AUTOMATIC SOLUTIONS
Australia Pty Ltd

FARMSOLARULT

GENERAL

E3300
Motor Voltage – 12 volt
Power Absorbed – 70 watts
Speed – 0,019 metres per second
Maximum Thrust – 1500 N
Protection Level – IP43
Duty Cycle – 90%
Dimensions – 670L x 90W x 185H
Stroke – 30 CM
Maximum Leaf –5 metre farm gates
Maximum Leaf Weight – 250 Kg
Opening Time – 16 Seconds

IMPORTANT—READ THIS FIRST

Parts of these instructions are intended as a quick start guide and should be used in conjunction with the full instructions. The quick start instructions provide the basics to get you up and running and are based on the most commonly used installations in Australia.

SAFETY

This booklet will offer you information you may need to install your gear motor and to safeguard your safety.
However, caution is unquestionably indispensable and nothing is better than preventing accidents.

WARNING: any repair or adjustment of working machinery is strictly prohibited unless all the necessary precautions (electrical supply disconnected and motor off) have been taken in order to avoid possible accidents.
WARNING: any repair must be carried out by qualified people.
WARNING: All moving mechanisms must be provided with suitable protections.
WARNING: Keep the automatic controls out of the reach of children.
WARNING: Command pulses must be given from positions where the gate is visible.
WARNING: Use transmitters only if you can see the gate.

Read carefully the instructions enclosed in this manual.
Keep this booklet in a suitable place well known to all interested people.

PRELIMINARY CHECKS

In order to make the automation work efficiently; the gate to automate must have the following characteristics:
- It must be balanced.
- It must oscillate fluently.
- You must be able to carry out manual closing and opening of the gate without any effort.
- Make sure that the gate has a solid structure and that there is no friction points in its movement.
- Make sure that the gate/s have both solid opening stops and solid closing stops.

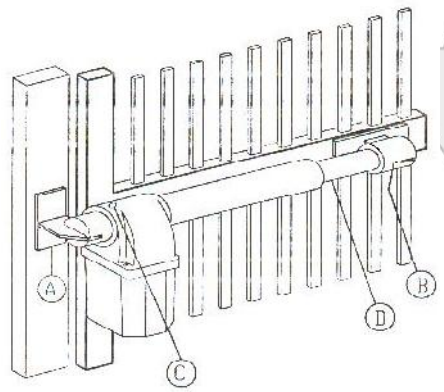
GENERAL ORDER OF INSTALLATION

To ensure a good installation of the gear motors E3300, we suggest the following order of installation:
1 - Open the box and take out gear motor. Inspect the contents and ensure all components are present.
2 - Make sure that the leaf of the gate is perfectly horizontal.
3 - Determine the height position of your motor and mark post bracket position.
4 - Spend some time here considering the correct height and geometry of your post bracket.
5 - Attach the gear motor on to the support post.
6 - With gate/s leaf closed, turn and slide the screw of gear motor's shaft, until it comes to the end of the screw.
7 - Screw shaft back 1 complete turn of 360º.
8 - Place the gate support plate in the hole of the shaft end and position it against the gate leaf.
9 - Fix it to the gate leaf taking in account the inclination.
10 - Put the gear motor into manual operation mode with your override key and test your install for smoothness.
11 – If correct proceed in the same way with the other gate leaf.
12 - Place the mechanical limit stops
13 - Connect the gear motors to the logic controller.
14 – Program and test your installation
15 – Attach your safety devices and access devices one by one testing for correct operation at each point.

MAINTENANCE

Periodically check your installation for loose or worn fastenings, correct alignment and operation of your gate/s and correct operation of your manual override operation. Clean and keep clean all areas of the installation. Remember that the motorisation has been planned in order to help you use the gate. This means that it does not resolve the problems caused by an inadequate installation or by a poor upkeep of the gate.

