Radford.

Installation Manual

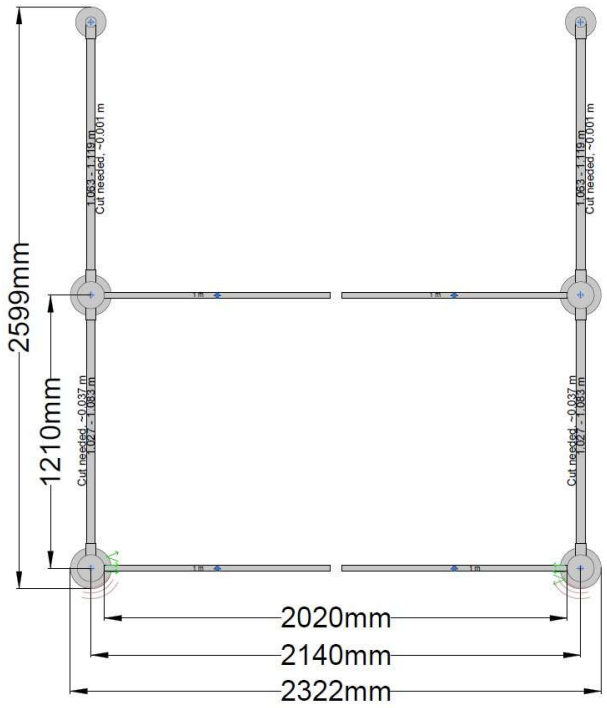
Prepared by Dominic Casey for Coles

(29/09/2021)

Coles Itab Alphagate, 4 gate kit

Radford.

ITAB Alphagate 4 Gate Kit Installation & Commissioning Manual:

