ET DRIVE300 USER 2016.001.001

End User Instructions





Low Traffic 300kg Slide Gate Operator



a company of TheNiceGroup



www.et.co.za

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For any assistance with this product, which is not covered in this manual, please contact your service provider/installer.

Contact details of service provider/installer:	Company stamp:
Company name:	
Technician:	
Contact number:	
Email address:	
Date of installation:	

Be Safe!

WARNING!! These are the general safety obligations for the installers and users of ET Systems automation equipment.

- 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 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 cannot accept responsibility for improper use or incorrect installation of this product.
- 5. ET Systems cannot accept responsibility if the principles of good workmanship are disregarded by the installer.
- 6. ET Systems 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 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 gate operators are supplied with a terminal connection for the electrical supply beneath the screwed down cover of the operator. In the case of a model requiring 220Vac supply at the operator, an all pole negatively biased switch, with a contact opening of greater than 3mm must be installed within 1,5m of the operator. This switch must be clear of all workings of the system and must be in a position secure from public access. This switch and its connections must be inspected and passed by a certified electrician prior to using it.
- 10. It is the responsibility of the installer to ascertain that the designated persons (including children) intended to use the system, do not suffer reduced physical sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning the use of the system by a person responsible for their safety.
- 11. The drive may not be installed on a door incorporating a wicket door, unless the drive is disabled by the release of the wicket door. (Wicket door :- A pedestrian door within the main gate or door)

During installation:

- 1. Ensure the working area is clear of obstructions and obstacles.
- 2. Install the safety warning sticker within clear view of where the gate or door will be operated from. Typically this would be adjacent to any fixed trigger switches or on the gate or door itself.
- 3. The emergency manual release must be installed where it is no higher than 1,8m from the floor level. This would apply to the cord in a garage installation or the lockable lever in a gate installation.
- 4. Any additional fixed door control switches such as wall consoles or keypads, if installed, must be at a height of at least 1,5m, within clear sight of the gate or door and away from any moving components of the system.

- 5. It is highly recommended that a set of safety infra-red beams be used in conjunction with this product. The safety beams must be installed in such a way that the product is prevented from running when anything is in the path of the door or gate.
- 6. Over and above the recommendation to use safety infra-red beams with this product it is mandatory to install and use a safety beam set when using the automatic closing feature. It is recommended that a warning light be fitted to any automation system.
- 7. The 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. 1.
- 2. Is issued with the documentation accompanying this product.
- 3. 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 4. 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 5. automation system in an unsafe condition before a service provider attends to it.
- Is proficient in testing the unit's safety obstruction sensing system. 6.
- 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 7. 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 8. 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.					
Rated gate mass.	300kg				
Maximum gate leaf length.	25m				
Primary power supply to gate.	220 – 240Vac @ 50Hz – 60Hz (A low voltage plug in transformer can be purchased and installed if required)				
Peak power consumption at gate	18W				
Electrical class.	Class 1 🚯				
Motor voltage.	24Vdc				
Motor current limiting.	5A Starting / 3,5A Running				
Rated duty cycle.	25% with 220Vac present (See determining your duty cycle on page 7)				
Number of operations on battery reserve within 24 hours of power failure.	100 (Gate load and battery health dependent.Based on a gate opening of 4m)				
Gate speed.	25m/min (Gate load and battery health dependent)				
Rated Load.	300N Starting / 240N Running				
Operating temperature range.	-10 to 50° C (14F to 122F)				
Anti-crushing safety sensing.	Yes – Electronic gate profiling				
Auxiliary supply output.	12Vdc @ 400mA				
Built in battery charger.	Multiple stage auto-calibrating (350mA peak)				
Receiver format.	ET BLU MIX [®] Backward compatible with ET BLUE (Rolling code)				
Receiver frequency.	433.92MHz				
Receiver channels.	4CH (BT, PED, Aux relay, Holiday lock-out)				
Receiver memory capacity.	32 users				
All users can be allowed control of all channels.	Yes				
Ingress protection.	IPX4				

Component identification and descriptions.