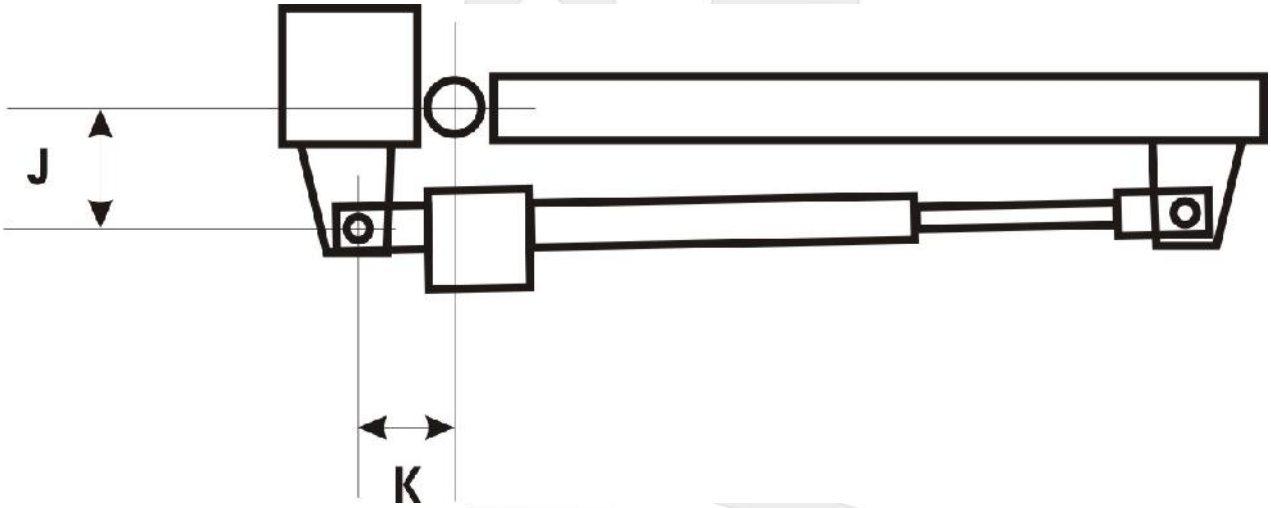
E3300 GEAR MOTOR INSTALLATION



INSTALL POST BRACKET

The position of the post bracket "A" is critical to the success of your installation and attention needs to be paid to both its correct height and also its position on the post in respect to the relationship between your gate hinge pivot point and the motor pivot point on the bracket.

Once you have determined the general desired height of your motor, position the bracket and take note of dimensions "J" and "K". In a standard installation the basic aim is to get dimensions "J" and "K" to be as close as possible to equal.



INSTALL GATE BRACKET

With your post bracket securely fastened, attach your gear motor to the post bracket with the bolts provided. Take care to support the weight of the gear motor at this point and throughout this stage. Wind out shaft "D" all the way till the end. Now turn shaft "D" back one complete turn of 360 degrees. Attach your gate bracket to the shaft end "H" and position on the gate. Fix your gate bracket at this position. Using your battery and the ends of the motor leads simply attach one lead to the battery negative and the other to the battery positive to move your gate and gear motor through the entire 90 degree arc to test the smoothness of your installation. If your gate tries to close instead of open simply reverse the leads on the battery. If your gate and gear motor moves smoothly through the entire travel range then you are ready to proceed to the next point. If you are having difficulty or hitting sticking points at any point in the travel you may need to adjust your post bracket pivot point to facilitate a smoother run.

