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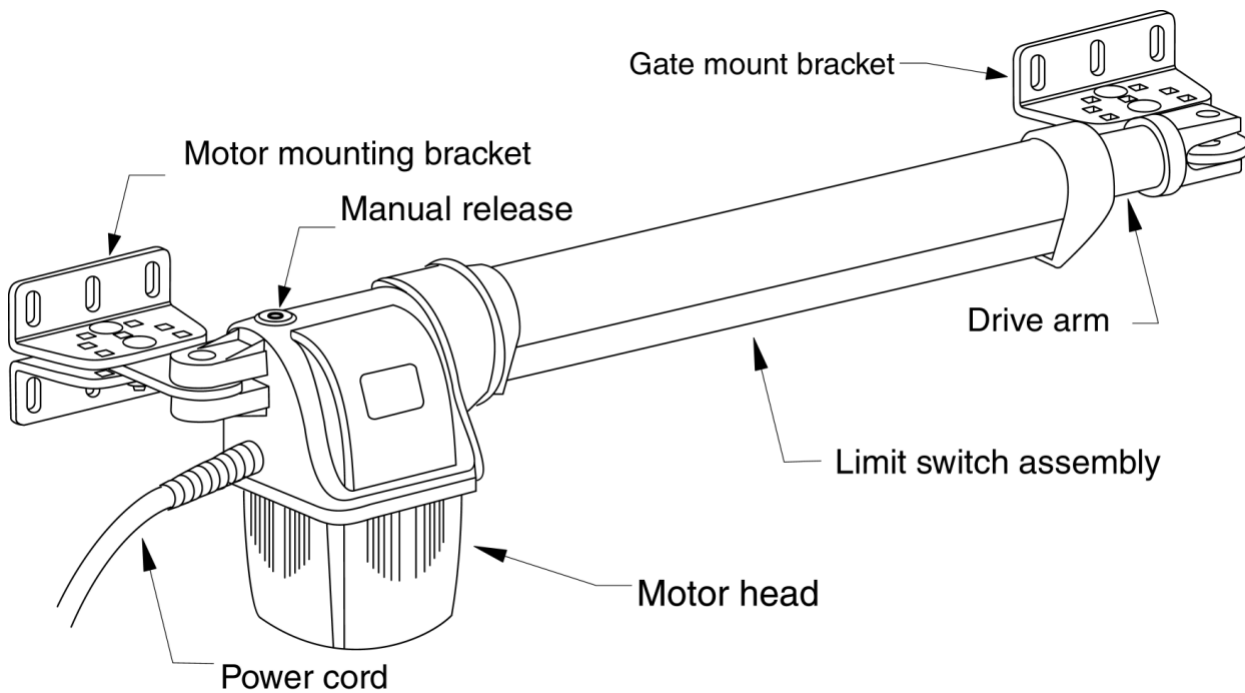
G&C Electronics cc. T/A ET Systems
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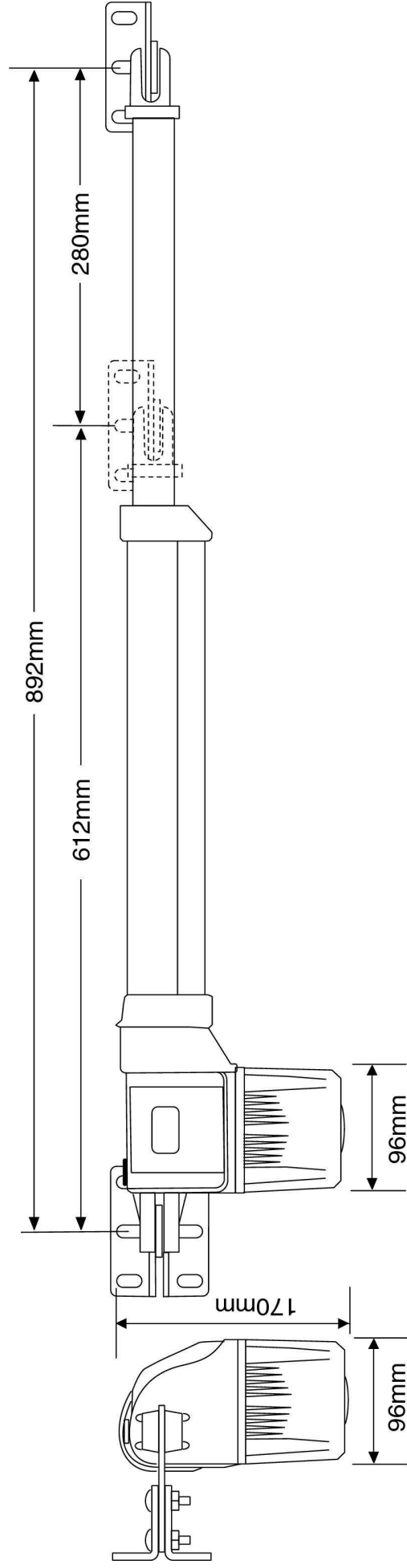
Technical specifications may change without prior notice.
All goods are subject to the standard factory warranty as laid out on the last page of this publication

