Beam Setup <  = change >		
Scroll left or right to next program option.	 	OR	EXIT back to standby status		“Selected” mode - Standby
























Receiver Setup		Receiver programming and setup. Setting up a new user: - Quick learn method.			
From Standby status		- "Selected" mode - - Standby	The gate 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
To enter the program menu. Press and hold the  button until buzzer beeps.		Display and buzzer confirms.	Programming menu <or> for options	 x2	
Scroll < or > to select the receiver setup option.		Display scrolls through options.	Receiver Setup <  = change >		
With "Receiver Setup" on the display, press and release  .		Display shows current option status.	Receiver Setup Quick learn	 x1	
With "Quick learn" on the display, press and release  .		Display prompts you to select a function.	Select function BT, Full opening		
Scroll < or > to the required receiver function/channel option. NB! Corresponding 4 function learn option is explained in the next instruction table on the next page.		Display changes respectively.	Select function BT, Full opening	 x1	
			Select function Pedestrian opening		
			Select function Auxiliary relay		
			Select function Holiday lockout		
			Select function Corresponding		
Press and hold required button on the remote transmitter.					
While still transmitting with the remote button, press and release  .		After the  button has been released, the user address for that transmitter displays and the buzzer beeps once.		 x1	
Release the button on the remote transmitter.					
Repeat the last 4 steps here for additional users or functions, or exit back one level in the receiver setup menu for other receiver setup options.					
Scroll left or right to next program option.			OR	EXIT back to standby status	 "Selected" mode - Standby





















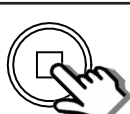










Receiver programming and setup. Setting up a new user: - Quick learn method. (Corresponding 4 function learn option)					Receiver Setup
From Standby status		- "Selected" mode - - Standby	The gate can be in any position when performing this routine.		
Action		Response			
		Description	Display	Buzzer	Gate
To enter the program menu. Press and hold the  button until buzzer beeps.		Display and buzzer confirms.	Programming menu <or> for options	 x2	
Scroll < or > to select the receiver setup option.		Display scrolls through options.	Receiver Setup <  = change >		
With "Receiver Setup" on the display, press and release  .		Display shows current option status.	Receiver Setup Quick learn	 x1	
With "Quick learn" on the display, press and release  .		Display prompts you to select a function.	Select function BT, Full opening		
Scroll < or > to the corresponding learn option.			Select function Corresponding	 x1	
Press and hold any button on the remote transmitter. All four buttons must be set to the same format for this to work in the same way as this example.					
While still transmitting with the remote button, press and release  .		After the  button has been released, the user address for that transmitter displays and the buzzer beeps once.		 x1	
Release the button on the remote transmitter.					
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 here for additional users or exit back one level in the receiver setup menu for other receiver setup options.					
Scroll left or right to next program option.			OR	EXIT back to standby status	
					"Selected" mode - Standby













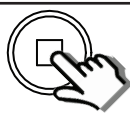




























All buttons should be set to either ET BLUE format or ET BLU MIX © format for this to work as shown here.

Receiver Setup		Receiver programming and setup. Setting up a new user: - Advanced learn method.			
From Standby status		- “Selected” mode - - Standby		The gate 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
To enter the program menu. Press and hold the  button until buzzer beeps.		Display and buzzer confirms.	Programming menu <or> for options	 x2	
Scroll < or > to select the receiver setup option.		Display scrolls through options.	Receiver Setup <  = change >		
With “Receiver Setup” on the display, press and release  .		Display shows receiver setup options.	Receiver Setup Quick learn	 x1	
Scroll < or > to select the advanced learn option.		Display changes respectively.	Receiver Setup Advanced learn	 x1	
With “Advanced learn” on the display, press and release  .		Display prompts you to select an available user address.	Select address < 1 = used >		
Scroll < or > to select an available user address.		Display changes respectively.	Select address < 2 >		
With an available user address on the display, press and release  .		Display changes to receiver functions list.	Select function BT, Full opening		
Scroll < or > to the required receiver function/channel option. NB! Corresponding 4 function learn option is explained in the next instruction table on the next page.		Display changes respectively.	Select function BT, Full opening	 x1	
			Select function Pedestrian opening		
			Select function Auxiliary relay		
			Select function Holiday lockout		
			Select function Corresponding		
Press and hold required button on the remote transmitter.					
While still transmitting with the remote button, press and release  .		After the  button has been released, the user address for that transmitter displays and the buzzer beeps once.		 x1	
Release the button on the remote transmitter.					
Repeat the last 4 steps here for additional functions or exit back one level in the receiver setup menu for other options.					
Scroll left or right to next program option.			OR	EXIT back to standby status	 “Selected” mode - Standby

Receiver programming and setup. Erasing a single user from the memory.					Receiver Setup
From Standby status		- "Selected" mode - - Standby	The gate can be in any position when performing this routine.		
Action		Response			
		Description	Display	Buzzer	Gate
To enter the program menu. Press and hold the  button until buzzer beeps.		Display and buzzer confirms.	Programming menu <or> for options	 x2	
Scroll < or > to select the receiver setup option.	 	Display scrolls through options.	Receiver Setup <  = change >		
With "Receiver Setup" on the display, press and release  .		Display shows current option status.	Receiver Setup Quick learn	 x1	
Scroll < or > to select the Erase remotes option.	 	Display scrolls through options.	Receiver Setup Erase remotes		
With "Erase remotes" on the display, press and release  .		Display shows first erase option.	Erase Remotes Select Address		
With "Select Address" on the display, press and release  .		Processor scans the memory and then displays the first available user address that can be erased.	Erase Address < 1 >		
Scroll < or > to the user address that you would like to erase.	 	Display scrolls through available user addresses.	Erase Address < 5 >		
With the correct user address displayed, press and release  .		Display confirms the user address has been erased.	Erase Remotes Erase done	 x2	
After the display confirms the erasing of the address is done.	Erase Remotes Erase done	Display reverts to main erase remotes options.	Erase Remotes Select Address		
Repeat the last 4 steps here to erase additional users or exit back one level in the receiver setup menu for other receiver setup options.					
Scroll left or right to next program option.	 	OR	EXIT back to standby status		"Selected" mode - Standby

Receiver Setup		Receiver programming and setup. Master erasing all users from the memory.			
From Standby status		- "Selected" mode - - Standby	The gate can be in any position when performing this routine.		
Action		Response			
		Description	Display	Buzzer	Gate
To enter the program menu. Press and hold the  button until buzzer beeps.		Display and buzzer confirms.	Programming menu <or> for options	 x2	
Scroll < or > to select the receiver setup option.	 	Display scrolls through options.	Receiver Setup <  = change >		
With "Receiver Setup" on the display, press and release  .		Display shows current option status.	Receiver Setup Quick learn	 x1	
Scroll < or > to select the Erase remotes option.	 	Display scrolls through options.	Receiver Setup Erase remotes		
With "Erase remotes" on the display, press and release  .		Display shows first erase option.	Erase Remotes Select Address		
Scroll < or > to select the Erase ALL memory option.	 	Display scrolls through options.	Erase Remotes Erase ALL memory		
With "Erase ALL memory" on the display, press and release  .		Display then prompts you to press and hold the  button.	Hold  to erase ALL		
When prompted, press and hold  .		Display prompts you to now also begin holding the > button.	Hold  and > to erase ALL		
While holding  begin holding the > button.	 	Display confirms the erase ALL is about to begin. Buzzer beeps intermittently. Releasing either button at this stage will abort the master erase.	Continue holding  and > ----- Preparing to erase ALL	 On/off...	
When buzzer silences. Release the buttons.		Master erase begins. Display confirms.	Erasing ALL Please wait...		
After erase ALL is complete.		Display confirms.	Erase ALL Erase complete		
After the display confirms the erase ALL is complete.	Erase ALL Erase complete	Display reverts to main erase remotes options.	Erase Remotes Erase ALL memory		
Scroll left or right to next program option.		 	OR	EXIT back to standby status	
					"Selected" mode - Standby