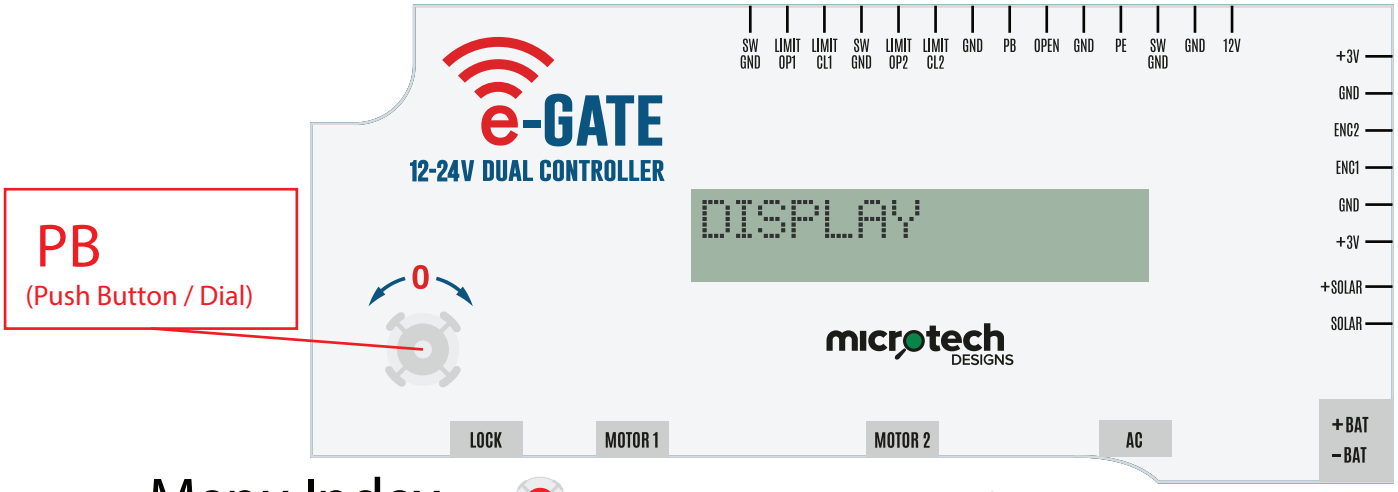
INSTALL GATE STOPS

This is a critical point in ensuring long trouble free operation of your automation system, yet it is relatively simple. Each gate must have a positive and well secured opening stop and closing stop. There are a range of stops available over the counter or you can make them yourself but the critical point is that the stops must be well secured as the gear motors will exert quite a deal of force on them during programming. In summary when your gate/s open they must hit a positive stop point that stop the gate/s from opening any further and the same at the closed point.

Specifications

Voltage:	12-24V ACDC
Current draw standby:	14mA (AC) 6mA (Solar)
Frequency:	433MHz Bidirectional
Remote storage:	200 remotes, 4 x keypads, 4 x e-loops
Programs:	4 Selectable programs
Solar:	Inbuilt solar charger
Motors:	12-24V ACDC 120W Solid State Motor Drive with short circuit and overcurrent protection

e-GATE
12-24V DUAL CONTROLLER



Menu Index

Use the dial to scroll right to move forward in the menu

Scroll left to go back through the menu

Press PB to enter or exit any of the menus, or to select or alter any settings.

Contents

Microtech Designs
enquiries@microtechdesigns.com.au

MAIN MENU	SUB MENUS
CODED DEVICES	ALLOCATE BUTTON MENU Allows you to allocate a button number to do a certain function, such as PB Button 1, Open Button 2, Close Button 3, Pedestrian Button 4, Lock Button 5.
	DELETE DEVICE MENU Allows you to delete all or individual remotes or other devices.
	SET ID MENU Allows you to set remote numbers to assigned unit numbers, also allows you to define whether a device is an entry device or an exit device, which can then be added in Lock Out Menu.
	LOCK OUT MENU Allows you to lock out Auto close or a particular device such as an e-Loop or e-Keypad using the e-Remote lock and unlock buttons.
	E-LOOP SETTINGS MENU Allows you to change settings and diagnose operation of a coded e-Loop.
	E-RADAR SETTINGS Allows you to change settings and diagnose operation of a coded e-Radar.
ALTER CLOSE DELAY	CLOSE DELAY TIME Allows you to change the time delay before closing.
INPUT MENU	SET PB INPUT TO Allows you to change the default Push Button inputs to OPEN or CLOSE inputs.
	SET PED INPUT TO Allows you to change the default Pedestrian inputs to OPEN or CLOSE inputs.
FORCE MENU	FORCE MARGIN Allow you to change the safety reverse force to either LIGHT, MEDIUM, HEAVY or MANUAL modes.
	ADVANCED FORCED MENU Contains more advanced force adjustments. (Refer to a technician).
SPEED MENU	MINIMUM SPEED Allows you to change the start up and slow down speeds.
	OPEN SPEED Allows you to change the OPEN speed.
	CLOSE SPEED Allows you to change the CLOSE speed.