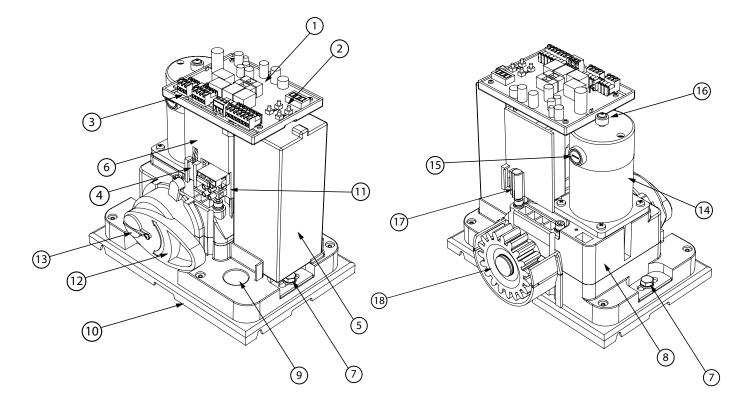
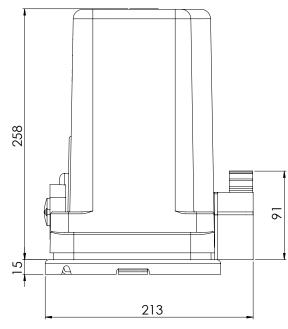
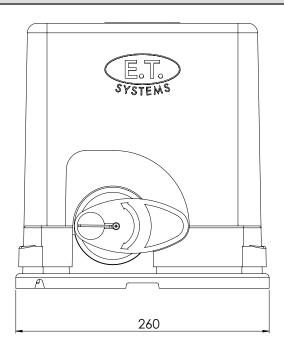


Diagram number	Description	Diagram number	Description
1	Control card	10	Baseplate
2	Dashboard	11	220V connector
3	Plug-in terminal connectors	12	Manual override
4	Manual release monitoring reed switch	13	Manual override lock
5	Battery	14	Electric motor
6	Transformer housing	15	Electric motor brush ports
7	Mounting bolts	16	Revolution counter ring magnet
8	Gearbox	17	Ends of travel limits, reed switch
9	Cable inlets	18	Output drive pinion

Operator dimensions.

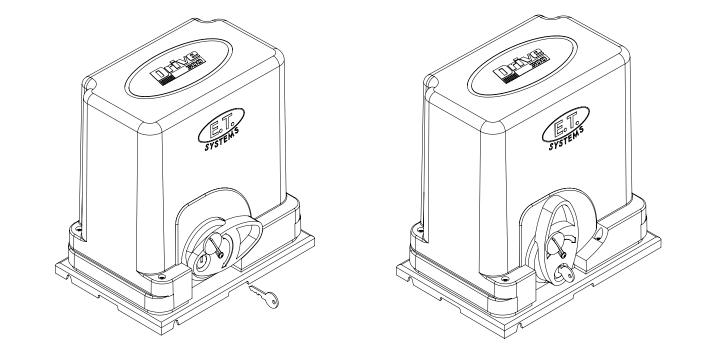




How to use the manual release override.

Move gate open and closed by hand.

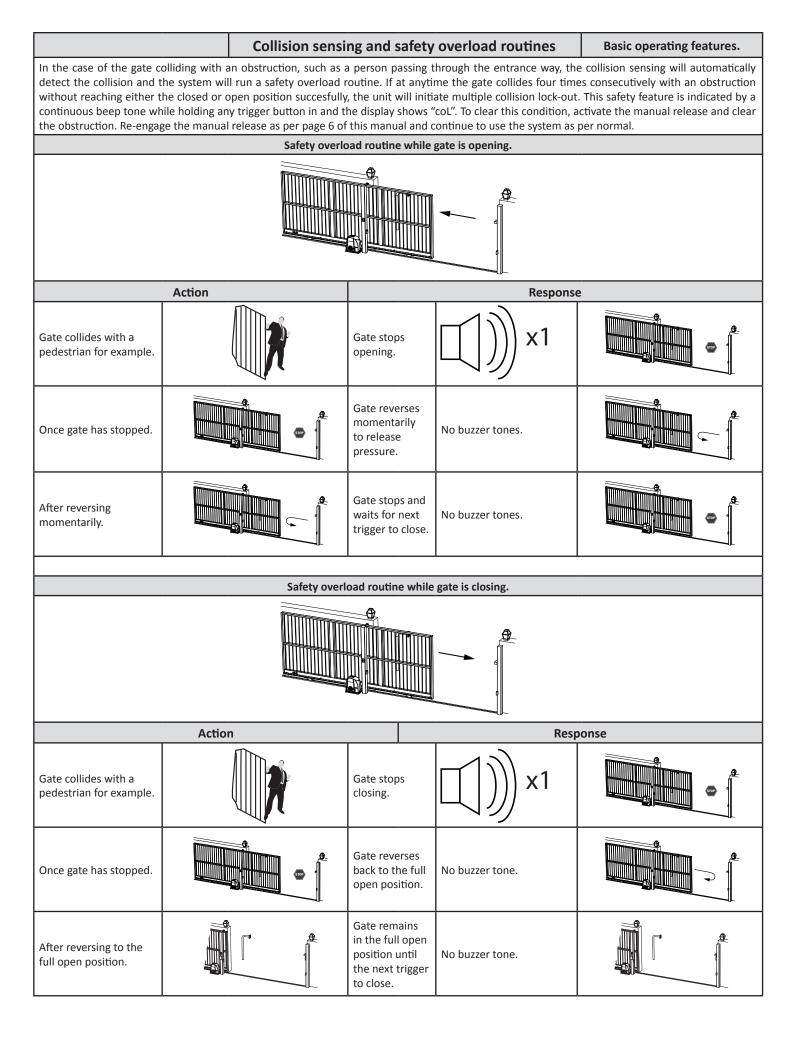
- 1. Unlock the manual release lever lock using the key supplied. 2
- 2. Swing the manual release lever upright to disengage the gearbox.