Rev: 2008/04/001

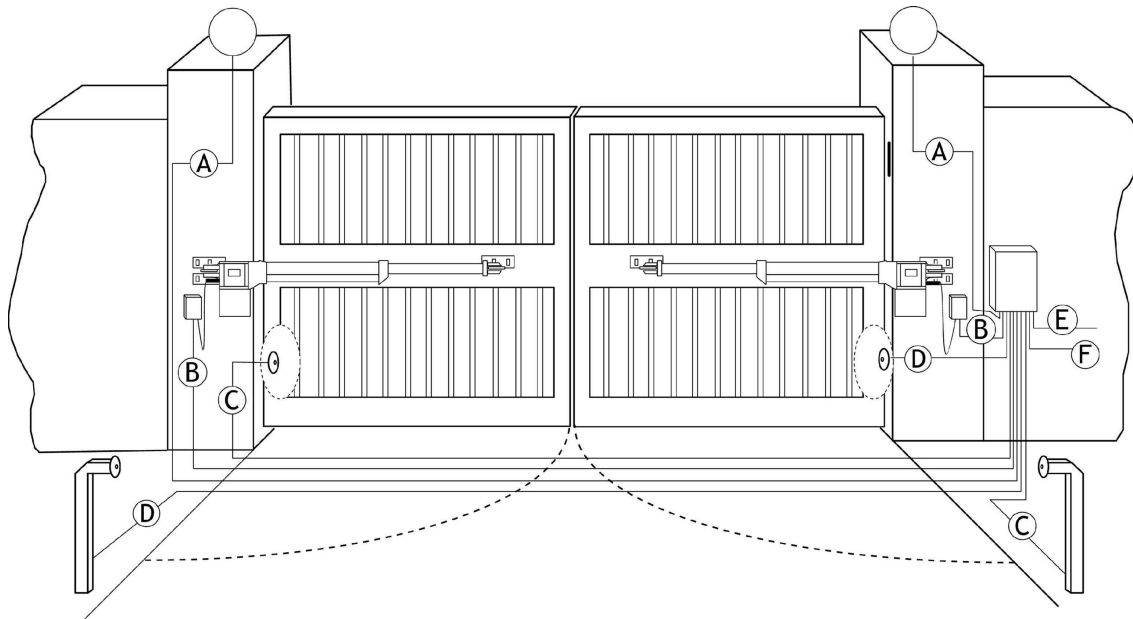
Technical Specifications of the 90 Blue plus

Current	2.5 A
Motor voltage	24Vdc
Motor speed	1500rpm
Stroke speed	16mm/sec
Max leaf length per motor	2m per leaf
Stroke length	Max. 280mm
Max usage in 24 hours	2 full cycles per hour (Domestic class)
Protection	IP44





Wiring Requirements



Wiring Requirements continued....

- A. Courtesy Light wiring – 2 + earth 1mm (3 Amp max load)
- B. Motor 1 and 2 wiring - 2 x 2.5mm (Motor) and 3 x 0.5mm (Limits)
- C. Safety beam TX 12Vdc supply – 2 x 0.5mm
- D. Safety beam RX 12Vdc supply and switch – 4 x 0.5mm
- E. Push button triggers and status LED to and from house – 5 x 0.5mm max 30m.
 - 2 – LED,
 - 1 – Common for pedestrian and button trigger control,
 - 1 – Button trigger,
 - 1 – Pedestrian trigger.
- F. Low voltage 29Vac supply – 2 + earth 1mm

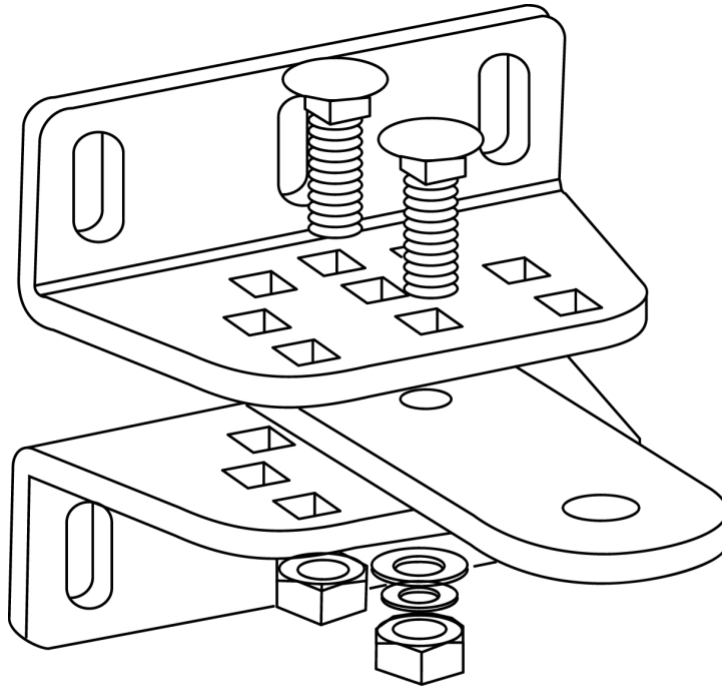
PLEASE NOTE: the linear type automation delivers high loads to your three mounting points, hinge, motor mounting and gate mounting.