RAMP MENU

- RAMP UP OPEN
  Allows you to change the ramp up open time.
- RAMP UP CLOSE
  Allows you to change the ramp up close time.
- RAMP DOWN OPEN
  Allows you to change the ramp down open time.
- RAMP DOWN CLOSE
  Allows you to change the ramp down close time.

LOCK OUT MENU

Allows you to turn on and off lockout settings for connected devices.

PE BEAMS MENU

- PE BEAM
  Allows you to turn on PE Beam activation.
- PE AUTO CLOSE
  Allows you to activate PE Auto Close function.
- PE AC TIME
  Allows you to adjust the PE Auto Close time.

AUTO CLOSE MENU

- AUTO CLOSE
  Allows you to turn on Auto Close function.
- AUTO CLOSE TIME
  Allows you to change Auto Close time.
- SECURE AUTO CLOSE
  Allows you to turn on Secure Auto Close (gate will close after set time even if it has not reached the open position)

PEDESTRIAN MENU

- PEDESTRIAN MODE
  Allows you activate Pedestrian function.
- PEDESTRIAN
  Allows you to change opening position.
- PED AUTO CLOSE
  Allows you to activate Pedestrian Auto Close function.
- PED AC TIME
  Allows you to adjust Pedestrian Auto Close time.

LOCK MENU

- LOCK TYPE
  Allows you to select Pulse Hold or courtesy function.
- COURTESY TIME
  Allows you to alter the time the light stays on after gate is opened or closed.

RADIO SETTINGS — RADIO SETTING
Allows you to turn off the on-board radio to save power consumption when wiring in a third-party receiver.

ADVANCED MENU — Allows you to alter advanced settings (refer to a Technician).

DIAGNOSTICS MENU — Allows you to view the last 30 recorded faults such as Obstruction, Low Battery or PE Activations.

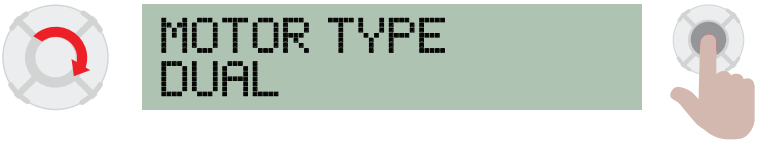
CURRENT TRIPS — Allows you to view the last 20 recorded current trips.

4. e-Gate Set Up – End Stop

1. Power up display, it will read 'System Not Setup'. Now press **PB** to enter set up menu 'System Type'.

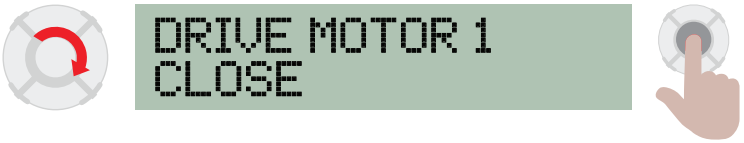
First display is 'Encoder', rotate dial to select 'End Stops'. Now press **PB** and a green light will appear .

2. The screen with display 'Motor type'. Use the PB button to select single or dual motor.



3. Screen will now display 'Drive Motor Open'.
You can drive the motor in the open direction by holding down the **PB** button or button **1** on a coded remote.