To re-engage the gearbox lower the manual release lever and lock it once again. Gently pull or push the gate by hand until the gears fall into place before triggering the unit to run.

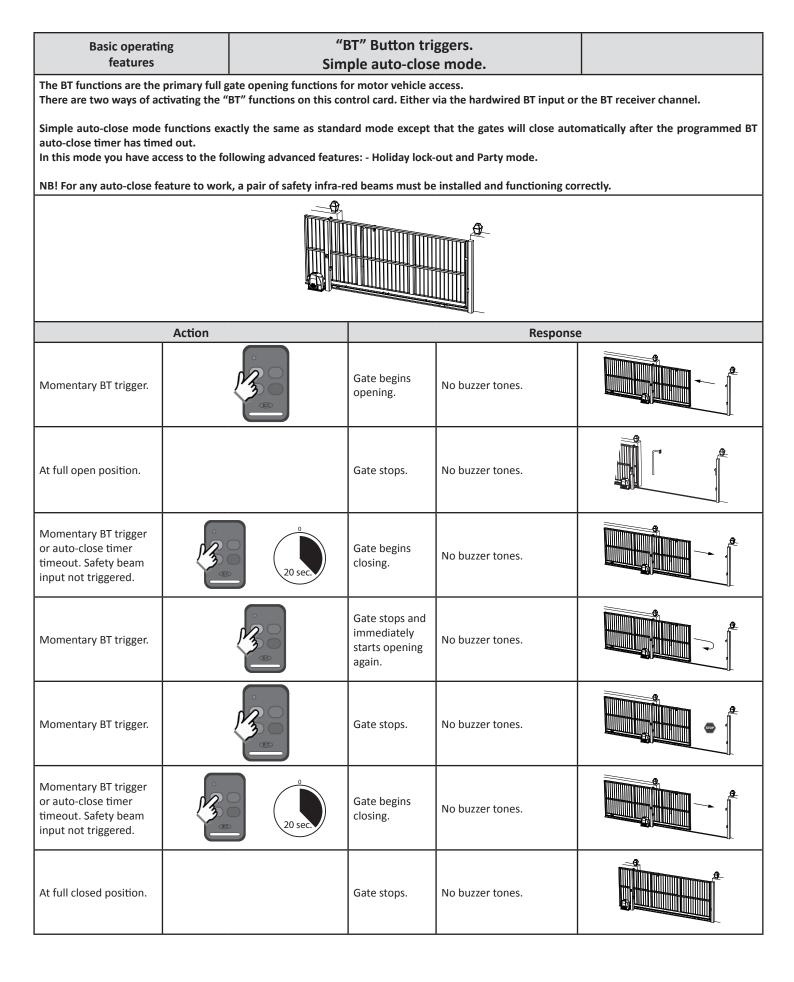
Referencing the closed position

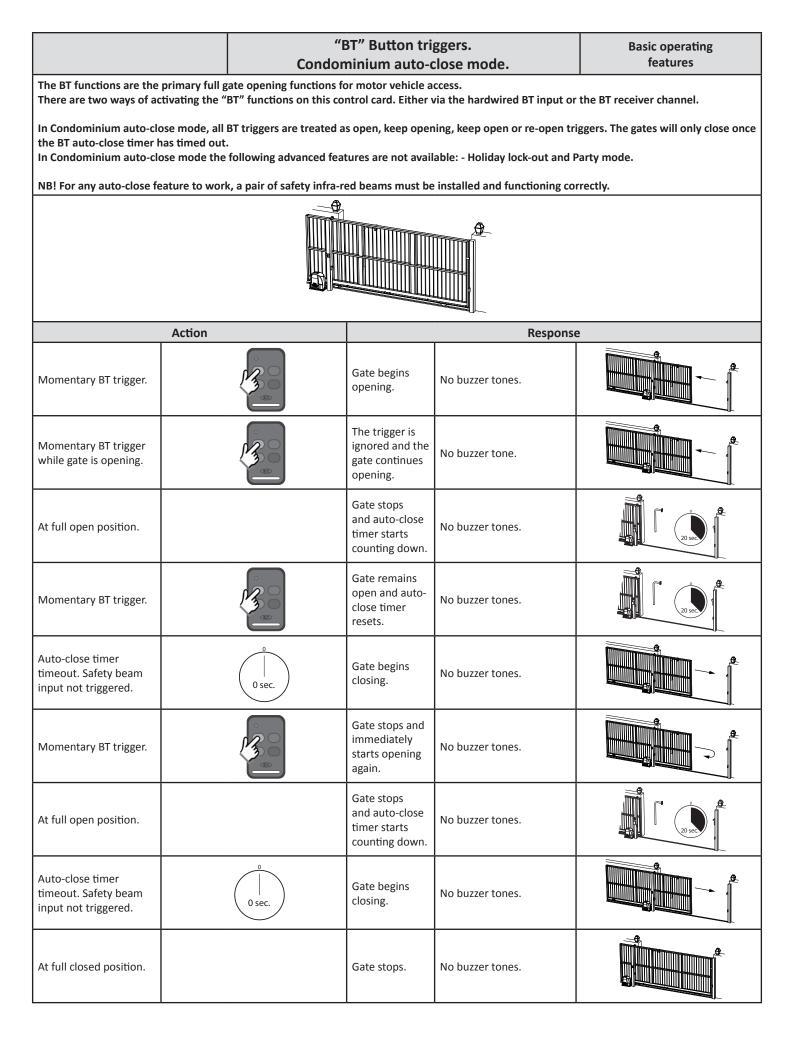
On the first trigger subsequent to the gearbox being engaged after a manual release, the gate will close at half speed. The system is looking for the closed position which is the origin point. This is known as referencing the closed position. If any of the trigger inputs are activated or the safety overload sensing is activated while the gate is busy "referencing" then the gate will simply stop. The next trigger will cause the unit to continue "referencing". While referencing the closed position the display will show "rEF". Referencing the closed