Re-enforce all mounting sufficiently to withstand continued force.

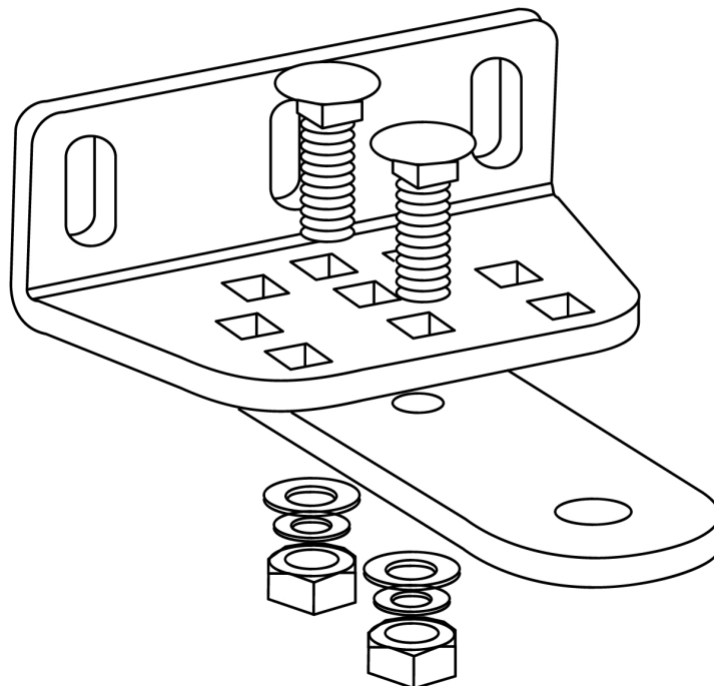
Because you are working with angles the measurements given here are critical. Failure to adhere to them will result in intermittent operation and/or damage being done to the gates or motors.

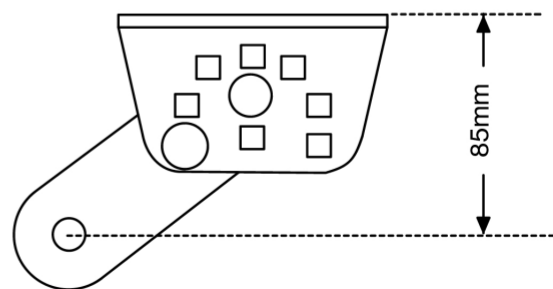
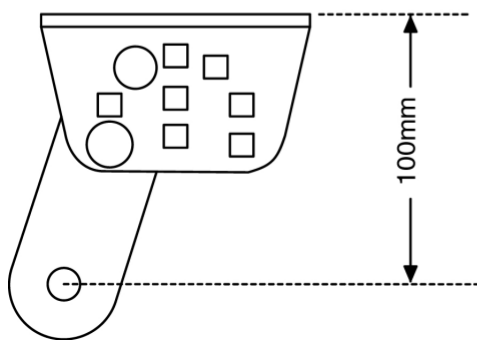
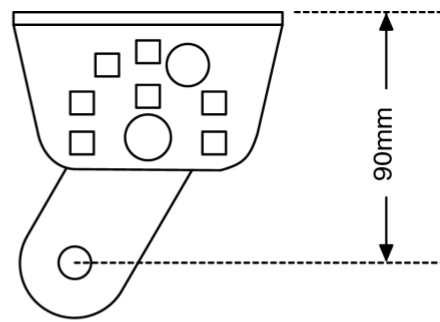
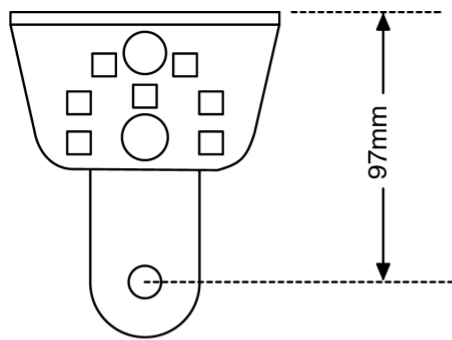
Assembling the mounting brackets

Motor mounting bracket



Gate mounting bracket





The above is a guide to help determine how deep into a column your gate hinge center will need to be to successfully mount the motor mount bracket in the correct position.