4. Now rotate the dial to display 'Drive Motor 1 Close'.
You can drive the motor in the close direction by holding down the **PB** button, or holding down button **1** on a coded remote. Rotate dial to use 'Drive Motor 2 Open' and 'Drive Motor 2 Close' if you are in dual motor mode.

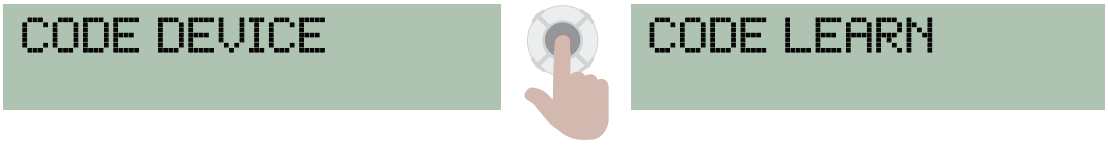


4. Now rotate dial to 'Direction Change Press PB'.
   If you want to change motor direction, press **PB** and a green light will appear to show the direction has been changed. Otherwise rotate dial to 'Motor Setup'.

5. Rotate dial to 'Setup System Press Button', now press **PB** and gate will close until it reaches the close limit. (Note: Gate should be in half way position)

5. Coding – Remotes

1. Scroll to 'Code Device' and press **PB** The screen will display 'Code Learn' and the red light will appear.



2. Now press the Remote button once and the e-Gate board will display 'Remote # Coded'. To code more remotes, repeat step 2.
(Note: To exit Code Learn you can press **PB** again or wait 10 seconds and the board will automatically exit back to main screen. Alternatively press the coded remote button again and it will return the the main screen.)

6. Coding – e-Loop

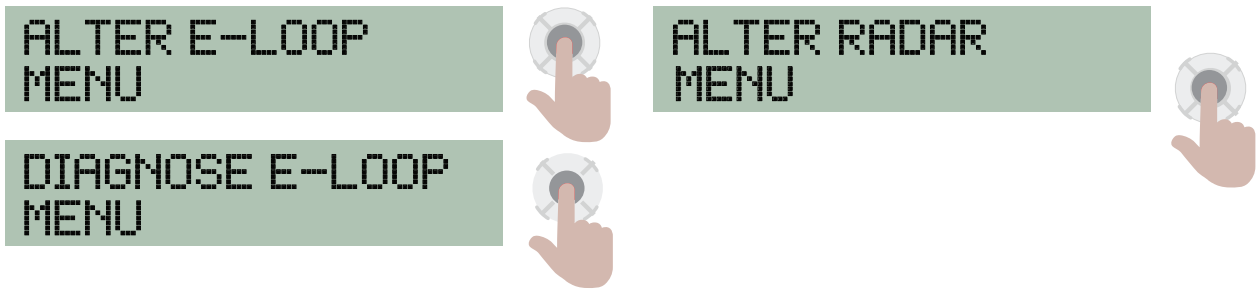
1. Scroll to 'Code Device.

2. Now place the e-Loop close to the antenna of the board then press and release **PB** .
If pairing is successful, the screen will display 'Loop (number) Paired'.
If not successful, 'Code Learn' will be displayed. To exit 'Code Learn' press **PB** again or wait 10 seconds and it will automatically exit to the main menu.