position will also occur on the first trigger after exiting programming or powering up a previously programmed control card.



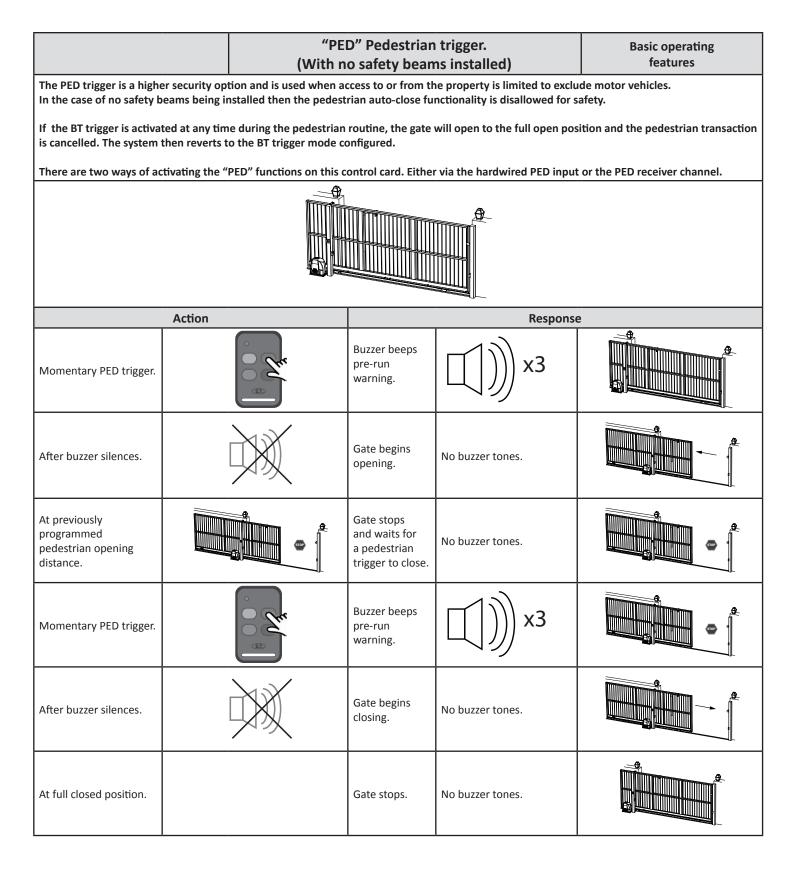
Basic operation features	ng		nfra-red bean except P.I.R.A					
NB! A set of safety beams	If the safety beam input has been switched on, the control card will constantly monitor to ensure a set of safety beams is installed. NB! A set of safety beams must be installed and the safety beam input must be configured . Below is an example of how the gates will behave whenever the safety beam input is activated.							
	Action			Response				
Momentary BT trigger.	ŗ	3	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.	Į		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.	Ę		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.	Į		Gate begins closing.	No buzzer tone.				