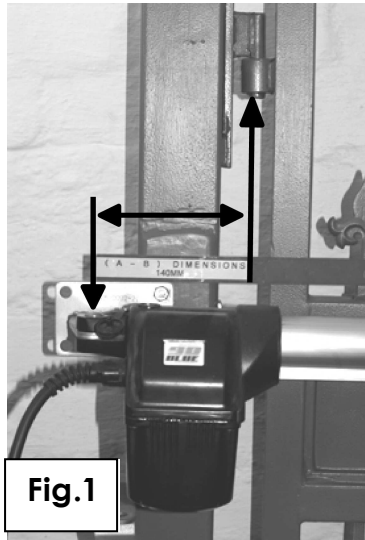
For example:-

If the top left assembly option here is used.

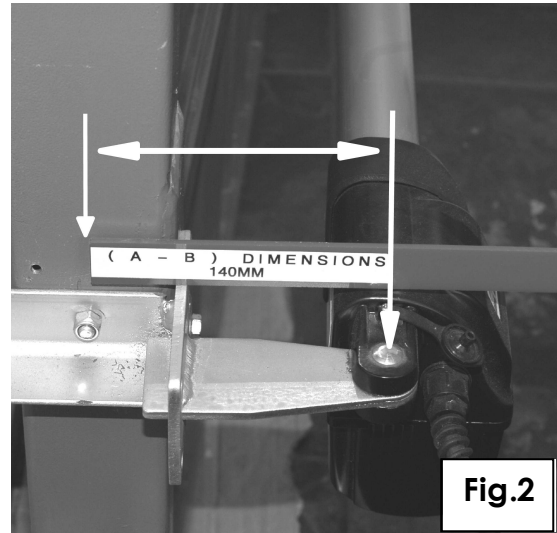
$140\text{mm} \text{ less } 97\text{mm} \text{ (Pivot point center to post corner/inside fascia)} = 43\text{mm}$

Thus the gate hinge center will need to be mounted 43mm deep along the gate post, to give you your required 140mm "B" measurement.