Receiver programming and setup. Diagnose remotes.					Receiver Setup
From Standby status		- "Selected" mode - - Standby	The gate can be in any position when performing this routine. This feature can be used to determine if there is 433.92MHz radio interference. Use this feature to check previously learnt remotes.		
Action		Response			
		Description	Display	Buzzer	Gate
To enter the program menu. Press and hold the  button until buzzer beeps.		Display and buzzer confirms.	Programming menu <or> for options	 x2	
Scroll < or > to select the receiver setup option.	 	Display scrolls through options.	Receiver Setup <  = change >		
With "Receiver Setup" on the display, press and release  .		Display shows current option status.	Receiver Setup Quick learn	 x1	
Scroll < or > to select the Diagnose Remotes option.	 	Display scrolls through options.	Receiver Setup Diagnose Remotes		
With "Diagnose Remotes" on the display, press and release  .		Display prompts you to press and release a remote button.	Diagnose Remotes Press Remote		
After prompt.		Display shows a signal strength graph and waits for a remote transmission.	Signal:  Not recognised		
Press and release remote that you are testing.		If the remote button is in the memory the display will confirm the signal strength, user address and function of that button. The higher the graph goes, the stronger the signal.	Signal:  Adr: 1 Func: BT		
		If the remote button is not in the memory the display will confirm the signal strength and confirm the remote is not recognised. The higher the graph goes, the stronger the signal.	Signal:  Not recognised		
Multiple remote buttons can be tested by repeating the last step above here.					
Press and hold the X button when finished testing.		Display Diagnose Remotes option has been exited and buzzer beeps.	Diagnose Remote Exited	 x1	
Release X button.		Display reverts to Receiver Setup options.	Receiver Setup Diagnose Remote		
Scroll left or right to next program option.		 	OR	EXIT back to standby status	
					"Selected" mode - Standby

Receiver Setup		Receiver programming and setup. Receiver information.			
From Standby status		- “Selected” mode - - Standby	The gate can be in any position when performing this routine.		
Action		Response			
		Description	Display	Buzzer	Gate
To enter the program menu. Press and hold the  button until buzzer beeps.		Display and buzzer confirms.	Programming menu <or> for options	 x2	
Scroll < or > to select the receiver setup option.	 	Display scrolls through options.	Receiver Setup <  = change >		
With “Receiver Setup” on the display, press and release  .		Display shows receiver setup options.	Receiver Setup Quick learn		
Scroll < or > to select the Receiver info option.	 	Display changes respectively.	Receiver Setup Receiver info		
With “Receiver info” on the display, press and release  .		Display begins toggling between the number of user addresses used out of the total memory and the software version.	Receiver Info used: 1 of 1023 ----- Receiver Info Software ver: 2		
Press and release X to exit back to receiver setup options.		Display changes back to main receiver setup options level and buzzer beeps.	Receiver Setup Receiver info	 x1	
Scroll left or right to next program option.		 	OR	EXIT back to standby status	
					“Selected” mode - Standby

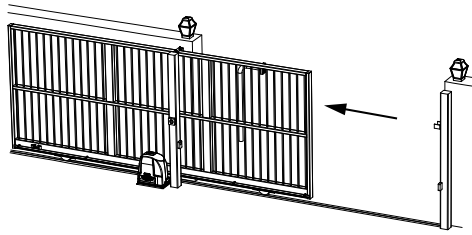
Advance programming options and their definitions.	
Crawl Distance.	This option allows you to increase or decrease the distance allowed for the momentum of the gate to dissipate on the approach to the ends of travel limits. <i>A larger mass gate that is running freely will need a longer crawl distance.</i>
Quick Stop.	This option allows you to increase or decrease the distance allowed for the momentum of the gate to dissipate when triggered while running at full speed. <i>The distance the gate continues to travel closed after the safety beams have been triggered while closing for example. A larger mass gate that is running freely will need a longer quick stop distance.</i>
Gate Speed.	Closing and opening speed - This allows you to reduce the full speed of the gate in both directions.
	Closing speed - This allows you to reduce the full speed of the gate in the closing direction.
	Opening speed - This allows you to reduce the full speed of the gate in the opening direction.
Positive Close Mode.	This option allows you to select that the gate continues to surge onto the physical closed stopper after seeing the closed limit. <i>Use this option with gates that have electric fencing contacts or electric locks for example.</i>
Auxiliary Relay Setup.	Lock mode - This option allows you to control either a electro-mechanical lock like an electric rim lock or a magnetic lock. The relay on time can be adjusted in strike lock mode.
	RX1 Module - This option allows you to combine the third channel of the receiver with the auxiliary relay to operate like an ET RX1 receiver. The relay can be set to latch mode or the on relay on time can be adjusted to any time between 1 and 60 seconds. The receiver is a single shot receiver.
	Light switch - This option is used as a switch in the driveway lighting circuit where the lights will come on as the gate opens and will switch off after the gate has closed again. In this mode the third channel of the receiver when triggered will switch the auxiliary relay no matter the gate position. There are two on times which are adjustable. Light on time whenever gate opens and light on time when remotely triggered.
Blue-bus Setup.	The Drive 1000 motor unit can be used with the NICE Blue-bus two wire devices like the Blue-bus safety beam products. This function must be run when adding or removing any Blue-bus devices to the system.
Power Settings.	Battery charger - This option allows you to disable the battery charger where a larger capacity intelligent charger has been installed additionally to maintain the battery level of additional batteries larger than 7A/h. By disabling the built in charger you remove any possibility of interfering with the external charger's diagnostics thus optimising the external battery and charger's performance.
	AC monitoring - This option allows you to disable the Vac mains failure monitoring on sites where a solar panel system has been installed to maintain the battery.
	Battery replaced - The Drive 1000 intelligent charger monitors and tests the battery health, where it samples the battery level under load regularly. Each time the battery is sampled in this state, the reading is compared to previous samples to determine if the battery is still able to maintain full charge efficiently. When replacing the battery, the battery health monitor must be reset to prevent the comparison being made to the replaced battery's samples. On fitting of a new battery the first true battery health reading will only be available after 20 full gate opening operations.
Control card setup.	LCD Contrast Adj - This allows you to adjust the contrast between the text and the background of the LCD display.
	Number of limits - In some applications the safety requirements call for a limit to be at either end of the gate travel. In these cases a second limit kit can be installed and the control card can be set here to use both an open and a closed limit switch.
	Adv Beam Setup - In the case of a safety beam circuit being installed without an end of line resistor, it is still possible to meet the stringent CE safety standards by activating this function that intelligently monitors the safety beam circuit.
	Alarm output setup - The Drive 1000 monitors for three tampering conditions namely; safety beam tampering, gate lifted and forced open and gate kept open too long.
	Gate jammed open - Use this feature to adjust the length of time the gate is permitted to remain open for before the alarm activates.
	On board alarm - Use this feature to enable or disable the on board buzzer sounding whenever the alarm activates.
	Alarm output invert - Use this feature to set the alarm output to switch to 0V (Disable) or switch from 0V (Enable) in an alarm condition.
	BT on-board - Use this feature to enable or disable the on-board BT button.
	Wired BT Enable - Use this feature to enable or disable the hardwired BT input.
Control card info	Wired PED Enable - Use this feature to enable or disable the hardwired pedestrian input.
	Loop-In Enable - Use this feature to enable or disable the hardwired loop input.
	Serial number - Use this to view the control card serial number.
	Cycle count - Use this to see how many times the gate has been operated. This counter cannot be reset in the field.
	Event log - Use this to see a log of the most recent gate open and close operations.
	Fault log - Use this to see a log of the last 30 fault conditions.
	Trigger log - Use this to see a log of the last 30 triggers.
	Firmware version - Use this to see the control card firmware version.
	Hardware version - Use this to see the control card hardware version.
IEC Standards	Use this feature to enable or disable IEC safety standards mode.


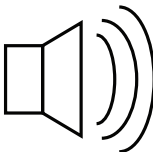
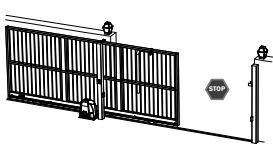
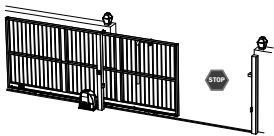
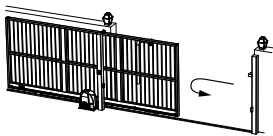
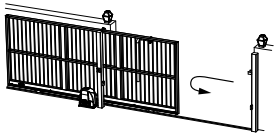
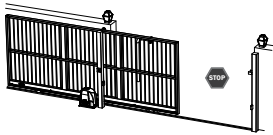
Reset and Restore	Set restore point - Use this to set a restore point.
	Restore settings - Use this feature to restore all controller settings to the last saved restore point.
	Clear logs - Use this feature to clear the event, fault and trigger logs. NB! this does not clear the cycle counter.
	Factory reset - Use this feature to default all controller settings to factory settings. NB! this does not factory reset the receiver memory or clear the cycle counter.

Basic operating features.	Collision sensing and safety overload routines	User manual reference - Page 6
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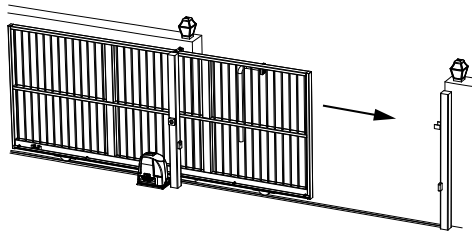
In the case of the gate colliding with an obstruction such as a person passing through the entrance way, the collision sensing will automatically detect the collision and the system will run a safety overload routine.