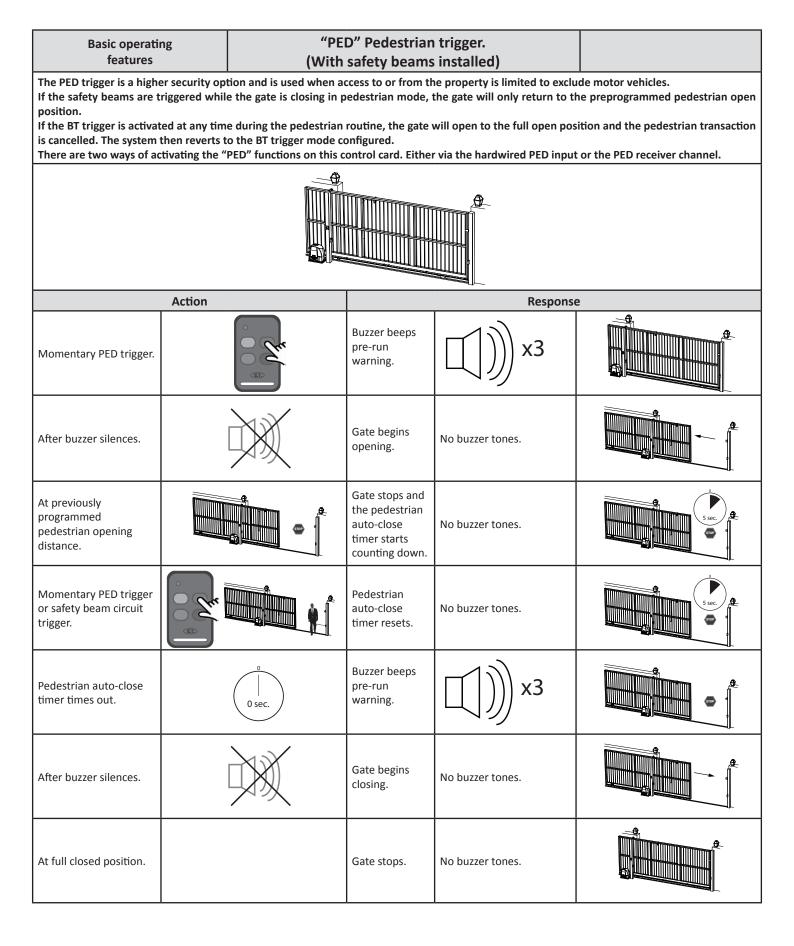
		'BT" Button tr Standard mo		Basic operating features				
	The BT functions are the primary full gate opening functions for motor vehicle access. There are two ways of activating the "BT" functions on this control card. Either via the hardwired BT input or the BT receiver channel.							
	tes respond to each BT trigger. ave access to the following advanced	l features: - Holida	v lock-out and Party mode.					
,	In Standard mode you have access to the following advanced features: - Holiday lock-out and Party mode.							
	Action		Respon	ise				
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.	9				





Basic operati features									
	The BT functions are the primary full gate opening functions for motor vehicle access. There are two ways of activating the "BT" functions on this control card. Either via the hardwired BT input or the BT receiver channel.								
In 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 mode the following advanced features are available: - Holiday lock-out and Party mode.									
NB! For any auto-close fe	eature to wor	k, a pair of safety infra-ro	ed beams must be	installed and functioning co	rrectly.				
	NB! For any auto-close feature to work, a pair of safety infra-red beams must be installed and functioning correctly.								
	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.									
At full closed position.			Gate stops.	No buzzer tones.					