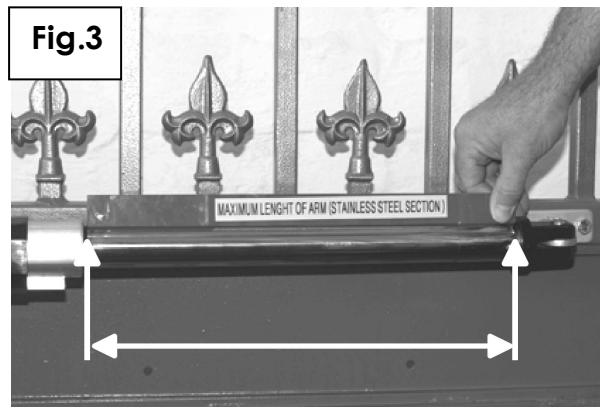
Determining the mounting positions



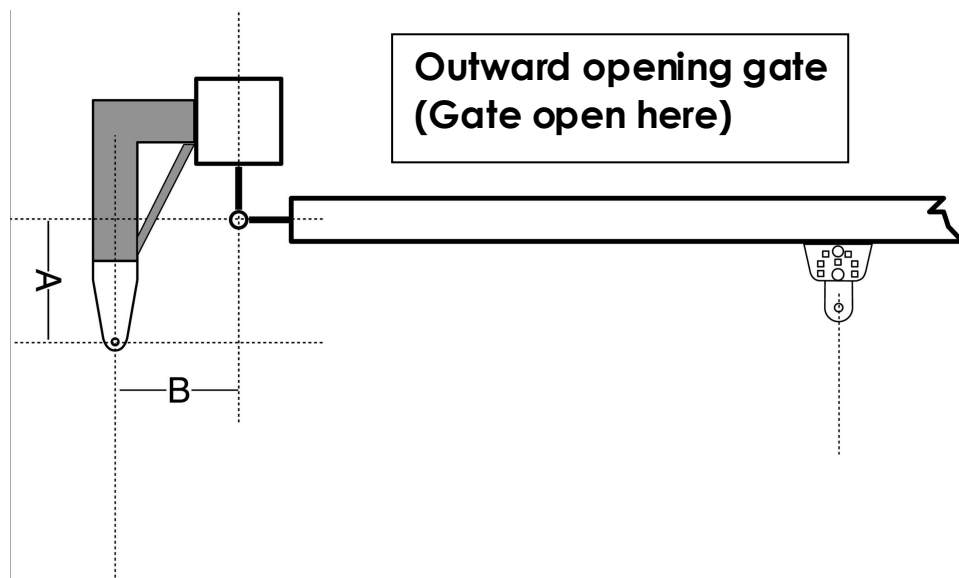
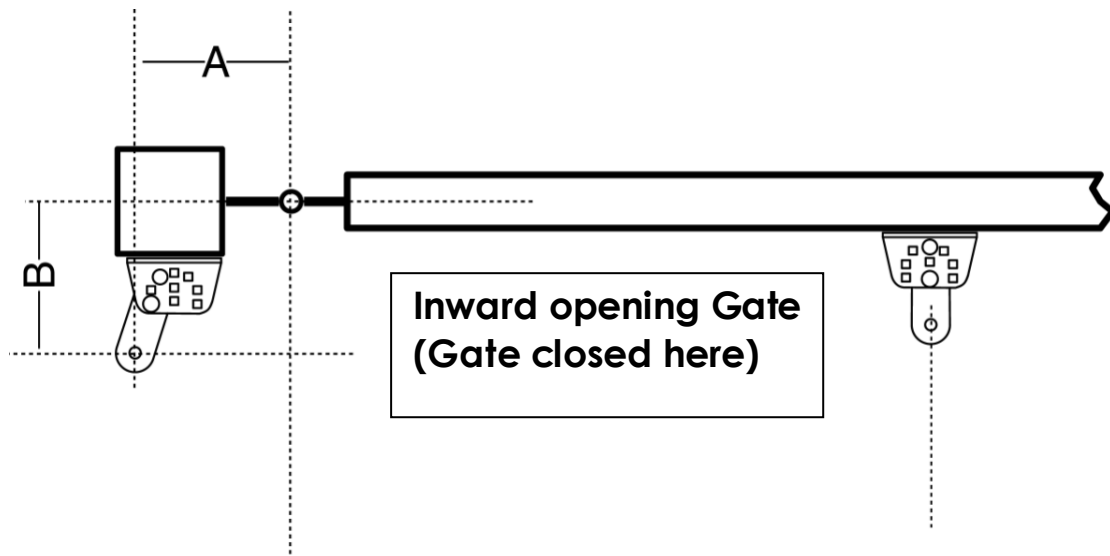
Use the guide supplied to ensure that your maximum "A" displacement is 140mm from the hinge centre to the motor pivot.



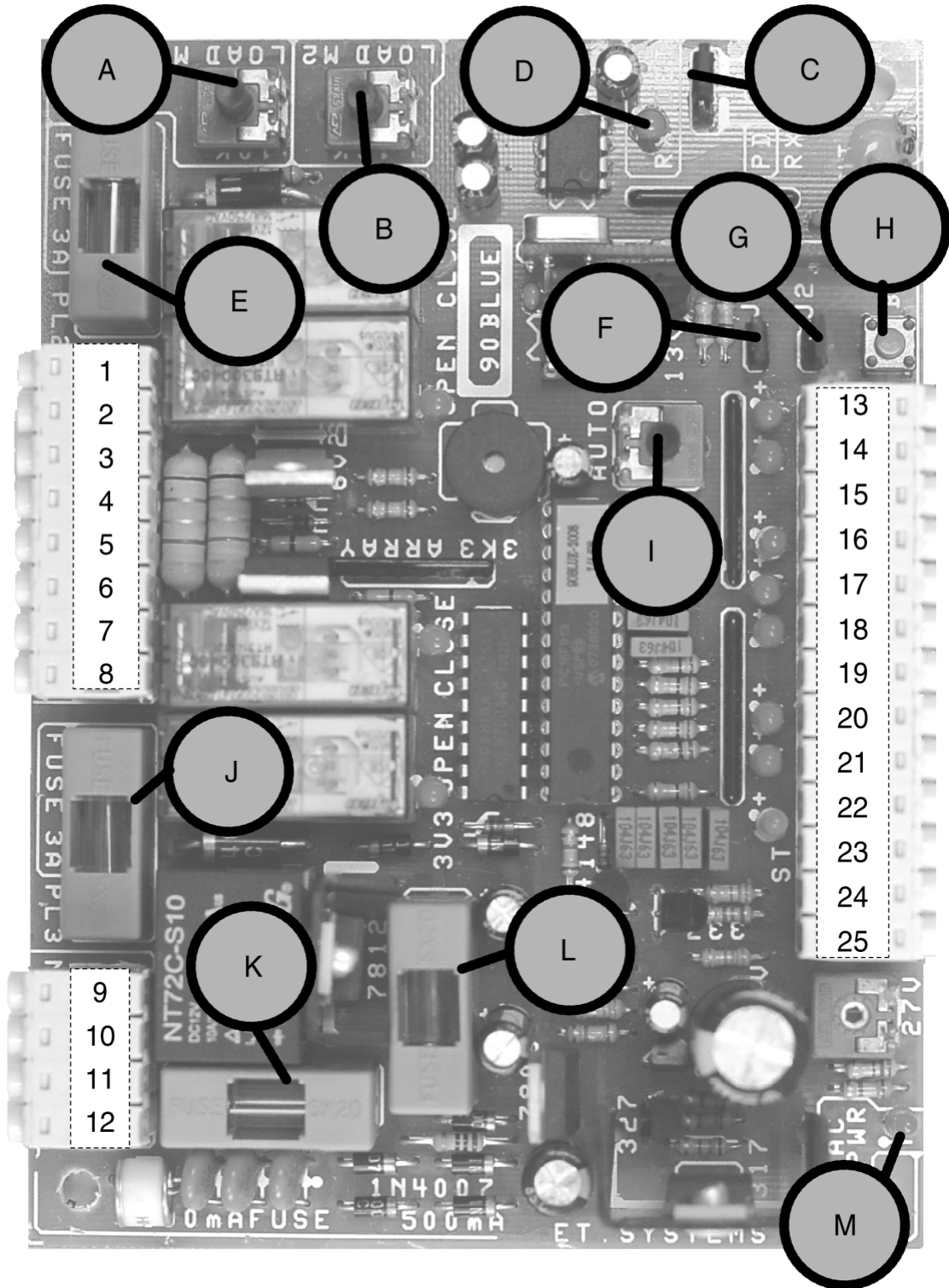
Use the guide supplied to ensure that your maximum "B" displacement is 140mm from the hinge centre to the motor pivot.