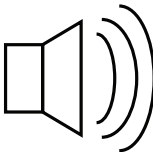
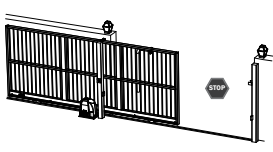
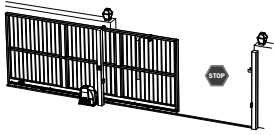
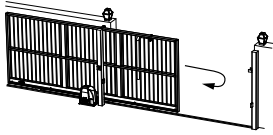
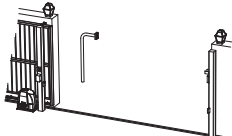
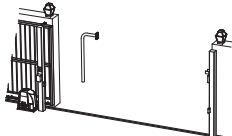
Safety overload routine while gate is opening.

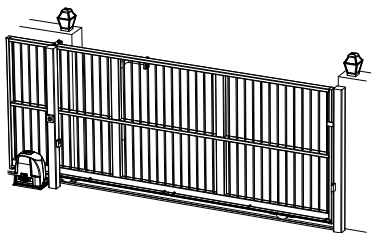

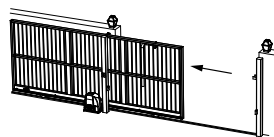
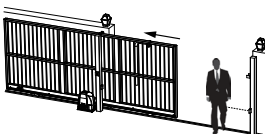
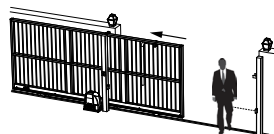

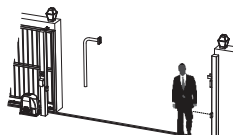

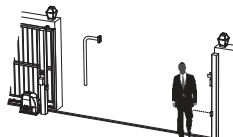
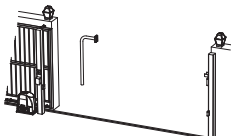
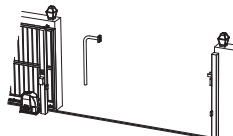

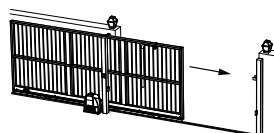
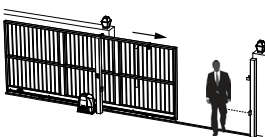
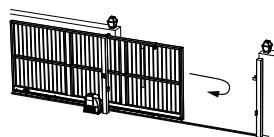
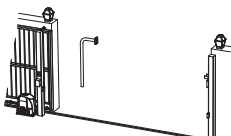
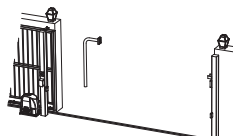

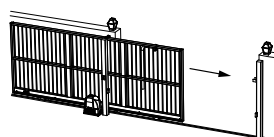


Action		Response		
Gate collides with a pedestrian for example.		Gate stops opening.	 x1	
Once gate has stopped.		Gate reverses momentarily to release pressure.	No buzzer tones.	
After reversing momentarily.		Gate stops and waits for next trigger to close.	No buzzer tones.	

Safety overload routine while gate is closing.



Action		Response		
Gate collides with a pedestrian for example.		Gate stops closing.	 x1	
Once gate has stopped.		Gate reverses back to the full open position.	No buzzer tone.	
After reversing to the full open position.		Gate remains in the full open position until the next trigger to close.	No buzzer tone.	

User manual reference - Page 7	Safety infra-red beams function. All modes except P.I.R.A.C.			Basic operating features
<p>If the safety beam input has been switched on, the control card will constantly monitor to ensure a set of safety beams is installed.</p> <p>NB! If the BT input mode has been set to either simple auto-close or condominium mode, the safety beam input is forced on.</p> <p>If the loop detector input is activated, the safety beam input is forced on for that transaction only.</p> <p>Below is an example of how the gates will behave whenever the safety beam input is activated.</p>				
<div>Gate closed.</div> 				
Action		Response		
Momentary BT trigger.		Gate begins opening.	No buzzer tones.	
Safety beam input triggered while gate is opening.		Gate continues opening	No buzzer tones.	
At full open position. Safety beam input still triggered.		Gate stops and waits for next trigger to close.	No buzzer tones.	
Momentary BT trigger.		Trigger is ignored and gate remains open.	No buzzer tones.	
Safety beam input cleared.		Gate remains in the full open position until the next trigger to close.	No buzzer tone.	
Momentary BT trigger.		Gate begins closing.	No buzzer tone.	
Safety beam input while the gate is closing.		Gate stops and reverses open.	No buzzer tone.	
At the full open position.		Gate stops and waits for next trigger to close.	No buzzer tone.	
Momentary BT trigger.		Gate begins closing.	No buzzer tone.	

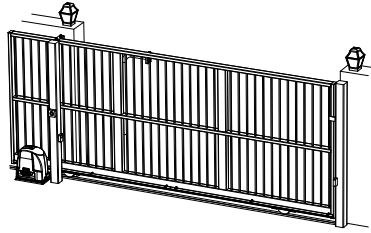
Basic operating features	"BT" Button triggers. Standard mode.	User manual reference - Page 8
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The BT functions are the primary full gate opening functions for motor vehicle access.
There are three ways of activating the "BT" functions on this control card. Either via the hardwired BT input, on board BT 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.

Gate closed.



Action		Response		
Momentary BT trigger.		Gate begins opening.	No buzzer tones.	
At full open position.		Gate stops.	No buzzer tones.	
Momentary BT trigger.		Gate begins closing.	No buzzer tones.	
Momentary BT trigger.		Gate stops and immediately starts opening again.	No buzzer tones.	
Momentary BT trigger.		Gate stops.	No buzzer tones.	
Momentary BT trigger.		Gate begins closing.	No buzzer tones.	
At full closed position.		Gate stops.	No buzzer tones.	

User manual reference - Page 9	"BT" Button triggers. Simple auto-close mode.	Basic operating features
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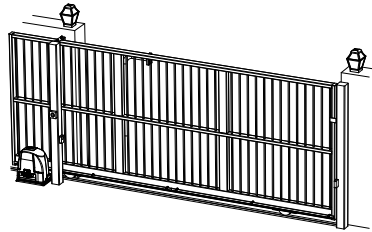
The BT functions are the primary full gate opening functions for motor vehicle access.
There are three ways of activating the "BT" functions on this control card. Either via the hardwired BT input, on board BT or the BT receiver channel.


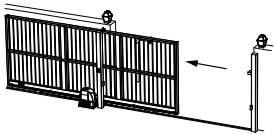
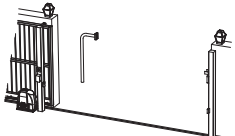

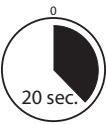
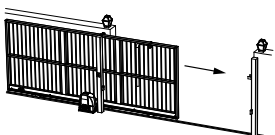

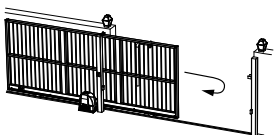

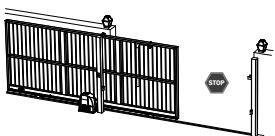


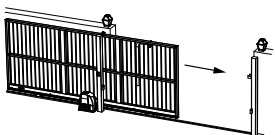
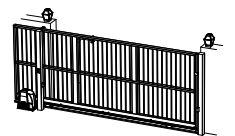
Simple auto-close mode functions exactly the same as standard mode except that the gates will close automatically after the programmed BT auto-close timer has timed out.

In this 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.

Gate closed.



Action		Response		
Momentary BT trigger.		Gate begins opening.	No buzzer tones.	
At full open position.		Gate stops.	No buzzer tones.	
Momentary BT trigger or auto-close timer timeout. Safety beam input not triggered.	 	Gate begins closing.	No buzzer tones.	
Momentary BT trigger.		Gate stops and immediately starts opening again.	No buzzer tones.	
Momentary BT trigger.		Gate stops.	No buzzer tones.	
Momentary BT trigger or auto-close timer timeout. Safety beam input not triggered.	 	Gate begins closing.	No buzzer tones.	
At full closed position.		Gate stops.	No buzzer tones.	

Basic operating features	"BT" Button triggers. Condominium auto-close mode.	User manual reference - Page 10
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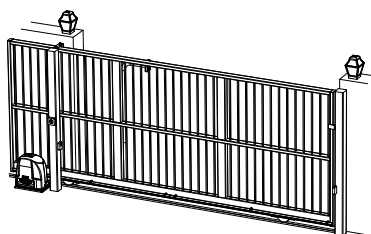
The BT functions are the primary full gate opening functions for motor vehicle access.
There are three ways of activating the "BT" functions on this control card. Either via the hardwired BT input, on board BT or the BT receiver channel.

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.

Gate closed.