With Strike lock mode se	elected, the au	Au Ixiliary relay will pulse n	Basic operating features ns.				
this can damage the cha	rger and batte	ry of the control unit.		er supply matching the lock	load must be installed. Failure to do		
Below is an example of strike lock mode when standard BT mode is active.							
	Action			Response	e		
Momentary BT trigger.			Auxiliary relay activates.	No buzzer tone.	ON (N/C Com (N/O		
Half a second after the auxiliary relay has activated.		0.5 sec.	Gate begins opening.	No buzzer tone.			
After the preprogrammed relay on time.		1 sec.	Auxiliary relay deactivates and gate continues opening.	No buzzer tone.	OFF N/C Com N/O		
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 operati features							
features Magnetic lock mode. 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 insta this can damage the char			ery backed up pow	ver supply matching the lock	load must be installed. Failure to do		
Below is an example of n	nagnetic lock	mode when standard B	r mode is active.				
	Action			Response	2		
Momentary BT trigger.			Auxiliary relay activates.	No buzzer tone.	ON 		
Half a second after the auxiliary relay has activated.		0.5 sec.	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.		0.5 sec.	Auxiliary relay deactivates.	No buzzer tone.	OFF N/C Com N/O		

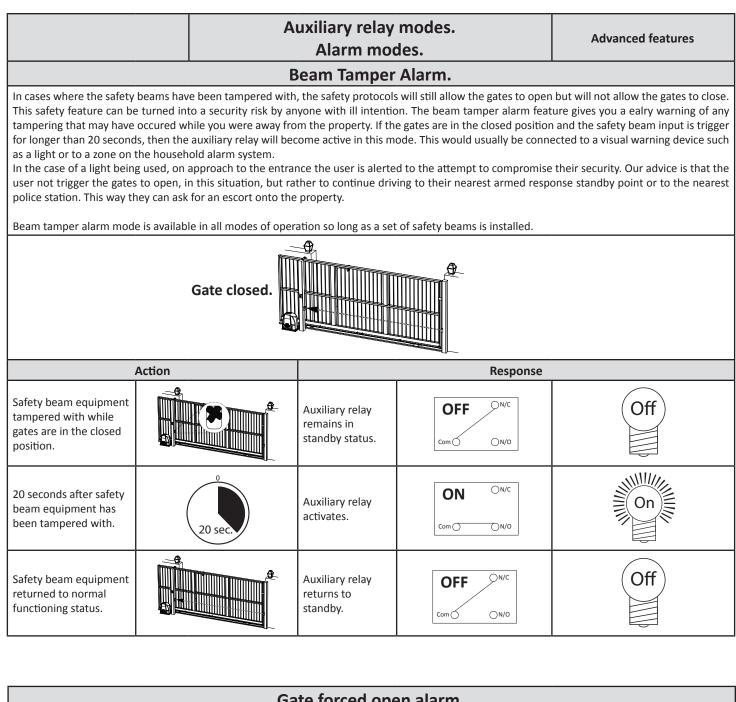
Auxiliary relay modes. Receiver relay mode.

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 "Relay" receiver function is pressed and released.

Latch mode. The transmitter must be released and pressed again to toggle the relay each time.						
Action			Response			
Momentary relay trigger.		Auxiliary relay switches on.	No buzzer tones.	ON ⁽⁾ N/C com () N/O		
Momentary relay trigger.		Auxiliary relay switches off.	No buzzer tones.	OFF N/C com N/O		

One shot pulse mode. The transmitter must be released and pressed again to reactivate the relay each time.						
Action			Response			
Momentary relay trigger.		Auxiliary relay switches on.	No buzzer tones.	ON ON/C Com ON/O		
After relay timer has timed out.	3 sec.	Auxiliary relay switches off.	No buzzer tones.	OFF N/C Com N/O		