1. In the case of an Inward opening gate, close the gate leaf and in the case of an outward opening gate, open the gate leaf.
2. Extend the drive arm completely.
3. Place the "Red Guide" on top of the stainless drive arm.
4. Push the drive arm back into the motor unit until the length of the "Red Guide" matches the length of exposed stainless steel of the drive arm. **This is the maximum length that the drive arm is to be extended!**



To determine the gate mount bracket position, use the red ruler guide as described in figure 3 on the previous page.



Control Card wiring and setup cont.....

1. Motor – 2. Output. Red for Inward swing (Outward swing Black)
2. Motor – 2. Output. Black for Inward swing (Outward swing Red)
3. Battery 1 Positive. Red (Measure between here and terminal 6 for charge voltage and Battery voltage 27.2Vdc)
4. Battery 1 Negative. Black
5. Battery 2 Positive. Red
6. Battery 2 Negative. Black (Measure between here and terminal 3 for charge voltage and Battery voltage 27.2Vdc)
7. Motor – 1. Output. Red for Inward swing (Outward swing Black)
8. Motor – 1. Output. Black for Inward swing (Outward swing Red)
9. Courtesy light or lock relay N/O output.
(Max Current 3A.) Check J2 jumper for type of output selected either lock or courtesy light.
10. Courtesy light or lock relay COM.
(Max Current 3A.) Check J2 jumper for type of output selected either lock or courtesy light.
11. 29Vac from transformer
12. 29Vac from transformer
13. Common supply to switching devices
14. Button trigger input (BT) N/O
15. Safety beam input (BM) N/O
16. Pedestrian opening input (PD) N/O
17. Motor 2 Open limit input (Yellow for INWARD swing) N/C
18. Motor 2 Closed limit input (Black for INWARD swing) N/C
19. Motor Limit common (Red of both motors)
20. Motor 1 Open limit input (Yellow for INWARD swing) N/C
21. Motor 1 Closed limit input (Black for INWARD swing) N/C
22. External Status LED cathode (-) output
23. External Status LED anode (+) output
24. Auxiliary 0Vdc output
25. Auxiliary 12Vdc positive output (Max 500mA)

A. Motor 1 Load sensing adjustment. Anti-clockwise = more sensitive. Clock-wise less sensitive.

B. Motor 2 Load sensing adjustment. Anti-clockwise = more sensitive. Clock-wise less sensitive.

On encountering an obstruction while closing the gates will stop. Then re-open away from the obstruction.

On encountering an obstruction while opening the gates will stop.

C. Receiver programming pins: Max BT (Button trigger) = 25 locations. Max PD (Pedestrian) = 6 locations.

To master erase: (It is recommended that this be done on first time set up)

1. Remove all power.
2. Short PD, middle and BT receiver pins
3. Re-apply power. Rx DET LED will begin flashing, wait....
4. When RX DET LED remains on permanently remove the short and power
5. Re-apply mains power first then battery power.