Action		Response		
Momentary BT trigger.		Gate begins opening.	No buzzer tones.	
Momentary BT trigger while gate is opening.		The trigger is ignored and the gate continues opening.	No buzzer tone.	
At full open position.		Gate stops and auto-close timer starts counting down.	No buzzer tones.	
Momentary BT trigger.		Gate remains open and auto-close timer resets.	No buzzer tones.	
Auto-close timer timeout. Safety beam input not triggered.		Gate begins closing.	No buzzer tones.	
Momentary BT trigger.		Gate stops and immediately starts opening again.	No buzzer tones.	
At full open position.		Gate stops and auto-close timer starts counting down.	No buzzer tones.	
Auto-close timer timeout. Safety beam input not triggered.		Gate begins closing.	No buzzer tones.	
At full closed position.		Gate stops.	No buzzer tones.	

User manual reference - Page 11	"BT" Button triggers. P.I.R.A.C. auto-close mode.	Basic operating features
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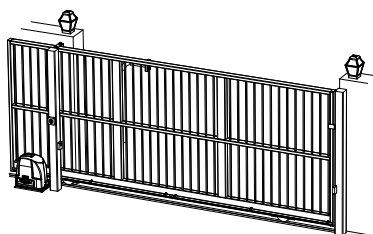
The BT functions are the primary full gate opening functions for motor vehicle access.
There are three ways of activating the "BT" functions on this control card. Either via the hardwired BT input, on board BT or the BT receiver channel.


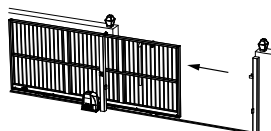
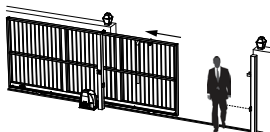
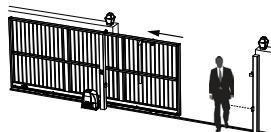
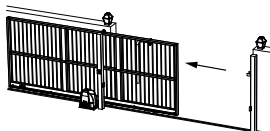
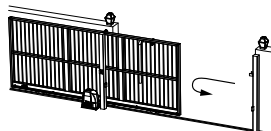
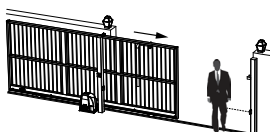
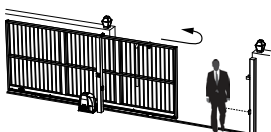
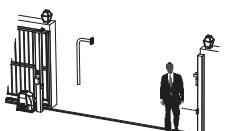
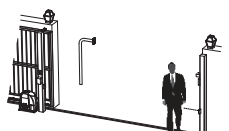
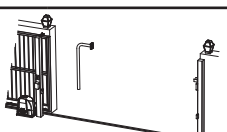
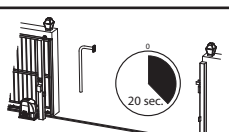
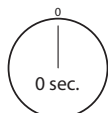
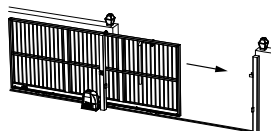
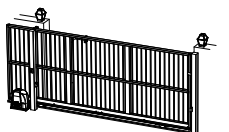
In P.I.R.A.C. auto-close mode, all BT triggers are treated as per simple auto-close. The difference in this mode is how the system responds to the safety beam triggers while the gate is opening. Below is an example of P.I.R.A.C. auto-close mode when the safety beam circuit is triggered while the gate is in operation.

In this mode the following advanced features are 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.

Gate closed.



Action		Response		
Momentary BT trigger.		Gate begins opening.	No buzzer tones.	
Safety beam circuit triggered while gate is opening.		The gate continues opening.	No buzzer tone.	
Safety beam circuit cleared while gate is opening.		Gate stops and immediately starts closing again.	No buzzer tones.	
Safety beam circuit triggered while gate is closing.		Gate stops and immediately starts opening again.	No buzzer tones.	
Gate reaches open position while safety beam circuit is still triggered.		Gate remains open waiting for safety beam circuit to be cleared.	No buzzer tones.	
Safety beam circuit cleared while gate is in the open position.		Auto-close timer starts counting down.	No buzzer tones.	
Auto-close timer times out. Safety beam circuit not triggered.		Gate begins closing.	No buzzer tones.	
At full closed position.		Gate stops.	No buzzer tones.	

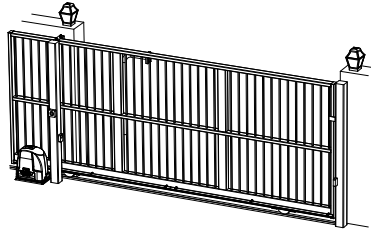
Basic operating features	"PED" Pedestrian trigger. (With no safety beams installed)	User manual reference - Page 12
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The PED trigger is a higher security option and is used when access to or from the property is limited to only pedestrian access. In the case of no safety beams being installed, then the pedestrian auto-close functionality is disallowed for safety.

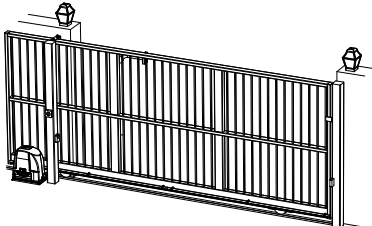

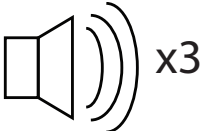
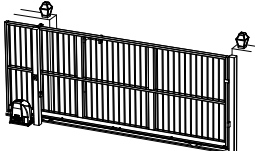

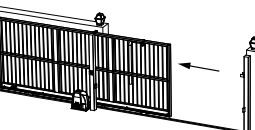
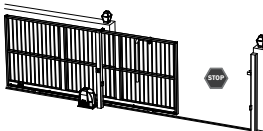
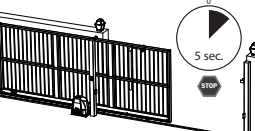
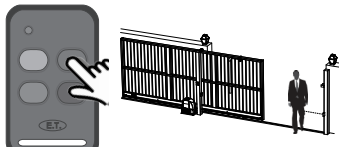
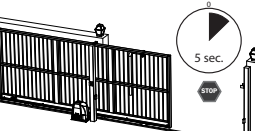
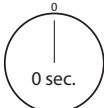
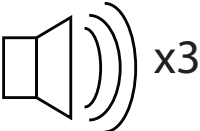
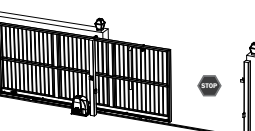

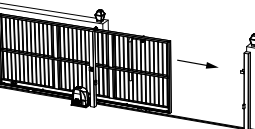
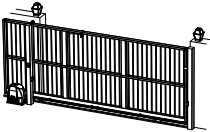
If the Loop or the BT triggers are activated at any time during the pedestrian routine, the gate will open to the full open position and the pedestrian transaction is cancelled. The system then reverts to either the Loop or BT trigger mode depending on which was triggered.

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

Gate closed.



Action		Response		
Momentary PED trigger.		Buzzer beeps pre-run warning.		
After buzzer silences.		Gate begins opening.	No buzzer tones.	
At previously programmed pedestrian opening distance.		Gate stops and waits for a pedestrian trigger to close.	No buzzer tones.	
Momentary PED trigger.		Buzzer beeps pre-run warning.		
After buzzer silences.		Gate begins closing.	No buzzer tones.	
At full closed position.		Gate stops.	No buzzer tones.	

User manual reference - Page 13	“PED” Pedestrian trigger. (With safety beams installed)			Basic operating features
<p>The PED trigger is a higher security option and is used when access to or from the property is limited to exclude motor vehicles.</p> <p>If the safety beams are triggered while the gate is closing in pedestrian mode, the gate will only return to the preprogrammed pedestrian open position.</p> <p>If the Loop or the BT triggers are activated at any time during the pedestrian routine, the gate will open to the full open position and the pedestrian transaction is cancelled. The system then reverts to either the Loop or BT trigger mode depending on which was triggered.</p> <p>There are two ways of activating the “PED” functions on this control card. Either via the hardwired PED input or the PED receiver channel.</p>				
<div>Gate closed.</div> 				
Action		Response		
Momentary PED trigger.		Buzzer beeps pre-run warning.		
After buzzer silences.		Gate begins opening.	No buzzer tones.	
At previously programmed pedestrian opening distance.		Gate stops and the pedestrian auto-close timer starts counting down.	No buzzer tones.	
Momentary PED trigger or safety beam circuit trigger.		Pedestrian auto-close timer resets.	No buzzer tones.	
Pedestrian auto-close timer times out.		Buzzer beeps pre-run warning.		
After buzzer silences.		Gate begins closing.	No buzzer tones.	
At full closed position.		Gate stops.	No buzzer tones.	