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Basic operati features	ng	Au Ce				
With courtesy light mod	e selected, the auxiliary	light will swi	itch on as the gate	e begins opening and remain	n on for 3 minutes after the gate has	
closed. The auxiliary relay can a into the auxiliary relay fu		h on without	the gate opening I	by simply pressing and relea	sing any remote button programmed	
Below is an example of o	ourtesy light mode whe	n standard BT	mode is active.			
		1	3			
	Action			Respons	ie	
Momentary BT trigger.			Auxiliary relay activates.	No buzzor topo	ON (N/C Com () N/O	
Nomentary B1 trigger.			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 humor tono		
At full closed position.			Relay on timer begins counting down.	No buzzer tone.	3 Min.	
After relay on timer timeout.	0 0 sec.		Auxiliary relay deactivates.	No buzzer tone.	OFF N/C Com ON/O	
If any remote button programmed into the auxiliary relay function is pressed momentarily, the following will occur.						
Auxiliary relay status	Action			Respons	ie .	
OFF N/C Com N/O	Momentary auxiliary relay trigger.		Auxiliary relay switches on for 1 hour.	No buzzer tone.	1 hour.	
ON (N/C Com () N/O	Momentary auxiliary relay trigger.		Auxiliary relay switches off.	No buzzer tone.	OFF N/C com N/O	



Gate forced open alarm.							
In a case where the gate is physically lifted off its track and forced open, the auxiliary relay will immediately activate. The auxiliary relay 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.		Auxiliary relay remains in standby status.	OFF N/C com N/O	Off			
Attempt to lift gate off track and force open.		Auxiliary relay activates.	ON ON/C Com ON/O	On			
Gate resecured in the closed position. Standing by.		Auxiliary relay returns to standby.	OFF ON/C Com ON/O	Off			

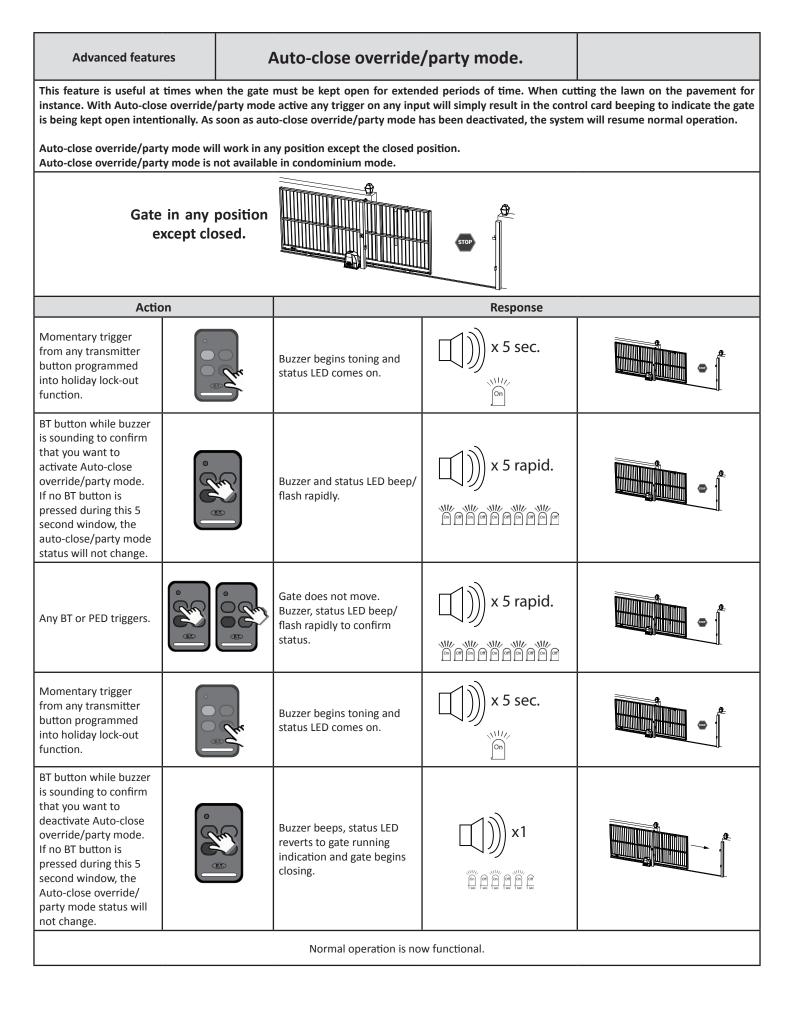
Positive close mode.