Programming new Transmitters into memory

1. **Press and hold** required **TX button**.
2. **While holding** the **TX button** short the middle pin to the required function pin (BT or PD)
3. When RX DET LED flashes release TX button and remove short.
1 x Flash - First TX in memory for that function.
2 x Flashes – There is still memory available for this function.
10 x Flashes – The last memory location for this function has been filled.
Collect all TX's used for this function and check that they are all still working. The last TX learned into this function may have been erased to allow your new TX.
4. Repeat 1 to 3 above for further TX's.

D. RX detection L.E.D. This will flicker whenever there is a Keeloq transmission present on 433.92 MHz. Non Keeloq formats will not activate this L.E.D.

E. Motor 2 Fuse (3A max/30sec)

F. J1 Jumper.

- i. Off = both motors begin running at the same time.
- ii. On = M1 will begin opening 3 sec. before M2 starts to open.
Then on closing M2 begins closing 3 sec. before M1 begins closing. This would be used when Gate 1 overlaps Gate 2 in the closed position.

G. J2 Jumper.

- i. Off = Courtesy light relay closes for 3min to switch pillar lights on
- ii. On = Courtesy light relay closes for 1 sec. And 0.5 sec before motor 1 begins to run.

H. Onboard test button. Pressing this button is the same as using your remote or wall button that opens and closes your gates.

I. Auto-close selector adjustment. There are 5 preset options available. Adjusting clockwise increases the auto-close time. After every successful adjustment the controller will beep confirmation of the new setting when the gates reach the full open position for the first time after the change is made.

- i. 5 sec. 1 beep
- ii. 10 sec. 2 beeps
- iii. 15 sec. 3 beeps
- iv. 20 sec. 4 beeps
- v. 25 sec. 5 beeps

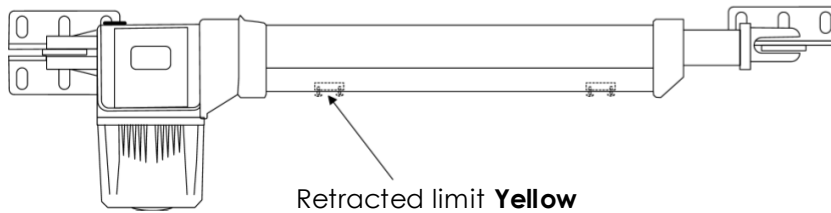
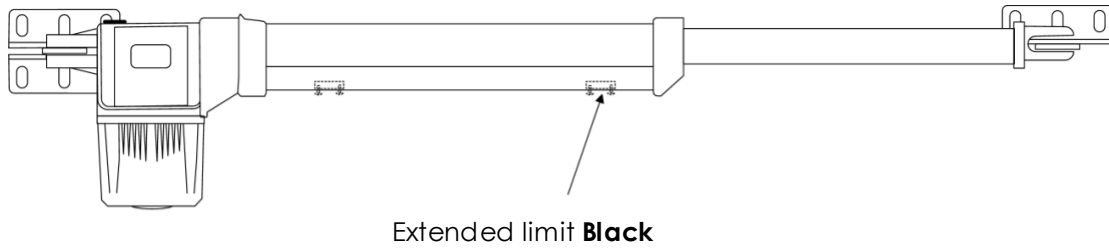
J. Motor 1 Fuse (3A max/30sec)

K. AC input fuse. 800mA fast blow

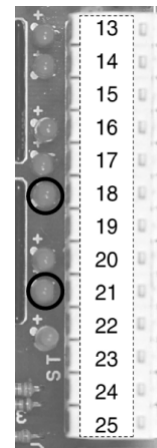
L. Aux 12V+ fuse (500mA max/30sec)

M. AC Power indicator. On = AC present.

Setting the limits



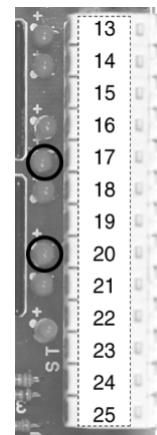
1. Position the gates in the fully closed position.
2. Hard up against the closed stoppers.
3. Loosen the limit pickup locking screws.
4. Slide the pickup forward or backward until the LED indicator for the closed limit input for that motor goes off. (Circled here in the picture)
5. With the motors in manual maneuver mode swing the gates slightly open and then closed again taking note of when the closed limit LED indicator goes off.
6. Adjust the limit pickup if necessary.
7. If satisfied re-lock the pickup in place by fastening the screws.



CLOSED LIMIT

Take note of your type of swing direction, with regards to whether you are swinging inward to open or outward. Correct the wiring if the incorrect LED indicator goes off.