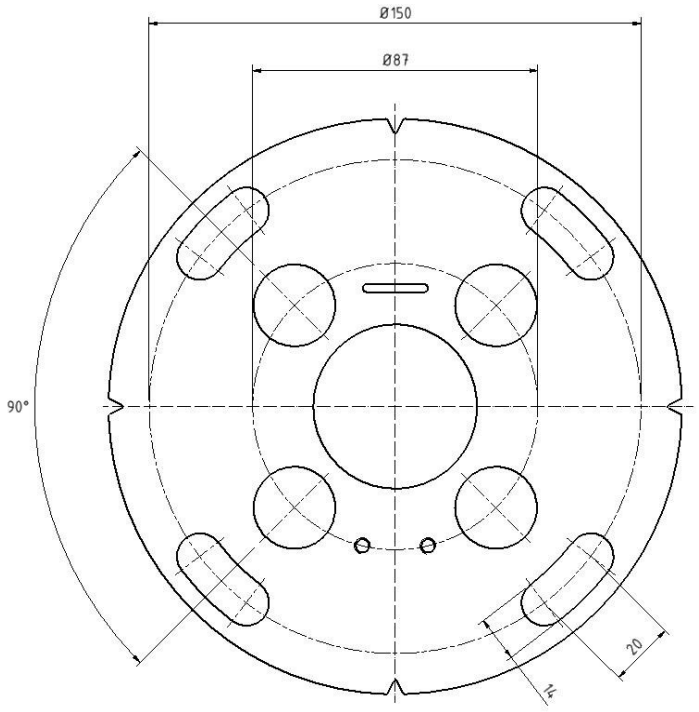


1. Unpack materials from crates & ensure all components are accounted for & fully intact.

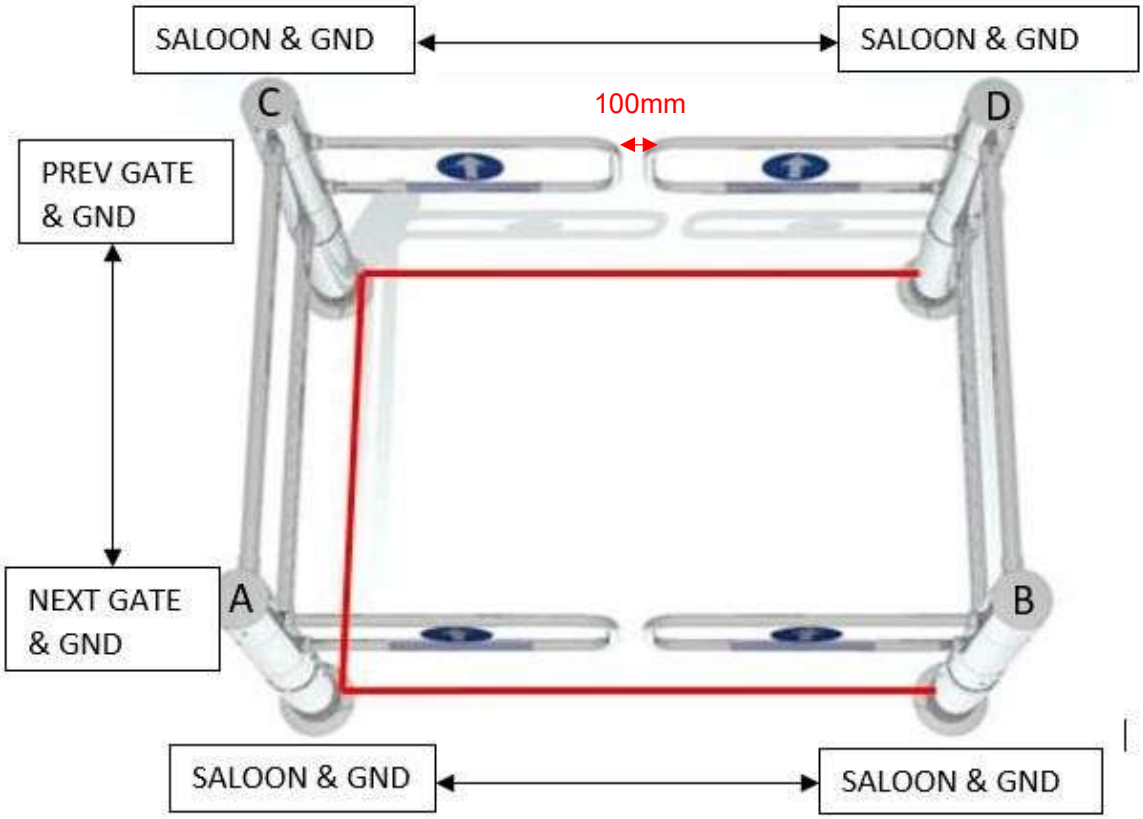
2. Remove gate bollard front covers to revel the electronics – front plate fixing screw bracket helps to locate the centre of the gate for floor marking.

3. Lay out the gates in situ & double-check the layout and “dimensional-correctness” with site foreman. Please ensure you have sufficient clearance for a 50mm safety gap between the individual gate-arm ends of no more 50mm – when satisfied with layout, carefully mark gate bollard fixing locations to be drilled.

Alpha fixing base plate drawing;



Important: before drilling, ensure all underground cables (power & data) are in situ and not likely to be damaged during the drilling process – see drawing below.



Synchronisation cable connections:

- **Front saloon-gate couple (A & B**) = connect to "saloon gate" & "ground" terminals at both ends –when triggered by their inbuilt (top mounted) radar sensors, these gates will now operate as one.

- **Second saloon-gate couple (C & D)** = connect to "saloon gate" & "ground" terminals at both ends – when triggered by (front- gate-mounted) photocell eyes, these gates will now operate as one.