Basic operating features	"Loop" trigger.	User manual reference - Page 14
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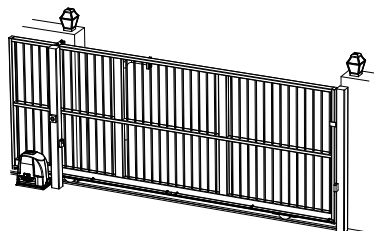
The Loop trigger mode is exactly the same as Condominium auto-close mode.


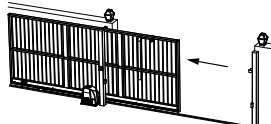
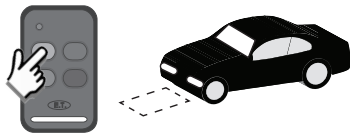
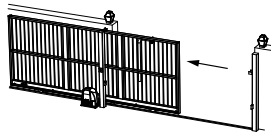
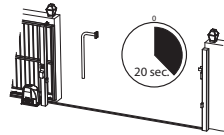
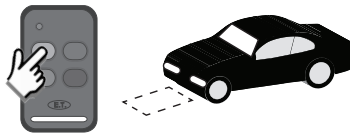
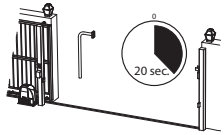
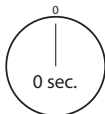
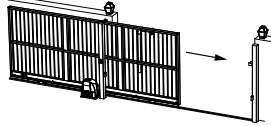
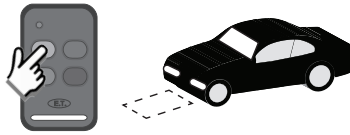
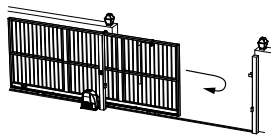
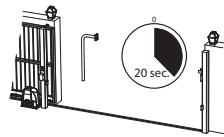
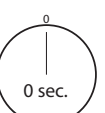
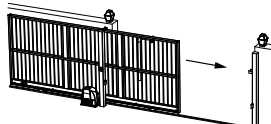
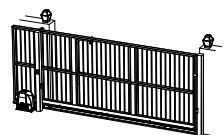
The only way to trigger loop detector mode is via the hardwired LPT input.

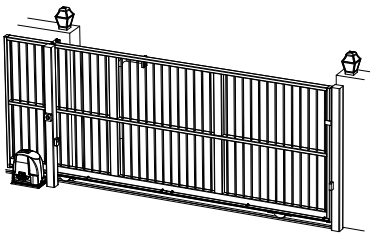


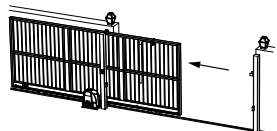

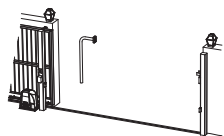

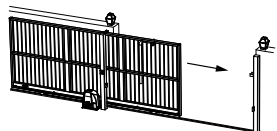
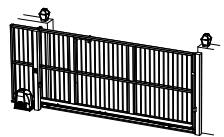
In Loop detector mode, a LPT trigger is treated as open, and any BT or LPT triggers are treated as a keep opening, keep open or re-open trigger while the gates are running. The gates will only close once the auto-close timer has timed out. The loop mode transaction will only clear once the gates reach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

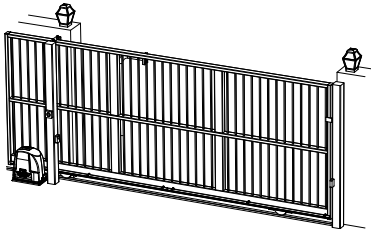

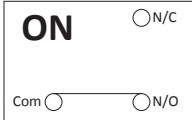

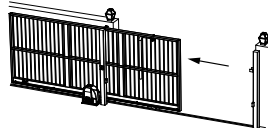
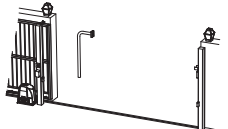

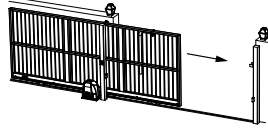
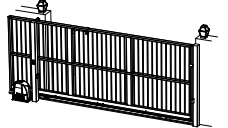

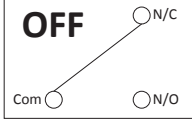
NB! For any auto-close feature to work, a pair of safety infra-red beams must be installed and functioning correctly. If no safety infra-red beams are installed then the gates will open but not close again.

Gate closed.



Action		Response		
Loop trigger.		Gate begins opening.	No buzzer tones.	
Momentary BT trigger or Loop trigger while gate is opening.		The trigger is ignored and the gate continues opening.	No buzzer tone.	
At full open position.		Gate stops and auto-close timer starts counting down.	No buzzer tones.	
Momentary BT trigger or Loop trigger while gate is open.		Gate remains open and auto-close timer resets.	No buzzer tones.	
Auto-close timer timeout. Safety beam input not triggered.		Gate begins closing.	No buzzer tones.	
Momentary BT trigger or Loop trigger while gate is closing.		Gate stops and immediately starts opening again.	No buzzer tones.	
At full open position.		Gate stops and auto-close timer starts counting down.	No buzzer tones.	
Auto-close timer timeout. Safety beam input not triggered.		Gate begins closing.	No buzzer tones.	
At full closed position.		Gate stops.	No buzzer tones.	

User manual reference - Page 15	Auxiliary relay modes. Strike lock mode.			Basic operating features
With Strike lock mode selected, the auxiliary relay will pulse for the preprogrammed on time, half a second before the gate opens.				
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 strike lock mode when standard BT mode is active.				
<div>Gate closed.</div> 				
Action		Response		
Momentary BT trigger.		Auxiliary relay activates.	No buzzer tone.	<div>ON</div> <div>Com <input type="radio"/> N/C</div> <div><input type="radio"/> N/O</div>
Half a second after the auxiliary relay has activated.		Gate begins opening.	No buzzer tone.	
After the preprogrammed relay on time.		Auxiliary relay deactivates and gate continues opening.	No buzzer tone.	<div>OFF</div> <div>Com <input type="radio"/> N/C</div> <div><input type="radio"/> N/O</div>
Gate reaches open position.		Gate stops.	No buzzer tone.	
Momentary BT trigger.		Gate begins closing.	No buzzer tone.	
At full closed position.		Gate stops.	No buzzer tone.	

Basic operating features	Auxiliary relay modes. Magnetic lock mode.			User manual reference - Page 16
With Magnetic lock mode selected, the auxiliary relay will activate half a second before the gate opens and remain active until half a second after the gate has 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 magnetic lock mode when standard BT mode is active.				
<div>Gate closed.</div> 				
Action		Response		
Momentary BT trigger.		Auxiliary relay activates.	No buzzer tone.	
Half a second after the auxiliary relay has activated.		Gate begins opening.	No buzzer tone.	
Gate reaches open position.		Gate stops.	No buzzer tone.	
Momentary BT trigger.		Gate begins closing.	No buzzer tone.	
At full closed position.		Gate stops.	No buzzer tone.	
Half a second after gate has reached the full closed position.		Auxiliary relay deactivates.	No buzzer tone.	

User manual reference - Page 17	Auxiliary relay modes. Courtesy light mode.	Basic operating features
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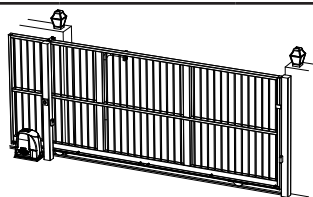
With courtesy light mode selected, the auxiliary light will switch on as the gate begins opening and remain on for the programmed light on time after the gate has closed.

The auxiliary relay can also be triggered to switch on without the gate opening by simply pressing and releasing any remote button programmed into the auxiliary relay function of the receiver.

The relay on time for the two different triggers can be programmed to different on times if wanted.

Below is an example of courtesy light mode when standard BT mode is active.

Gate closed.


















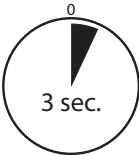




Action		Response		
Momentary BT trigger.		Auxiliary relay activates.	No buzzer tone.	
		Gate begins opening.		
Gate reaches open position.		Gate stops.	No buzzer tone.	
Momentary BT trigger.		Gate begins closing.	No buzzer tone.	
At full closed position.		Gate stops.	No buzzer tone.	
		Relay on timer begins counting down.		
After relay on timer timeout.		Auxiliary relay deactivates.	No buzzer tone.	