With positive close mode activated, the gate will surge onto the closed stopper after seeing the closed limit. 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.



	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.		Closed limit activates.	No buzzer tones.					
When the closed limit activates.		Gate continues to surges onto the mechanical closed stopper.	No buzzer tone.					

		Holiday lock-out mode. Advanced features					
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 gar- den service company, for extended periods of time. An example of when the holiday lock-out function would be useful is when the home owner is away on holiday. With holiday lock-out mode active, any trigger on any input will simply result in the control card beeping to indicate the gates are being kept locked intentionally. As soon as the holiday lock-out mode is deactivated, the system will resume normal operation.							
Holiday lock-out will onl Holiday lock-out is not a	-						
Gate must be closed to start.							
Actio	on			Response			
Momentary trigger from any transmitter button programmed into holiday lock-out function.		24	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.	(1))) x 5 rapid.			
Any BT or PED triggers.			Gate does not open. Buzzer, status LED.	u)) x 5 rapid. తోలితో లితో లితో లితో లి			
Momentary trigger from any transmitter button programmed into holiday lock-out function.		n n n	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.							



Status LED indications and buzzer guide.							
Description	Visual confirmation	Buzzer	Reason				
Static off.	Off	None	Gate fully closed.				
Flashing slow 1 second on and 1 second off.	On Off On Off On Off On Off 1 sec 1 sec 1 sec 1 sec 1 sec 1 sec	None	Gate running normally.				
Static on.		None	Gate open.				
2 x 0,5s flashes fol- lowed by a 2 second pause.	My My Pause My My Pause	1 x 1 second beep every 15 seconds for 5 minutes after gate transaction.	AC mains off. Restore AC as soon as possible.				
4 x 0,5s flashes fol- lowed by a 2 second pause.		1 x 1 second beep every 15 seconds for 5 minutes after gate transaction.	Battery low. Allow at least 8 – 10hr uninterrupted charge before checking again.				
5 x 0,125s rapid flashes each time a trigger is received.	On Off On Off On Off On Off	Mimics LED.	A lock-out mode is active. See Holiday Lock-out and Party Mode in advanced operating features pages.				

Display definitions and troubleshooting guide.							
Displayed on screen.	Definition.	Solution.					
	In normal o	perating mode.					
rdy	Unit is standing by and ready for next instruction.	Trigger to run a required routine.					
Ac	Charger powered down due to Vac mains interuption.	Check 220Vac or 29Vac supply to the unit.					
ЪЯŁ	Battery is either disconnected or discharged.	Allow 8-10 hours uninterrupted charge before trying to operate the unit again. If the battery has not recovered after this, then replace the battery.					
r EL	Gearbox manual release is in released (Manual) position.	Lower the release lever to engage gearbox. Page 6.					
ւրթ	Infra-red beams circuit is being triggered.	Remove obstruction from the path of the safety beams. Page 8.					
hol	Control card is in Holiday Lock-out mode.	Follow the steps on page 21 to deactivate Holiday Lock-out.					
PR-	Control card is in Party mode.	Follow the steps on page 22 to deactivate Party mode.					
col	Multiple collision lock-out active.	See page 7 or contact your service provider. Page 2.					
For	Safety overload triggered by physical overload.	See page 7 or contact your service provider. Page 2.					
r E F	Referencing the gate closed position.	See "Referencing the closed position" on page 6.					
E-L	Failure to see the closed limit.	Contact your service provider. Page 2.					
oPn	Gate is open.	Trigger gate to close.					
Pr9	Control card is in Programming mode.	Press and release X to exit programming mode.					
El	Revolution counter/encoder failure.	Contact your service provider. Page 2.					
63	Motor is disconnected, motor fuse is fused or electric motor is faulty.	Contact your service provider. Page 2.					

Receiver user address log											
Address	F	unc	tion	s	User identification	Address	Functions		s	User identification	
	ВТ	PED	RLY	НОГ			ВТ	PED	RLY	НОГ	
001						017					
002						018					
003						019					
004						020					
005						021					
006						022					
007						023					
008						024					
009						025					
010						026					
011						027					
012						028					
013						029					
014						030					
015						031					
016						032					

WARRANTY:

- 1. All goods manufactured by ET NICE (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 NICE (Pty) Ltd free of charge.
- 4. This warranty is subject to the goods being returned to the premises of ET NICE (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.