

Radford.

**Woolworths
Itab Autogates
General maintenance
manuals**

(Prepared by Dominic Casey on August 5, 2021)

1. Maintenance instructions

The following inspections are recommendations and should to perform on regular basis:

| Mechanical Inspection | | Interval |
|------------------------------|--|----------------------------------|
| Structural Safety | Motorised column, photoelectric barrier and reflector column and all other columns | 6 months |
| Rotation | Connecting tube between the columns | 6 months |
| Mounting | Gate Arm | Monthly |
| Electrical Inspection | | Interval |
| Earth conductor | Connecting contacts and connections | Checks when servicing the system |
| Photoelectric Barrier | Operation and Settings | Annually |
| Radar Detector | Operation and Settings | Annually |
| Motor | Functional check | Annually |
| Motor control | Functional check of cut out in event of over current (actuator blockage) | Annually |
| Signalling device (horn) | Panic alarm functional check | Annually |
| Key switch | Functional check | Annually |
| Limit switch | Functional check | Annually |
| Ultrasound sensor | Operation and Settings | 6 months |

2. Cleaning instructions

Cleaning your Alphagate:

Use only a proprietary spray polish suitable for chrome, glass and plastic.

A light buff should be sufficient to remove fingerprints and grease marks.

Do not wash down with soap and too much water as it might compromise the functionality of the gate.

3. Check existing polycarbonate arms are secure and fully operational on gate bollards.

Before checking and adjusting gate arms you must fully understand the following information below, otherwise the equipment may be severely damaged:



It is very important to make sure that ALL components are fitted to the gate arm bracket correctly; the gate arm should not come into direct contact with metal components at any time, otherwise breakage is likely to occur during normal operations.



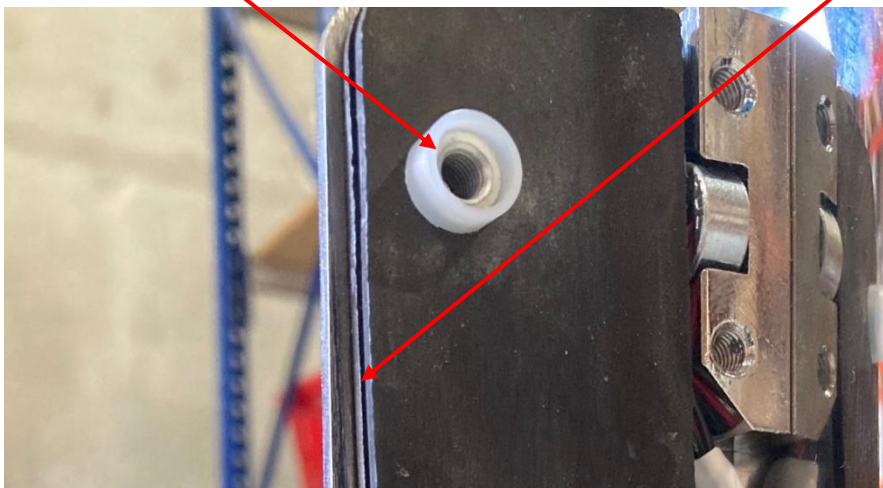
Ensure the rubber gaskets (there are two, one each side of the gate arm panel) are fitted correctly – the gate arm should not come into direct contact with metal components at any time.



Ensure **BOTH** plastic spacers are fully intact and firmly in place on metal mounting shaft – the gate arm should not come into direct contact with metal components at any time.



Original fitting of gate arms into brackets should have had the (2 per gate bollard) plastic brackets spacers fitted into place (ensuring there are metal bracketry in contact with arm). Make sure spacers are fully inserted into the (2 gaskets per gate bollard) the rubber gaskets which sandwiches the arm and in turn separates the gate arm panels from the metal brackets.



Ensure cables associated with arm LED lighting strip are secure without damages.



Please note operating the gates with loose gate arm-fixings, missing screws or missing rubber seals will damage the arms over a very-short period of time.



All original fixing screws should have had thread **lock** applied to their ends before final tightening - ensuring fixings are firmly countersunk flush into outside-metal fixing panel – replace if necessary.



Ensure all original gate arm protective coverings (including the section that is inserted into fixing bracket - as this may reduce the LED visibility) have been fully removed.

4. Check fixings on upright posts and rails.

Check gate bollard cross rail cups, arm panel, and infill panel brackets set screws are fully tightened.,

Ensure equipment is fully aligned (into the 90-degree positions where required) and arms sit directly below (centred under rail) the cross rails – adjust if required before checking tension of set screws.

5. Check power alignment of gate arms:

With the gate bollards powered up and **no input sensors connected** the gates should power into the normally closed position – before taken the next steps ensure you complete a, b & c below:

- a. go to left-hand gate bollard PCB and ensure the # 2 gate dip switch is flicked to left.
- b. go to right-hand gate bollard PCB and ensure the # 2 gate dip switch is flicked to right.
- c. adjust the gate arms to a centralised position as per gate arm adjustment instructions below:

Note: gate bollards will be severely damaged if you do not strictly understand and follow the gate arm adjustment process, so it's important to fully understanding “why” you need to remove all sensor inputs before you attempt to adjust the settings of the gate bollard arm position.

- a. Ensure all radar, and CSS sensors are disconnected **completely for this task**: ensure there are no sensors in circuit while the Allen key adjuster tool is inserted in the coulisse (*electronic encoder circuit/position sensor*) otherwise, if the sensor is in circuit, they may trigger the motor to activate with the tool still in place and this tool will move with the shaft and jam against the metal casing (see image of gate cut out for Allen key adjustments below) – **ignoring this may severely damage the coulisse beyond repair and void warranty completely.**
- b. If the gate arm needs to be adjusted for alignment, providing you are sure there are no sensors in circuit, loosen the locking screw that holds the coulisse (electronic encoder circuit/position sensor as shown in the image below) with 3mm Allen key and move the coulisse a little bit to the left or to the right depending on how the gate arm needs to be adjusted.

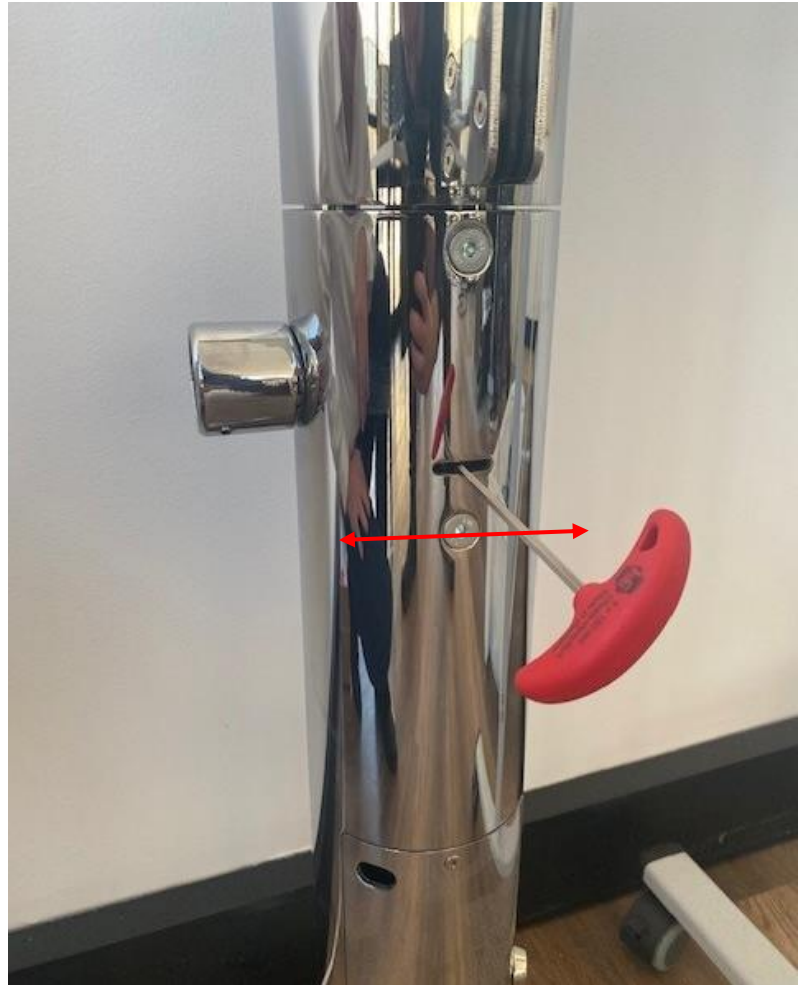
Gate bollard arms Coulisse adjustment instructions:

To do this adjustment power needs to be switched on (with the key) to the gate bollards. Move adjustment tool carefully as **small** adjust the arm position several centimetres.

When the gate arm is satisfactory adjusted, fasten the locking screw again – do not over tighten the locking screw.

Move Allen Key to the right
→ gate arm moves to the left.

Move Allen Key to the left
→ gate arm moves to the right.



At this point both gates bollard arms should be aligned with each other satisfactorily, when powered up.

If a gates couple, ensure the synchronisation cable terminated between saloon & GND on both gates the insert a temporary wire link on one gate couple bollard, between Cleaning & GND.

With the gates powered on at the key switch the gates should now be open to the fully opened 90-degree position, thus allowing you to check, adjust & align lead-out posts and rails with the fully opened arms, as required.

Final adjustment should see the gate arms sit directly under the centre of the cross-rail position, when fully rested in the open position.

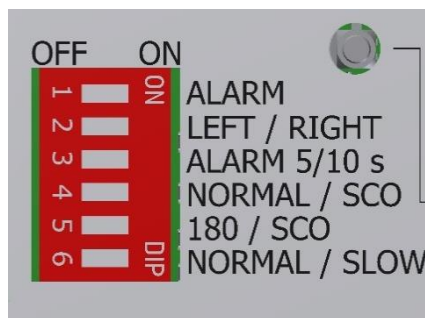
Adjustments can be made from four positions:

- a. Coulisse adjustment with tool mas above
 - b. Gate bollard base plate adjustment (loosen fixings and physically move gate bollard as required)
 - c. End-post base plate adjustment (loosen fixings and physically move gate bollard as required)
 - d. Cross rail cup adjustment (gently tapping with rubber hammer to move cup as required)
6. Check (and change if required) dip switche settings on the controller board, as below:

Note: upon store entry: gate on left = left-hand & gate your right = right-hand.

Dip switch block settings on both left & right-hand gate bollards:

- 1 = right position
- 2 = left **or** right position (left hand gate = select left) (right hand gate = select right)
- 3 = **Right** position
- 4 = left position
- 5 = left position
- 6 = **Left** position (right if glass arms fitted)



7. **Set up & commission sensors:**

Commissioning and adjustments **cannot** be completed successfully without having full access to the store with the entry roller shutter fully in the **open** position, as in a real-time situation.

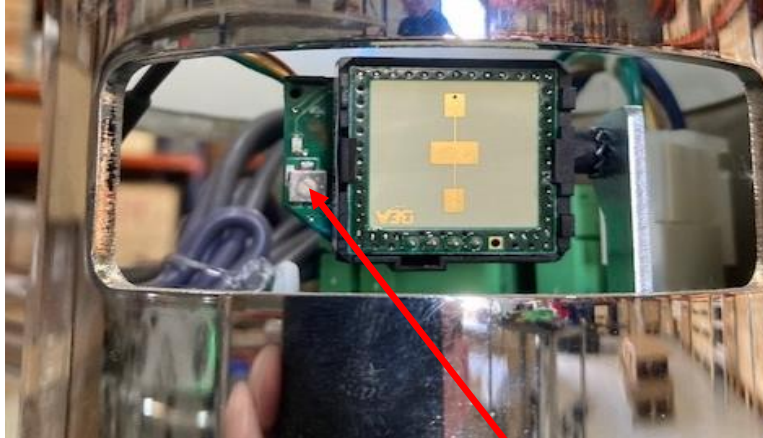
****See video link below before commissioning of sensors****

<https://youtu.be/lmyngCrtN0s>



A. Radar commissioning; adjust to detect approaching patrons from 2m away:

(Disconnect the CSS temporarily during this test)

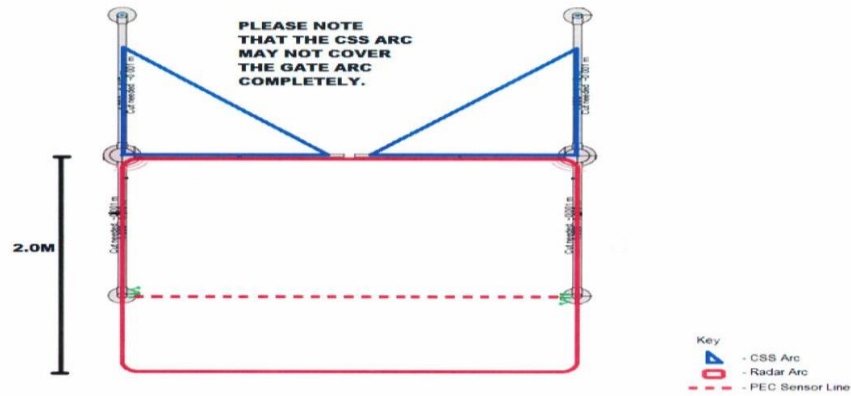


There are 3 radar adjustments as follows:

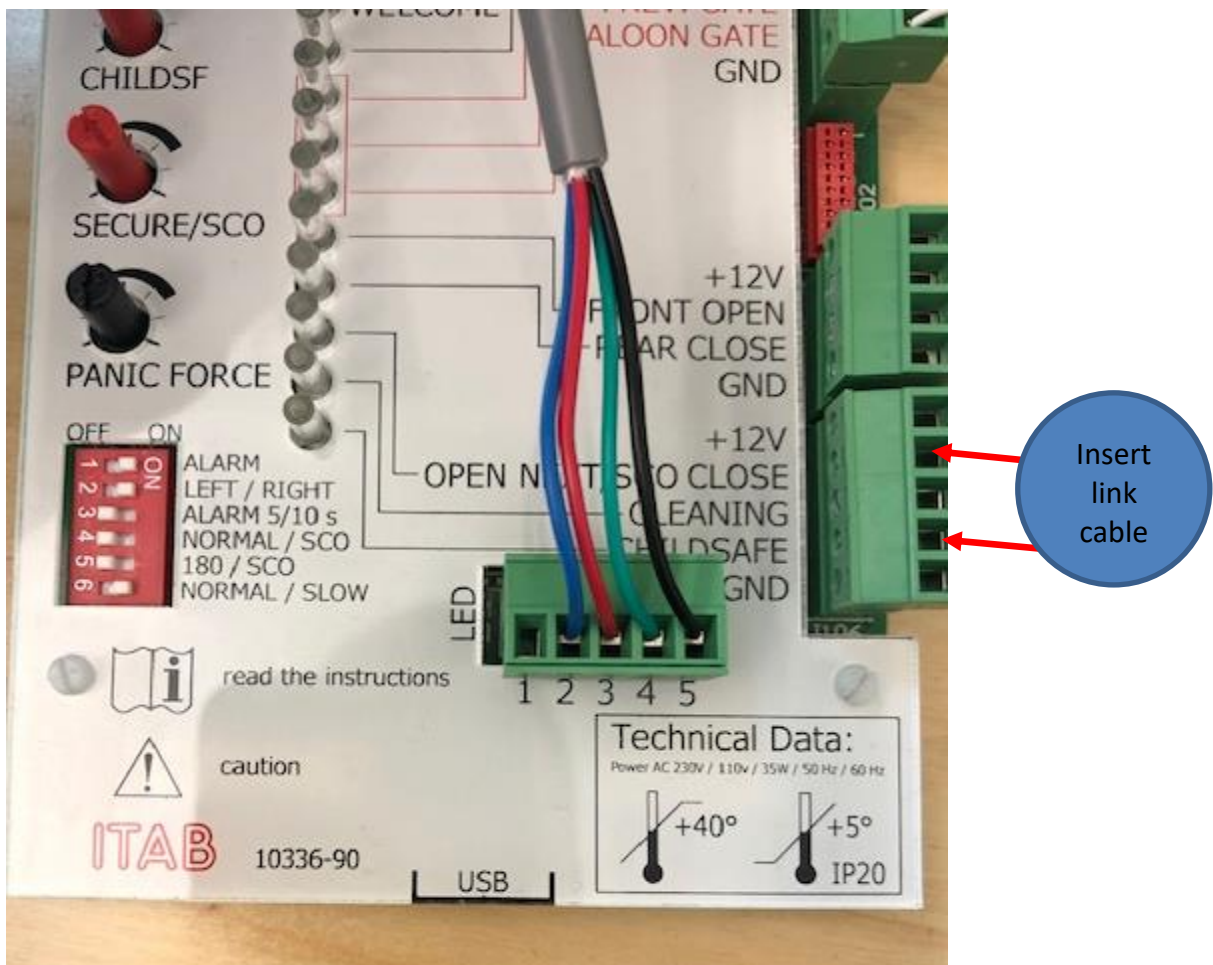
1. = left or right adjustments as per Allen key bollard fixing screw
2. = up and down as per side radar bracket fixing screw
3. = pick up distance as per potentiometer adjustment on radar device

Both gates (in the saloon-gate couple) are fitted with individual radar controllers (either gate bollard radar will trigger the gate couple) to trigger the gate-couple as one unit.

- Ensuring the electrical connectors are firmly connected onto the radar units adjust the mechanical radar bracket on **each** gate into position - the radars should be pointing in the general forward position and slightly into the middle of the gate arms centre. Radar should also be pointing **slightly** down towards the floor to pick up shopping trolley wheels as a trolley approach and to avoid ghost signals being picked up from above.
- Remove the inner white plastic radar cut-out cover (slides out by hand) and adjust the radar 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 radar is picking up a forward **moving** person or object at 2m, measured from the gate arm.
- (If a gate couple) disconnect **each** radar electrical connector (one at a time) and test the remaining in-circuit radar sensor distance picks up a trigger signal from 2m from the gate bollard and opens both gates fully – each individual gate bollards radar sensor should pick up approaching patrons across the full width of the arm and include a little overlap to the other arm position.
- Ensure electrical connectors are re-connected firmly into both radar units and ensure cables are secured with a cable-tie to prevent false triggering. Please also note that **loose** radar brackets (or gate bollards fixings) will cause **false** triggering.



8. Check Woolworths's wiring configuration for gate arm LED Colours & audible alarm link



When connected as shown above the arms lights will operate to achieve the following LED colours for **Woolworths's** operations:

PCB LED wiring colours:

- 1 = not used
- 2 = blue
- 3 = red
- 4 = green
- 5 = black

- Gate in normal closed operation = green lighting illumination
- Gate while in moving operations = green lighting illumination
- Gate pushed into break out (wrong way) operations = red lighting flashing illumination

Important: check and fit (if required) a wire link between:

OPEN NEXT/ SCO CLOSE & CHILDSAFE

Wire link to be terminated to OPEN NEXT/ SCO CLOSE & CHILDSAFE terminals to enable audible alarm if a patron enters the rear gate arm arc – **note** if gate is already opening before a patron enters gate arm arc, alarm will **not** sound.

9. Check PEC adjustments.

PEC must be powered up to begin with which will illuminate green light steadily.

Note: the brackets of the PEC sensors are spring loaded (see below).

- The upper screw 1 is for trimming vertically.
- The lower screw 2 is for trimming horizontally.

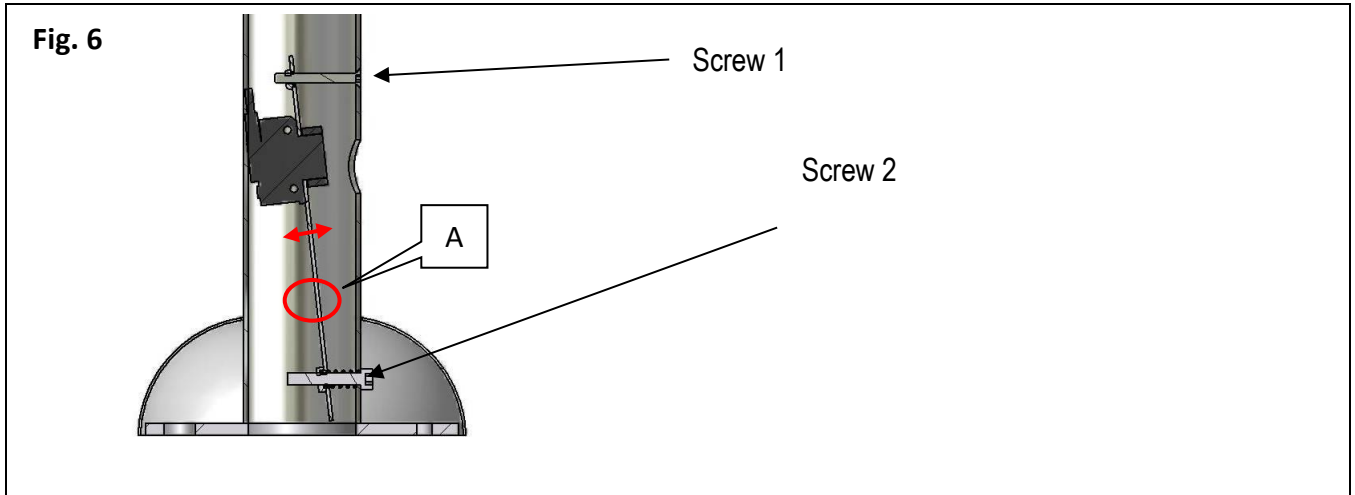
Adjust **one** PEC at a time only by disconnecting the opposite PEC sensor unit temporarily until finished to ensure both PEC units are operating independently.

This PEC alignment/adjustment can be assisted by placing a piece of paper in the line of sight between the PEC and reflector which gives us a visual sighting of the red-light position needing to be aligned.

Note: if either of the PEC are not aligned correctly, the gates will stay open all the time!

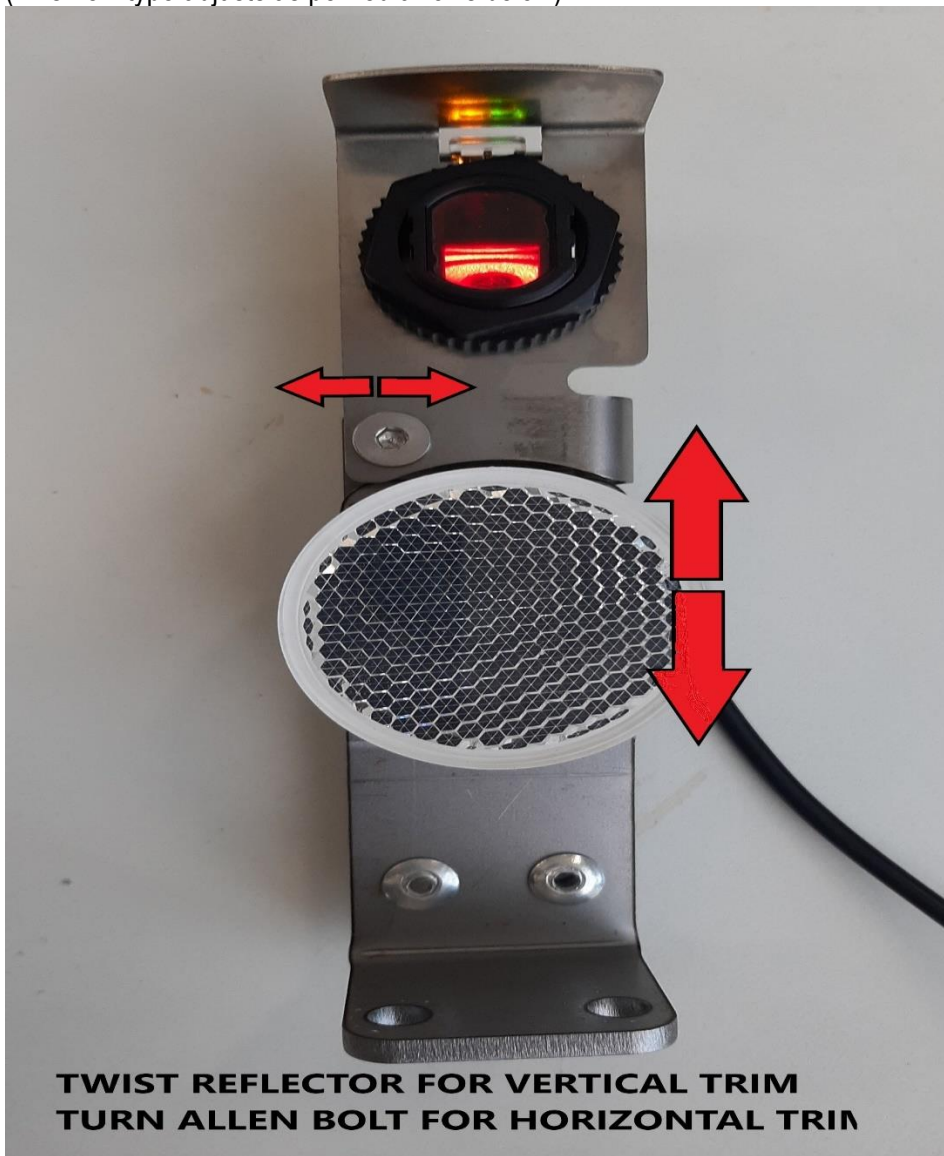
Step A: adjust the lower screw 2 first to centralise the horizontal position red beam should be approx. in the centre position of the opposite reflector post then gently lock the screw (clockwise) hand tight.

Step B: now adjust the top screw 1 to adjust the PEC sensor vertically until the yellow light on top of sensor is steady (no flashing).



(When properly aligned both the green and yellow lights will be steadily illuminated continuously)

Newer gate bollards are fitted with PEC sensors to trigger rear gate couples:
(This new type adjusts as per red arrows below)



Older type gate bollards are fitted with PEC sensors to trigger rear gate couples:
Adjustments are made by trimming (twisting reflector disc) and adjusting the 4 Allen keys)



10. Please be careful of the sensor on the CSS device as this is a sensitive part and can be

easily damaged while installing, particularly when **removing** and **refitting** the gate bollard front cover plate.

Important: the front cover metal case should **not-touch** the metal casing of the sensor assembly (see below image) – if adjustment needed, gently bend the fixing bracket with



11. Check radar sensor cover-strip and replace (if required)



12. Check base plates on gate bollards & upright posts:

Check that all ground fixings are adequately fixing base plates of gate bollards and upright posts. Retention all ground fixings and if fixings are unsecure (after re-tensioning) consider installing chemset solution as an alternative fixing. Please ensure that a flat and spring washer is used for each fixing.