7. Altering – e-Loop Settings and Diagnostics

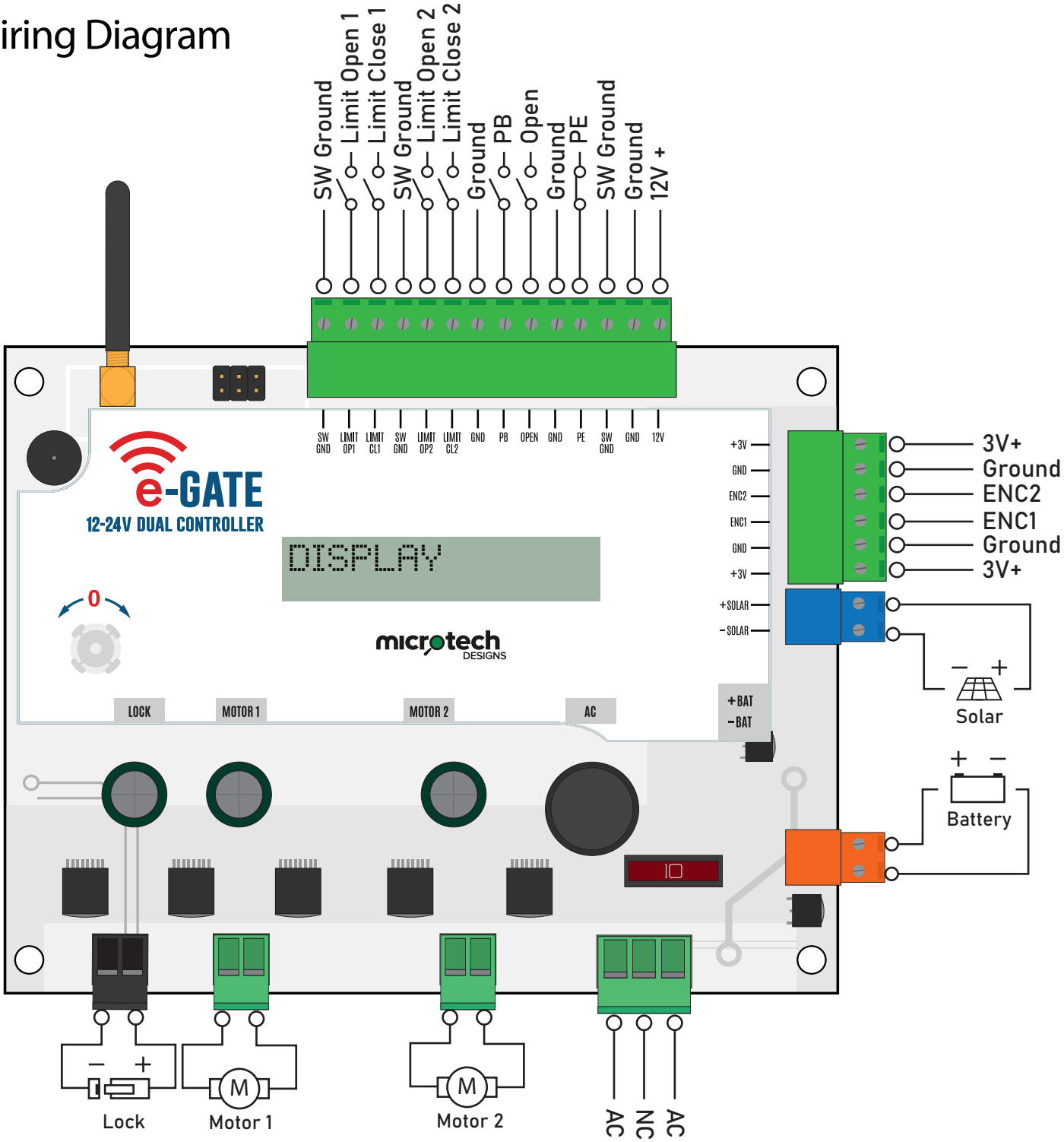
1. To alter the e-loop settings, select coded devices from the main menu, and then select e-loop settings. Before doing so, place a magnet on the mode button of the commercial e-loop for 10 seonds to enter diagnostics mode.

2. Scroll to alter e-loop menu for general e-loop settings, alter radar menu for e-loop radar settings and diagnose e-loop for e-loop information readout. Select any option using the **PB** button.



Note: Diagnostics mode is not required for e-loop and radar settings changes, however the e-loop must be held next to the e-gate board.

Wiring Diagram



microtech DESIGNS

enquiries@microtechdesigns.com.au | microtechdesigns.com.au