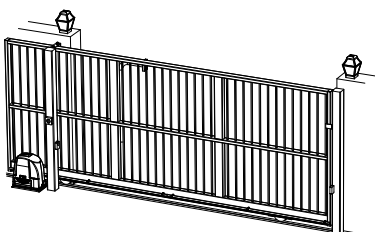

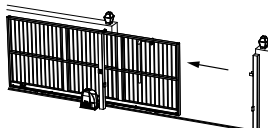
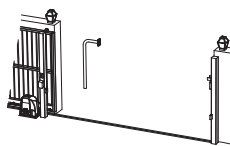

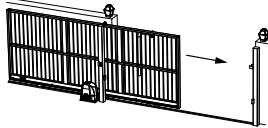

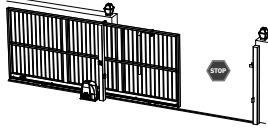

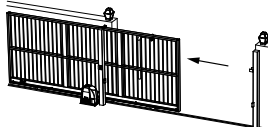

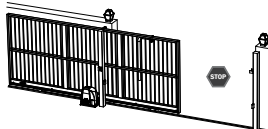
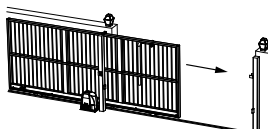
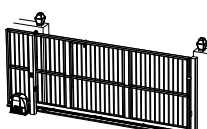


If the gate is closed and any remote button programmed into the auxiliary relay function is pressed momentarily, the following will occur.

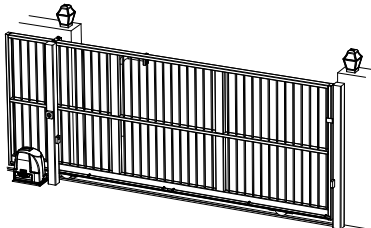







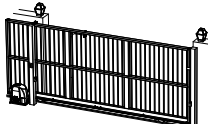

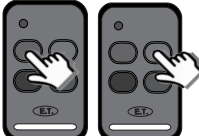



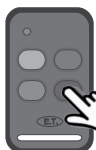


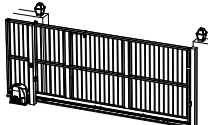



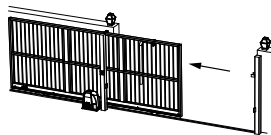
Auxiliary relay status	Action		Response		
	Momentary auxiliary relay trigger.		Auxiliary relay switches on for programmed time.	No buzzer tone.	
	Momentary auxiliary relay trigger.		Auxiliary relay switches off.	No buzzer tone.	

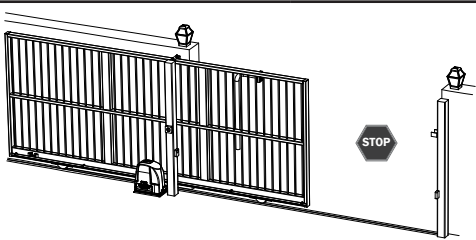
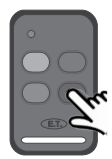


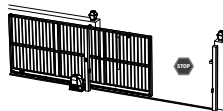



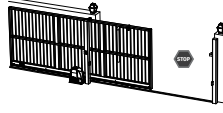

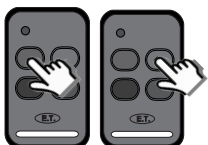


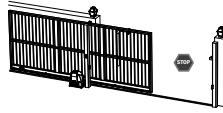
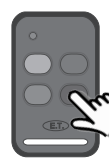


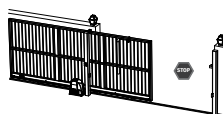



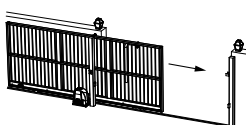
Basic operating features	Auxiliary relay modes. Receiver relay mode.	User manual reference - Page 18
With receiver relay mode selected, the auxiliary relay will operate in exactly the same way as a single channel receiver would, whenever a transmitter button programmed into the “Auxiliary Relay” receiver function is pressed and released.		

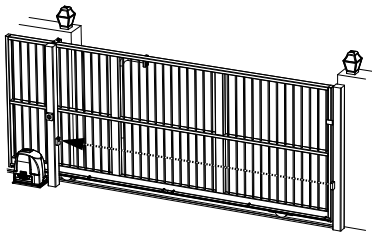
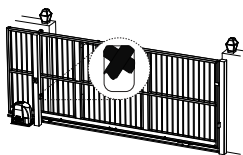





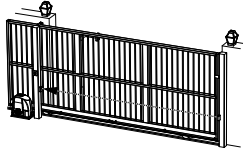


Latch mode. The transmitter must be released and pressed again to reactivate the relay each time.				
Action		Response		
Momentary relay trigger.		Auxiliary relay switches on.	No buzzer tones.	<div>ON</div> <div>Com   N/C</div> <div>  N/O</div>
Momentary relay trigger.		Auxiliary relay switches off.	No buzzer tones.	<div>OFF</div> <div>Com   N/C</div> <div>  N/O</div>

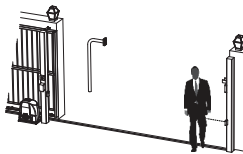








One shot pulse mode. The transmitter must be released and pressed again to reactivate the relay each time.				
Action		Response		
Momentary relay trigger.		Auxiliary relay switches on.	No buzzer tones.	<div>ON</div> <div>Com   N/C</div> <div>  N/O</div>
Relay timer timed out.		Auxiliary relay switches off.	No buzzer tones.	<div>OFF</div> <div>Com   N/C</div> <div>  N/O</div>

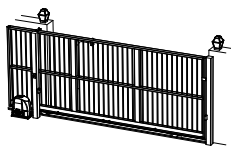





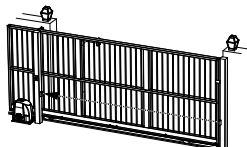


User manual reference - Page 19		Positive close mode.		Advanced features	
<p>With positive close mode activated, the gate will surge onto the closed stopper after seeing the closed limit.</p> <p>This feature is useful when installing an electric lock or when trying to ensure an electric fencing gate contact always closes when the gate is in the closed position.</p>					
					
Action			Response		
Momentary BT trigger.		Gate begins opening.	No buzzer tones.		
At full open position.		Gate stops.	No buzzer tones.		
Momentary BT trigger.		Gate begins closing.	No buzzer tones.		
Momentary BT trigger.		Gate stops.	No buzzer tones.		
Momentary BT trigger.		Gate begins opening.	No buzzer tones.		
Momentary BT trigger.		Gate stops.	No buzzer tones.		
Momentary BT trigger.		Gate begins closing.	No buzzer tones.		
At full closed position.		Gate stops.	No buzzer tones.		
When gate has stopped on the closed limit.		Gate physically surges onto the mechanical closed stopper.	No buzzer tone.		

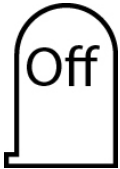
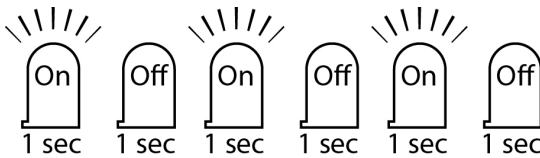
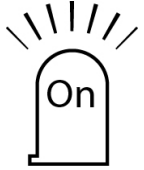

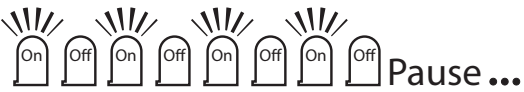

Advanced features	Holiday lock-out mode.			User manual reference - Page 20
<p>This feature is useful at times when access to the property needs to be disallowed to secondary level key holders, such as housekeepers or the garden service company, for extended periods of time. An example of when the holiday 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.</p> <p>Holiday lock-out will only work in the closed position. Holiday lock-out is not available in condominium mode.</p>				
<p>Gate must be closed to start.</p>				
Action		Response		
Momentary trigger from any transmitter button programmed into holiday lock-out function.		Buzzer begins toning and status LED comes on.	 x 5 sec. 	
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.	 x 5 rapid. 	
Any BT, Loop or PED triggers.	 	Gate does not open. Buzzer, status LED.	 x 5 rapid. 	
Momentary trigger from any transmitter button programmed into holiday lock-out function.		Buzzer begins toning and status LED comes on.	 x 5 sec. 	
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 gate running indication and gate begins opening.	 x1 	
Normal operation is now functional.				

User manual reference - Page 21		Autoclose override/party mode.		Advanced features	
<p>This feature is useful at times when the gate 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 gate is being kept open intentionally. As soon as auto-close override/party mode has been deactivated, the system will resume normal operation.</p> <p>Auto-close override/party mode will work in any position except the closed position.</p> <p>Auto-close override/party mode is not available in condominium mode.</p>					
<p>Gate stopped in any position except closed.</p>					
Action		Response			
Momentary trigger from any transmitter button programmed into holiday lock-out function.		Buzzer begins toning and status LED comes on.	 x 5 sec. 		
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 auto-close/party mode status will not change.		Buzzer and status LED beep/flash rapidly.	 x 5 rapid. 		
Any BT, Loop or PED triggers.	 	Gate does not move. Buzzer, status LED beep/flash rapidly to confirm status.	 x 5 rapid. 		
Momentary trigger from any transmitter button programmed into holiday lock-out function.		Buzzer begins toning and status LED comes on.	 x 5 sec. 		
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 auto-close override/party mode status will not change.		Buzzer beeps, status LED reverts to gate running indication and gate begins closing.	 x1 		
Normal operation is now functional.					