- **Interconnecting data cable triggering of second saloon-gate couple:**
  Gate A = connect to "*next gate" & "ground"*
  Gate C = connect to "*previous gate" & "ground"*

(Note: each gate-bollard requires standard 230V power)

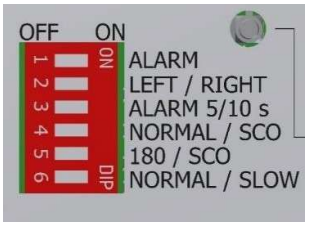
4. **Bolt gate bollards firmly into the ground – carefully fit glass arms including post and rails as required.**

(Commissioning)

5. **Dip switches:**

Set up dip switches in each gate bollard, as per its installed position.
(upon entry to store, the gate on your left is considered a left-hand gate & the gate on your right is considered right-hand gate)

Dip switch block settings:
1 = right position
2 = left or right position (as required)
3 = right position
4 = left position
5 = left position
6 = right position



6. **Set up Master & Slave function in each gate couple:**

- Left-hand gate = set DELAY/SCO & SECURE/SCO potentiometers to maximum (righthand) position.

- Right hand gate = set DELAY/SCO potentiometer to full left and then approx. 25% of its full range to the right position.

- Once the gate synchronization cable is connected between both gates, the gate couple will then be controlled as one-unit and **all** adjustments made to the righthand controller will control both right and left-hand gates alike.

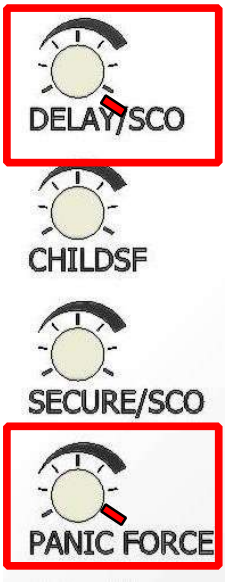
IMPORTANT NOTES:

- Saloon-gate couple A & B operates independent to saloon-gate couple C & D.

- However, the PEC triggering sensors for saloon-gate couple C & D are physically mounted into the gate-bollards of saloon-gate couple A & B.

- The PEC sensors are hard-wired into the gate bollards A & B but only trigger the rear gate couple C & D.

- **In a saloon-gate configuration, the right-hand gate is ALWAYS the Master.**



Set potentiometer 1 & 3 to maximum on left-hand gate

7. **Controller set up:**
   - Connect Synchronization cable to each front and rear saloon gate-couple.

   - Remove the lid on top of each gate bollard and disconnect the radar electrical connector to (temporarily) render the radar out of circuit.

   - Connect Synchronization cable to each front and rear gate-couple.

   - Power up gates and press the test button (see figure 8.5 in Alphagate MKII manual) on the **front saloon-gate couple.**

   - The gate couple (both left and right-hand gates) should open into the store, stopping in the 90-degree (fully open) position and remain open for a pre-set time before driving back to the fully closed position. To test, trigger the radar or PEC.

   - The time-lapse (time gates remain fully open) for both gate bollards can be adjusted by the master (right-hand) gate DELAY/SCO potentiometer. Both gates should now be operating and closing at the same time.

   - The recommended time delay (time-lapse) between the gates to reach the fully opened position and the time the gates start to drive back to the closed position is four (4) seconds.

- Adjust panic force potentiometer (break out function): wind to full left (off) position and then wind to the full right before setting to the approx. mid position.

- Repeat the above for the **second saloon-gate couple**.

8. Radar set up:

Both gates in the front saloon-gate couple are fitted with radar controllers to trigger the front gate couple as one unit.

- Connect the electrical connector back onto the radar unit.

- Adjust the mechanical radar bracket on each gate to position the radars pointing in the forward position (and slightly into the middle of the gate arms centre).

- Adjust the approach sensor (triggering distance potentiometer on the top of radar sensor) to the full left-hand (off) position.

- Then adjust in small-increments to the right until the gate is picking up a forward moving person at between 1.2 to 1.5 meters.

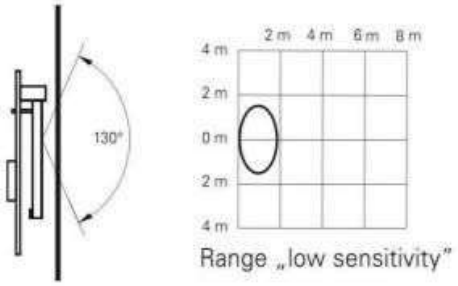
- Disconnect each radar electrical connector (one at a time) and test the sensor distance picks up a trigger signal from approx. 1.2 to 1.5 meters, opening both gates fully.