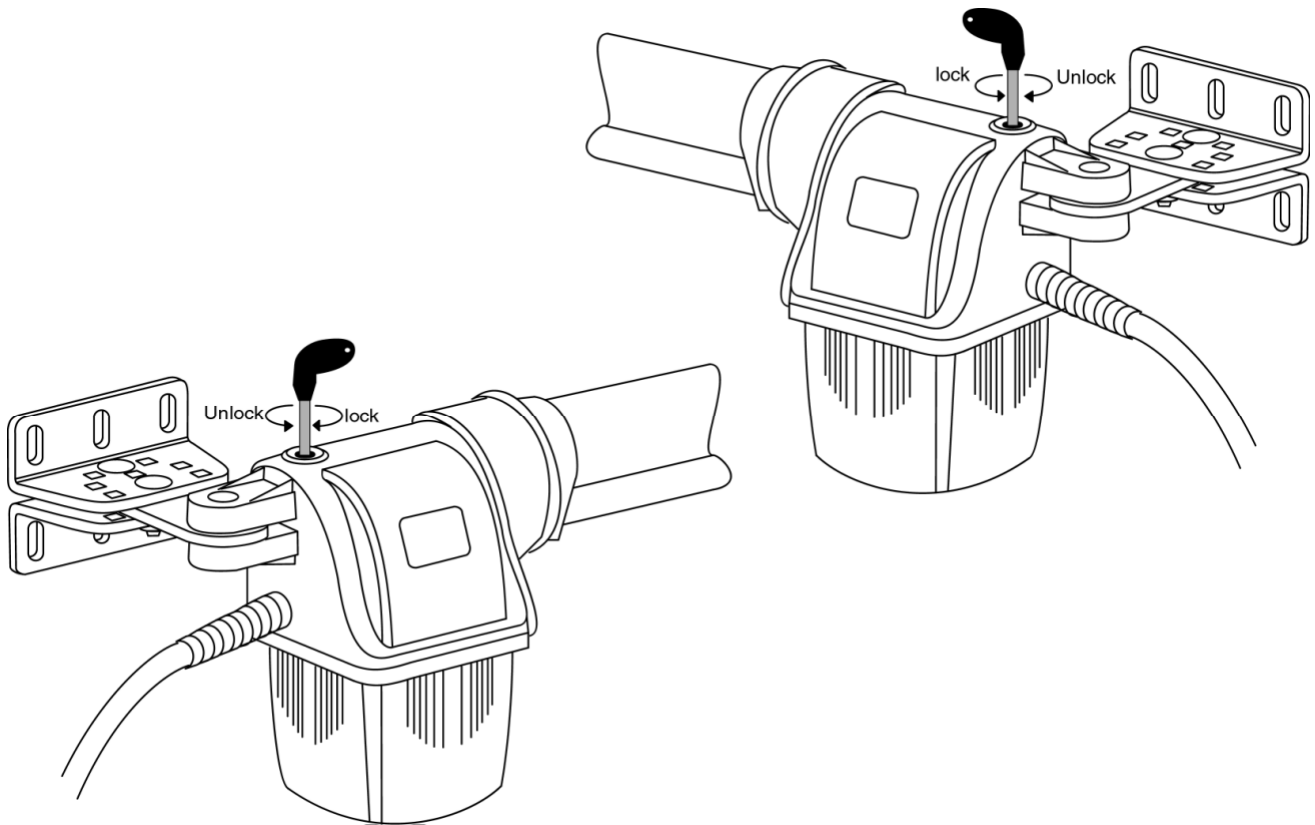
1. Position the gates in the fully open position.
2. Hard up against the open stoppers.
3. Loosen the limit pickup locking screws.
4. Slide the pickup forward or backward until the LED indicator for the open limit input for that motor goes off. (Circled here in the picture)
5. With the motors in manual maneuver mode swing the gates slightly closed and then open again taking note of when the open limit LED indicator goes off.
6. Adjust the limit pickup if necessary.
7. If satisfied re-lock the pickup in place by fastening the screws.



OPEN LIMIT

Take note of your type of swing direction, with regards to whether you are swinging inward to open or outward. Correct the wiring if the incorrect LED indicator goes off.

Manual maneuver



Ensure the rubber cover is returned and in place when done using the manual release.

WARRANTY: All goods manufactured by G&C Electronics cc T/A ET Systems carry a 12 month factory warranty from date of invoice. All goods are warranted to be free of faulty components and manufacturing defects. Faulty goods will be repaired or replaced at the sole discretion of ET Systems free of charge. This warranty is subject to the goods being returned to the premises of ET Systems. The carriage of goods is for the customers account. 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. All warranty claims must be accompanied by the original invoice. 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.

- Any unauthorized non-manufacturer modifications to the product or components thereof.
- The use of the 90Blue plus swing gate operators in heavy traffic applications such as office parks and residential complexes.

The following items are not included in the warranty.

- The batteries
- The motor brushes
- Damage resultant of wind and other climatic influences such as lightning strikes.
- Damage due to infestation i.e. Ants nesting...