Advanced features	Tamper alarms. Beam tamper in closed position.		User manual reference - Page 22	
<p>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 early warning of any tampering that may have occurred 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.</p> <p>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 advice 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.</p> <p>Safety beam alarm mode is available in all modes of operation so long as a set of safety beams is installed.</p>				
<div>Gate closed.</div> 				
Action		Response		
Safety beam equipment tampered with while gates are in the closed position.		Alarm output remains in standby status.		
20 seconds after safety beam equipment has been tampered with.		Alarm output activates.	Built in buzzer sounding can be disabled.  On/off...	
Safety beam equipment returned to normal functioning status.		Alarm output returns to standby.		

Advanced features	Gate kept open too long alarm.			User manual reference - Page
In a cases where the user would like to be notified of the gate being kept open for longer than a predetermined time period, the gate jammed open alarm can be setup. The alarm condition will reset to off when the gate is closed again.				
Action		Response		
Gate prevented from closing.		Alarm output remains in standby status.		
After programmed gate jammed open time.		Alarm output activates.	Built in buzzer sounding can be disabled.  On/off...	
Gate returns to full closed position.		Alarm output returns to standby.		

User manual reference - Page	Gate forced open alarm.		Advanced features	
In a case where the gate is physically lifted off its track and forced open, the alarm output will immediately activate. The alarm will only reset when the gate is returned to normal secured condition in the closed position.				
Action		Response		
Gate secured in the closed position. Standing by.		Alarm output remains in standby status.		
Attempt to lift gate off track and force open.		Alarm output activates.	Built in buzzer sounding can be disabled.  On/off...	
Gate resecured in the closed position. Standing by.		Alarm output returns to standby.		

Status LED indications and buzzer guide.			
Description	Visual confirmation	Buzzer	Reason
Static off.		None	Gate fully closed.
Flashing slow 1 second on and 1 second off.		None	Gate running normally.
Static on.		None	Gate open.
2 x 500ms flashes followed by a 2 second pause.		1 x 1 second beep every 15 seconds for 5 minutes after last gate transaction.	AC mains off. Restore AC as soon as possible.
4 x 500ms flashes followed by a 2 second pause.		None.	Battery low. Allow at least 8 – 10hr uninterrupted charge before checking again.
5 x 125ms second rapid flashes each time a trigger is received.		Mimics LED.	A lock-out mode is active. Press and release any holiday lock-out button to deactivate.

Diagnostics Menu This menu allows you to monitor certain key parameters while the gate is running or stopped. You do not need to enter programming mode to view this menu.		
Speed:	The current speed of the motor in meter per minute.	The higher the gate resistance, the lower the gate speed.
Distance:	The distance moved from the closed position.	This can be anything up to 40m.
Current:	The current that is being drawn by the motor.	The higher the gate resistance, the more current the motor will draw to run the gate.
Force:	The force being applied to the rack by the motor.	This will drop as the gate momentum takes over.
PSU:	The PSU voltage. This will not show when no PSU is installed.	This should be between 30 - 38V.
AC:	The AC input voltage, this will also show when a PSU is installed.	This should be between 29 - 37V.
Aux 12v:	12v auxiliary output voltage.	This should be stable at 11 - 13Vdc.
Power Supply:PSU	Motor power is being supplied by the PSU.	This will vary depending on the status of the mains power supply and/or the intelligent charger stage.
Power Supply:Bat	Motor power is being supplied by the battery.	This will vary depending on the status of the mains power supply and/or the intelligent charger stage.
Battery:	Battery voltage.	This may seem to pulse, this is part of the charge sequence.
Bat health: None	Battery health not yet measured.	Run +/- 20 full cycles to get your first reading.
Bat health: Good	Battery health Good.	Battery does not need replacing.
Bat health: Fair	Battery health Fair.	Battery does not need replacing.
Bat health: Poor	Battery health Poor.	Consider replacing battery.
Bat: Supply	Battery charger status: Battery is the supply.	This will vary depending on the status of the mains power supply and/or the intelligent charger stage.
Bat: Curr limit	Battery charger status: Charger is in current limiting.	Battery is level is low or there is a battery wiring fault.
Bat:Err FET shrt	Battery charger status: The charger FET has failed.	Return control card for repair.
Bat:Err FET open	Battery charger status: The charger FET has failed.	Return control card for repair.
Bat: Turned off	Battery charger status: Charger turned off.	This is configured by the installer. Change if necessary.
Bat:Float charge	Battery charger status: Battery in float charge.	Charge voltage lowered slightly when battery not in use for a long period.
Bat: Charging	Battery charger status: Battery charging.	Charge current > 100mA. All is good.
Bat:Topup Charge	Battery charger status: Battery in top-up charge.	Charge voltage maintained at a higher voltage for 5 hours after current < 100mA. All is good.
Bat: Short	Battery charger status: There is a short across the battery terminals.	Remove short or replace faulty battery.
Bat: Removed	Battery charger status: No battery plugged in.	Install battery.
Bat: Low Supply	Battery charger status: The supply is too low to charge the battery.	Correct/repair the primary supply.
Bat: ERROR	Battery charger status: Another error has occurred.	Contact ET Systems for assistance.
Charge Cur:100mA	Indicates the battery charge current.	All is good.
Temp:	Indicates the PCB temperature (Accurate to 5° c)	Acceptable range -10° to 60° Celcius.
Gate Mode: STD	Gate is in standard mode, no auto-close.	Change if necessary.
Gate Mode:A-Clos	Gate is in Auto-close mode.	Change if necessary.
Gate Mode: CONDO	Gate is in condominium mode.	Change if necessary.
Gate Mode: PIRAC	Gate is in PIRAC mode.	Change if necessary.
Recent Rx =	Shows the last received remote user trigger.	This is useful when trying to track down a false trigger.
Encoder = South/ North	Indicates the encoder direction.	This should change as the encoder rotates, use to check encoder is working by rotating motor by hand.

Troubleshooting guide and display definitions.

Displayed on screen.	Definition.	Solution.
AC mon disabled	AC power monitoring disabled by the installer.	Only use when installing a separate charger system.
Address used <NO replace YES>	Selected address is already used by another remote, would you like to replace it?	If yes is selected, the new code will overwrite the current code in memory.
Adv Beam Setup Bus Beams in use	Blue Bus Beams are being used.	It is not possible to use Bus Beams and wired beams at the same time.
Alarm Activated	The alarm output has been activated.	Clear alarm condition.
Aux voltage high	Auxiliary 12v output is too high.	Hardware error or external connection supplying higher voltage.
Aux voltage low	Auxiliary 12v output is too low.	Hardware error or external connection drawing too much current
Bat monitor run	Gate ran a cycle on battery power in order to cycle the battery and to perform health monitoring.	Continue to use gate as per normal.
BAT voltage high	The battery voltage is out of specification - too high.	Most likely due to a charger fault external connection supplying higher voltage.
Battery short	There is a short on the battery output.	Faulty battery or battery wiring.
Beam interrupted	Gate action caused by the beam being interrupted.	Clear gate area to close gate.
Beam Test 12v output error	There is an error on the Auxiliary 12 output.	It is likely that there is a short on this connection or too many devices have been connected to the output.
Beam Test Illegal wiring	The wiring used is not allowed.	Rewire the safety beam circuit as per page 15.
Beam Test Not switching	Beams are not switching when interrupted.	Check beam wiring (Page 15) and that they are being interrupted when prompted.
Beam Test, "Monitored HF N/C"	High frequency switched beam monitoring with Normally closed contacts wiring detected.	High safety option, IEC compliant.
Beam Test, "Monitored HF N/O"	High frequency switched beam monitoring with Normally Open contacts wiring detected.	Not allowed as this is not monitored, Not IEC compliant.
Beam Test, "Monitored LF N/C"	Low frequency switched beam monitoring with Normally closed contacts wiring detected.	High safety option, IEC compliant.
Beam Test, "Monitored LF N/O"	Low frequency switched beam monitoring with Normally Open contacts wiring detected.	High safety option, IEC compliant.
Beam Test, "R terminated N/C"	resistor terminated beam monitoring with Normally closed contacts wiring detected.	High safety option, IEC compliant.
Beam Test, "R terminated N/O"	resistor terminated beam monitoring with Normally Open contacts wiring detected.	Not allowed as this is not monitored, Not IEC compliant.
Beam Test, "Unmonitored N/C"	Unmonitored Normally Closed beam set wiring detected.	Low safety option, Not IEC compliant.
Beam Test, "Unmonitored N/O"	Unmonitored Normally Open beam set wiring detected.	Low safety option, Not IEC compliant.
Beam Test, "use N/C beam set"	Prompt to assist or is resolving fault.	Use normally closed beam circuit as per page 15.
Blue Bus Devices Change detected	A change was detected on the Blue Bus.	Rescan for Blue Bus devices.
Brown out Reset	Processor reset due to low supply voltage.	Check power supplies for low power failings.
Bus Calibrate High Volt Error	Blue Bus calibration error, bus voltage is too high.	Error on external circuitry. Double check wiring.
Bus Calibrate No Volt Error	Blue Bus error, no voltage detected.	Possibly a short on the bus or a fault with the drive circuitry on a module or the Drive1000 control card
Charg supply low	The supply voltage is too low for the charger to operate correctly.	Charger requires a minimum of 30V primary supply.
Charger disabled	Charger disabled by the installer.	Change if necessary.
Check beams	Possible error on the beam circuit preventing gate auto-close in PED mode.	Clear gate area, repair beams or beam wiring.
Close Run Ovload	A current overload occurred during the full speed portion of travel while the gate was closing.	Remove physical obstruction.
Close Slo Ovload	A current overload occurred during the crawl portion of travel while the gate was closing.	Remove physical obstruction.
Close Stall(enc)	The gate stalled (encoder counting no longer detected) while closing.	Remove physical binding.