- Ensure electrical connectors are re-connected back to both radar units.

- Repeat this same process for the rear child safety sensor, keeping in mind that we do not want to have the sensor picking up people outside of the rails of the kit

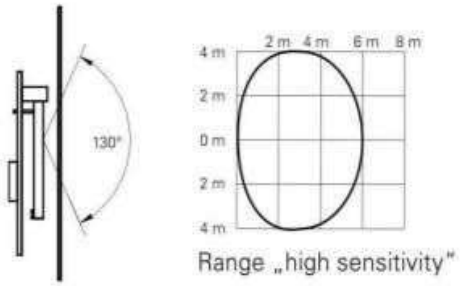
- Ensure that all radar cabling is tidy and secured with a cable tie to prevent false triggering.

Fig. 7 *Area coverage "low sensitivity"*

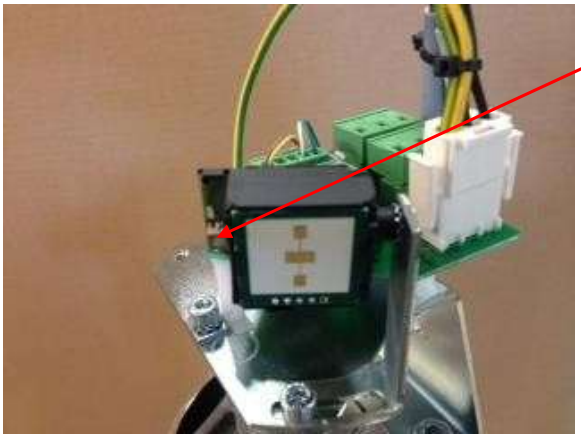


Range „low sensitivity"

Fig. 8 *Area coverage from above*

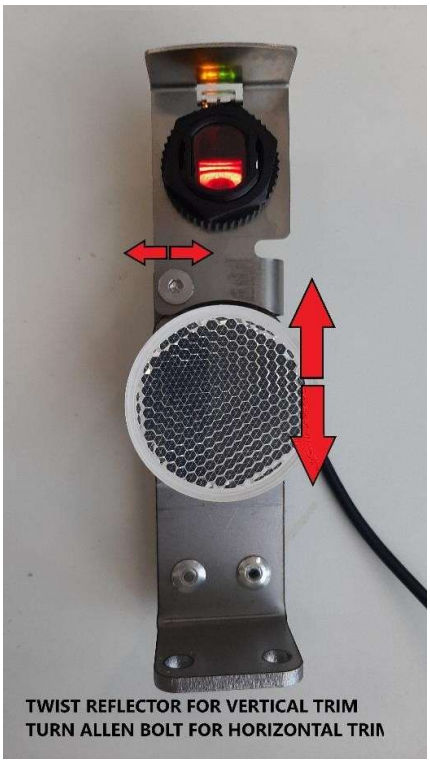


Range „high sensitivity"


Potentiometer
to adjust distance

9. Set up PEC trigger for front gates:

- Connect Synchronization cable between front and rear gate couples (gates A & C)
- We recommend setting the right-hand PEC sensor only and unplugging the left-hand sensor if installed. Simply use the left-hand sensor as a reflector only. This will have no effect on gate operation and simplify the commissioning process.

