

*For Field use*

## **CALIBRATION AND SETTINGS PROCEDURE FOR PCS-315**

**NOTE:** The instrument must **NOT** be in direct sun light (cloud cover or under umbrella is OK).  
Atmospheric conditions must be very good (no heat waves etc.)

**WARNING::** The following mechanical adjustments must be checked (and corrected if necessary) prior to Offset Adjust.

### **Vial Adjustment**

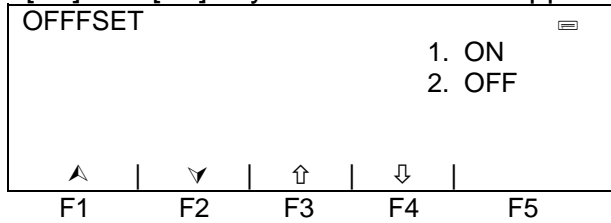
1. Setup PCS on tripod  
(These procedures should not be performed in direct sunlight – shaded setup area is preferred.)
2. Level using the circular vial and plate vial.
3. Adjust circular vial and plate vial.  
(See “Plate vial” and “Circular vial” on pages 62 and 63 of the PCS-300 Series instruction manual)

### **Adjust Reticle**

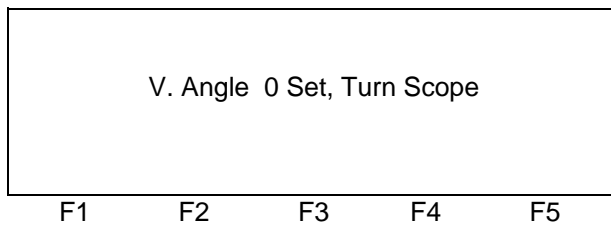
1. Adjust the reticle, left or right, by flopping between target A and B.  
(See “Perpendicularity of Line of Sight to Horizontal Axis” on page 65 of the PCS300 Series instruction manual)

## Adjust Offset [Vertical 0 point offset, X axis compensator]

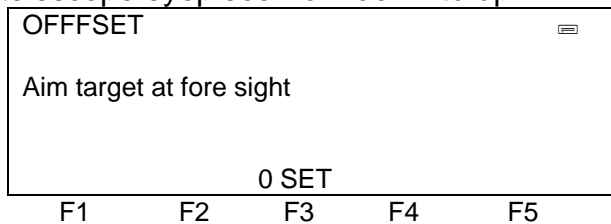
1. Press and hold [F1] and [F4] key, press and release [ON] key, release [F1] and [F4] keys when OFFSET appears on the display.



2. Use [F3] and [F4] to highlight ON  
Press [ENT]



3. Move telescope eyepiece from down to up.

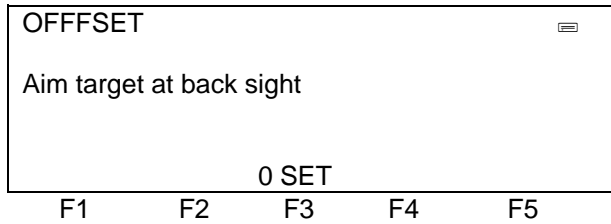


- Align the instrument reticle on a precisely definable target, with the telescope in the normal position.

**NOTE:** Target must be within 10°, plus or minus, of level.

**NOTE:** Reticle alignment must be precise.

Wait 5 seconds and press the F3 [0 SET] key.

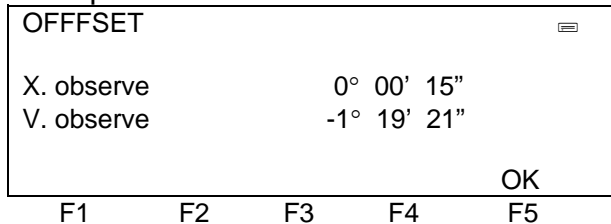


- Release the horizontal tangent assembly and rotate the alidade 180°. Release the vertical tangent assembly and rotate the telescope 180° (telescope is now in the reverse position). Align the reticle on the target.

Wait 5 seconds and press the [F3] 0 SET key.

Offset values will display (This value has no “accuracy meaning”).

Example values -



X. observe must not be more than +60” or -60”

V. observe can be any value.

**WARNING:** If the X. observe is out of tolerance – the compensator needs realignment (Compensator realignment is a repair shop procedure).

- Press [F5] OK to store values.
- Turn OFF

## Default Settings for USA

1. Press and hold [F1] key, press and release [ON] key, release [F1] key when SET 1 appears on the display.

- |                 |         |
|-----------------|---------|
| 1. ATM CORR     | : AUTO  |
| 2. PRISM CONST  | : -30mm |
| 3. CRV/REF CORR | : 0.14  |
| 4. COMP AXIS    | : ON    |

Press [ENT] to store the new value(s).

Press the OFF key.

2. Press and hold [F2] key, press and release [ON] key, release [F2] key when SET 2 appears on the display.

- |                   |                  |
|-------------------|------------------|
| 1. MEAS MIN DISP  | : 1 mm or FINE   |
| 2. TRACK MIN DISP | : 1 cm or COARSE |
| 3. SHOT COUNT     | : 1 TIME         |
| 4. SHOT INPUT     | : 01 TIMES       |
| 5. MIN UNIT ANG   | : FINE           |
| 6. V.ANG STYLE    | : Z.0            |
| 7. H. ANG SAVE    | : ON             |
| 8. AUTO OFF       | : 10 MIN         |
| 9. EDM OFF        | : 3 MIN          |
| 10. ILLU OFF      | : 3 MIN          |
| 11. DIST BUZ      | : ON             |
| 12. QUAD BUZ      | : OFF            |
| 13. MEAS SIGNAL   | : MARK           |
| 14. MEAS SET UP   | : SHOT           |
| 15. TRACK SET UP  | : CONT           |
| 16. AUTO MEAS     | : NIL            |
| 17. PRIORITY DISP | : HA    VA    SD |
| 18. CORD AXIS     | : NEZ            |

Press [ENT] to store the new value(s).

Press the OFF key

*Example: To change "MIN UNIT ANG"*

- Press ↵[F4] 4 times*
  - Press SELECT [F5]*
  - Press ↵[F4]*
  - Press [ENT] to select the new value.*
  - Press [ENT] to store the new value(s).*
- Press the OFF key*

3. There are no settings under SET 3

4. Press and hold [F4] key, press and release [ON] key, release [F4] key when SET 4 appears on the display.

- |               |          |
|---------------|----------|
| 1. TEMP UNIT  | : °F     |
| 2. PRESS UNIT | : inchHg |
| 3. DIST UNIT  | : ft     |
| 4. ANG UNIT   | : DEG    |

Press [ENT] to store the new value(s).  
Press the OFF key.

5. Press and hold [F5] key, press and release [ON] key, release [F5] key when SET 5 appears on the display.

- |                    |        |
|--------------------|--------|
| 1. BAUD RATE       | : 1200 |
| 2. DATA LENGTH     | : 8    |
| 3. PARITY BITS     | : NIL  |
| 4. STOP BITS       | : 1    |
| 5. SIGNAL CONTROL  | : ON   |
| 6. XON/XOFF        | : ON   |
| 7. THROUGH COMMAND | : NIL  |

Press [ENT] to store the new value(s).  
Press the OFF key.

### **Adjust Optical Plummet Reticle**

1. Adjust Optical Plummet Reticle.  
(See "Optical Plummet" on page 47 of the PCS-300 Series instruction manual)