Displayed on screen.	Definition.	Solution.
Collision Timer	More than 4 collisions detected in a row, 10s timer prevents subsequent triggers.	Remove physical obstruction.
Condominium Mode Lock not allowed	Holiday lockout not allowed in Condominium mode.	Change BT mode to a mode that allows holiday lock-out.
Crawl distance = 0mm	Crawl distance is the distance the gate runs as slow speed at either end, longer crawl improves safety.	Use longer crawl distances for heavier free moving gates.
Enable beam for auto-close	auto-close can not be used without beams.	This is for safety, an IEC requirement.
Encoder error	There was an error detecting the motor encoder.	Ensure control card and ring magnet are securely fastened.
Erase address Comms Error	No data seen on RF.	If persistent, bring control card in for repair.
Erase ALL Comms Error	An error occurred when trying to communicate to the receiver module.	If persistent, bring control card in for repair.
ERROR: BAT voltage too high	BAT voltage high error. (when trying to run gate)	The BAT voltage is too high and may cause damage to the motor drive circuitry.
ERROR: No high current source	Only low current power supply available.	No PSU or battery attached. Check wiring.
ERROR: PSU voltage too high	PSU voltage high error. (when trying to run gate)	The PSU voltage is too high and may cause damage to the motor drive circuitry. Check 220Vac supply.
ERROR: RF comms	No data seen on RF.	If persistent, bring control card in for repair.
Factory Reset	A factory reset was performed.	Reconfigure control card programming and setup.
Find Limit	The gate is searching for the limit.	Allow gate to continue all the way closed.
Finding closed limit	Gate is running slowly to the closed limit.	Allow gate to continue all the way closed.
Flash mem error Reprogram board	Flash memory corrupt, reprogram the board.	Bring control card in for repair.
Gate re-profile required	The gate run-time setup needs to be re-done.	This is required when changing parameters that affect how the gate runs and hence the overload sensing.
Holiday Locked	Holiday Lockout enabled.	Deactivate as per page 43.
IEC Mode Error No Beams	IEC mode has been enabled but there is an error.	Beams have been removed after enabling IEC mode, repair beam circuit.
Ill opcode Reset	Processor reset due to a software error.	If persistent, bring control card in for repair.
Learn Abort	Indicates that Learning gate length failed.	Restart runtime setup.
Learn Aborted	Runtime setup aborted for some reason.	Restart runtime setup.
Learn Error Beam	Runtime setup failed because the beams were interrupted.	Restart runtime setup.
Learn Error Button Exit	Runtime setup failed because exit button was pressed.	Restart runtime setup.
Learn Error Gate Too Long	Runtime setup failed because gate length is >40m.	Reduce gate opening distance before attempting runtime setup again.
Learn Error Gate Too Short	Runtime setup failed because gate length is <1m.	Increase gate opening distance before attempting runtime setup again.
Learn Error Limit Range	Runtime setup failed because the limit is out of range.	Limit moved or considerable rack jumping. Refasten limit actuator.
Learn Error Manual Released	Runtime setup failed because manual release lever was actuated.	Re-engage manual override or repair manual override monitoring circuit.
Learn Remote Err: Time-out	No ET Blue or ET BluMix remote detected within 2s.	Check that you are using a matching frequency ET Blue or ET BLU MIX transmitter that is functional.
Learn Remote Err:Decode error	Invalid remote detected.	You can only use ET Blue or ET BLU MIX transmitters.
Learn Remote Err:RSSI TimeOut	No remote detected within 2s.	Check that you are using a matching frequency ET Blue or ET BLU MIX transmitter that is functional.
Limit faulty	The limit sensor is faulty.	Shown when no limit is found within the expected limit window.
Limit Range Err	Closed limit not detected within an acceptable range.	Limit moved or considerable rack jumping. Refasten limit actuator.
Manual Released	Manual release lever activated.	Re-engage manual override or repair manual override monitoring circuit.

Displayed on screen.	Definition.	Solution.
Master clr Reset	Processor reset due to a hardware reset.	If persistent, bring control card in for repair.
Motor Unwind	Motor backing off slightly after overload to prevent gear system jamming up.	Remove physical obstruction.
No hi cur source	No current source present to run the motors.	Ensure either a battery or the PSU is connected.
None	No log item recorded yet.	A log will automatically build as the system is used.
Open half	Gate is open halfway in "BT" Standard mode.	Page 33.
Open PED	Gate is open to the PED distance.	Pages 37 and 38.
Open Run Ovload	A current overload occurred during the full speed portion of travel while the gate was opening.	Remove physical obstruction.
Open Slo Ovload	A current overload occurred during the crawl portion of travel while the gate was opening.	Remove physical obstruction.
Open Stall(enc)	The gate stalled (encoder counting no longer detected) while opening.	Remove physical obstruction.
Over temperature	The board experienced an over temperature situation.	This will clear when temperature returns to normal.
Overload	Gate has overloaded.	There could be an obstruction in the path of the gate, try increasing "Overload Setting"
Ped auto-close disabled	If beams are disabled Ped auto-close will also be disabled, This is an IEC standard.	Install a set of beams to facilitate any auto-close function. Pages 15 and 19.
Ped auto-close enabled = 2s	If beams are enabled Ped auto-close is enabled by default for added security.	Page 38.
Ped length reset to gate length	If the gate length is changed to be shorter than the PED length then PED length is shortened.	Pages 18 and 21.
PED Mode Setting < 00mm >	Displays whether PED mode is in Auto-close or standard mode and what the distance is set to.	Pages 37 and 38.
Pedestrian open distance: 00mm	The distance the gate will open on a pedestrian trigger.	Page 21.
Power error braking	Device is about to shut down due to low power, motor is slowing down.	Low AC, PSU and Bat voltages.
Power error resetting	Device is about to shut down due to low power, processor is waiting to reset.	Low AC, PSU and Bat voltages.
Power on Reset	Processor reset due to being powered up.	Wait for display to show "Standby" before continuing.
Program Run-time	Gate run time has not been programmed before trying to run gate.	Page 18.
PSU voltage high	The PSU supply voltage is out of specification - too high.	Check mains input is < 255Vac.
QC test passed	Quality Control test was passed.	Continue to use system as per normal.
Ramp Open Stall	The gate stalled while ramping up in the open direction.	Remove physical obstruction.
Remote not Learnt	Learning error.	Check that you are using a matching frequency ET Blue or ET BLU MIX transmitter that is functional.
Restore settings	Backed up settings were restored.	Page 30.
Run-time NOT set	Please perform a runtime setup before attempting to run the gate.	Page 18.
Searching Limit	Gate is closing looking for the closed limit.	Allow gate to continue all the way closed.
Set Limit before Ped distance	The PED distance can not be set before the runtime setup has been completed.	Page 18.
Signal: Not recognised	Unknown ET Blue or BluMix TX detected.	Program the remote button into the receiver memory. Page 22.
Software Reset	Processor reset due to a software command.	Continue scrolling through log.
Standby	Motor in standby, everything operating normally.	Continue to use the system as normal.
TRAP Reset	Processor reset due to a software error.	If persistent, bring control card in for repair.
TX already in memory	Remote already in memory, button learnt but at a different address.	Each remote can only occupy 1 memory address.
WARNING: Bat Health: Poor	Warning if the battery health is poor and the gate is running off battery.	Consider replacing the battery.
Watchdog Reset	Processor reset due to a software error.	If persistent, bring control card in for repair.

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. Within the warranty period.
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.