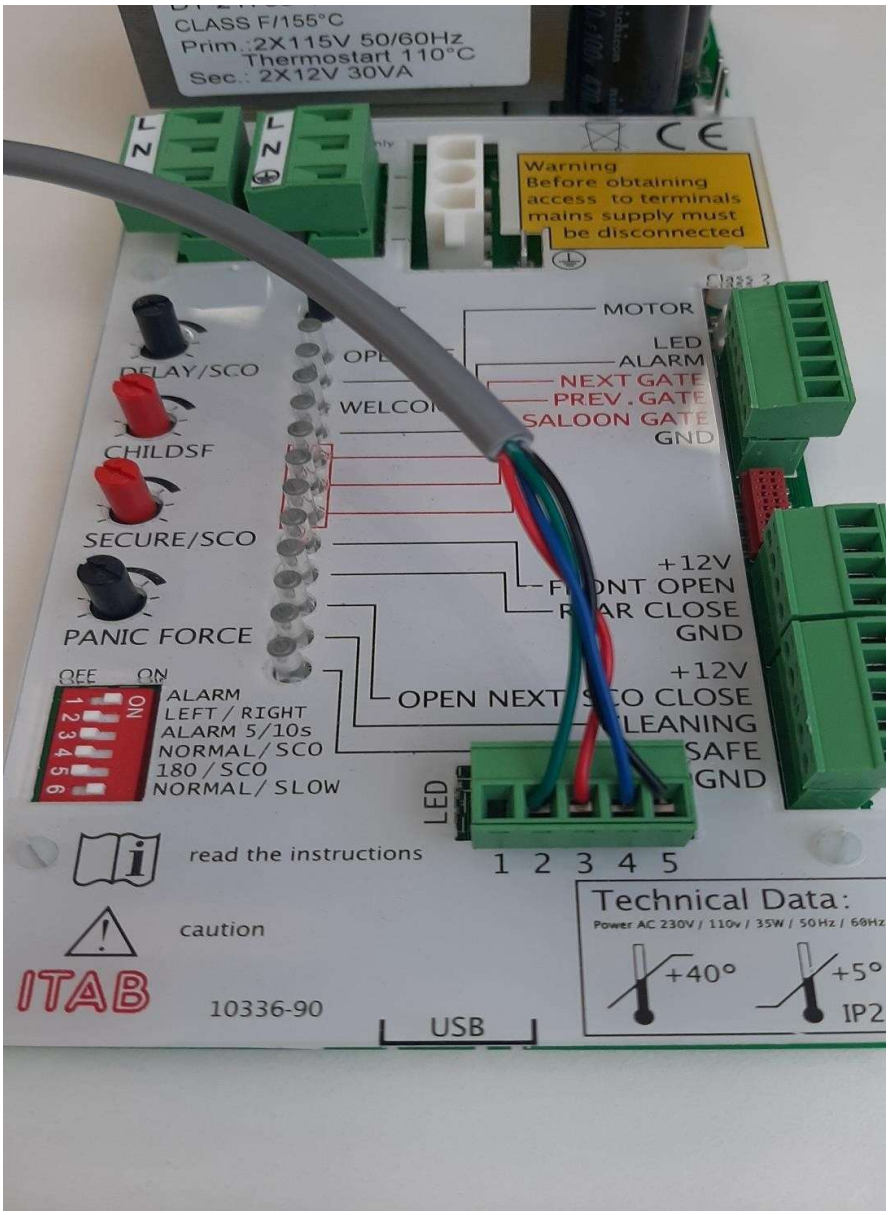


Step A. Right Hand Side: trim the horizontal and vertical angle of the PEC by turning reflector clockwise to raise beam and anticlockwise to lower beam. Use the 2.5MM Allen head screw as shown to adjust the beam horizontally. For best results ensure lower PCB cover is installed on the opposite gate while setting PEC sensor as beam may not align once cover is installed

Step B. Break the beam and test gate operation: Rear gate should now close once PEC sensor receives is signal back from opposite reflector and gate should open once signal is broken. **Important:** when PEC is set (trimmed) correctly, both the yellow & green lights will be steadily on, at the same time – see image below.

10. **Gate Arms should always be facing nose up/nose down as shown below:**

11. LED Cable Set Up



1. NIL

2. Green
3. Red
4. Blue
5. Black

Gate arms should illuminate Blue when at rest and Red when in alarm. No other colours should be present.

12. **Clean down gate equipment, including post and rails.**

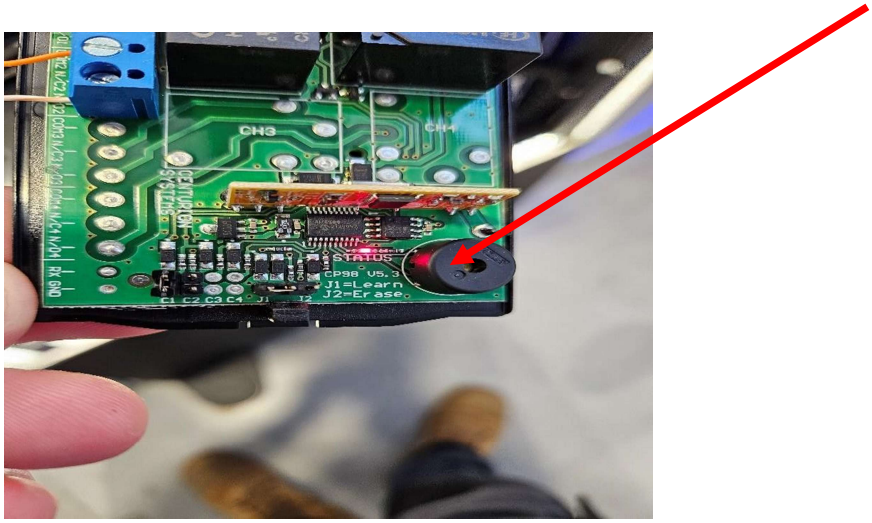
13. **Remote control testing.**

Gate kits sent from September 2021 may have a remote-control kit to be installed.

Remote Installation

Connecting Power

1. Open the bottom rear lower tube lid on the gate, place in same location as PEC is often fitted.
2. Connect 12v on gate to "+" positive on receiver.
3. Connect Ground on the gate to "-" negative on the receiver.
4. This will power the receiver and light the Status indicator.



Relay 1 (Latched) Gates will remain open until the button is pressed a second time to close

1. Connect Common on receiver to Ground on gate.
2. Connect N/O on receiver to Cleaning on gate.
3. This enables the gate to be locked in the open position.

Pairing Remotes

Before you start

- The gate receiver can be programmed to open the gates using button 1, 2, 3 or 4 on any paired remote. We have nominated button 1 for Coles nationwide.
- Each gate set will have its own receiver that can only be switched by the programmed remotes for this receiver.
- The first remote you program becomes your Master Remote.

Programming Buttons 1-4 (Latched)

1. **Disconnect** the power to the receiver.
2. Once the receiver is powered down, place a jumper across the CH2 pins and a jumper across J2 and the pin next to it.
3. Once the jumpers are in place, **power the receiver back up** and hold down button 1 on the master remote for 3 seconds.
4. This will send the receiver into “channel configuration” mode the LED will flash in 4 different sequences.
5. It will flash once then twice then three times than four times it will then continue to repeat this cycle until a jumper is removed.
6. The sequence you want to see is two flashes, when the LED flashes twice remove the jumper across “J2”
7. This will now allow button 1 to latch the gate open when pressed.
8. Repeat steps 1-7 for the remaining remotes.

14. Sign Off Document - Do a final test with site Foreman, asking Foreman to sign your paperwork confirming he is happy with full operation of the gates including "time" settings.

Sign Off Document

I can confirm that the gate has been successfully installed and is in full working order.

I have received the key for isolating the gate when required	
I have tested the distance of sensor triggering (pick up patron advancing) we recommend 1.2 meters to 1.5 meters	
I am satisfied with the timing of how long the gate stays open before automatically driving back to the closed position – we recommend 4 seconds for Coles operations.	
I have tested the alarm sounder cancelation (we recommend 5 seconds) before returning to normal operation	
I am satisfied with the gate arm selection speed – slow mode	

All 4 remote controls operate as stated within manual	

Date:

Name:

Signed: