



FARMSCAN PICO Implement Depth Indicator

OPERATION & CALIBRATION GUIDE

OPERATION:

When switched on, the unit will display the messages: “DEPTH INDICATOR” followed by “VERSION 1”. Then depending on which units have been selected the unit will display “DEPTH (current implement depth) CM “ or “DEPTH (current implement depth) INCHES “.

Using the Depth Meter:

If the current implement depth is negative it means the implement is above ground level and a positive reading indicates the implement is below ground level.

The zero position may be adjusted by simply flicking the reset switch. The unit will then display “ACQUIRE ZERO?”, flicking the reset switch again will set the implement’s current height to zero. Flicking any other switch will return the unit to the operating screen without changing the zero set point.

To cancel any adjustments made to the zero set point simply scroll through all the calibration screens (using the “CAL” switch) until you return to the operating screen.

CALIBRATION:

Setting the calibration factor:

1. Lower the tines to just touch the ground.
2. Flick “CAL” switch, unit will display “ZERO (current sensor position) [stored zero depth position]”
3. Flick “SELECT” switch, unit will display “ZERO (current sensor position) [stored zero depth position]”. (current sensor position) and [stored zero depth position] should now be the same, if not flick the “SELECT” switch again until they are.
4. Raise the tines.
5. Flick “CAL” switch, unit will display “SPAN (current sensor position) [stored span position]”
6. Flick “SELECT” switch, unit will display “SPAN (current sensor position) [stored span position]”. (current sensor position) and [stored span position] should now be the same, if not flick the “SELECT” switch again until they are.
7. Flick the “CAL” switch, unit will display “UNITS CM” or “UNITS INCHES” select inches or centimetres using the up down switches.



8. Flick the “CAL” switch, the unit will display “RANGE (current height range) INCH” or “RANGE (current height range) CM”
9. Measure the distance the tines are off the ground in centimetres or inches, depending on the units chosen. Enter this value using the up or down switches.
10. Flick the “CAL” switch, unit will display “DEPTH (depth reading) CM” or “DEPTH (depth reading) INCHES”.

Calibration is now complete you will notice that the value displayed is negative this is because the tines are above the ground

NOTE:

If a mistake is made on a previous screen scroll through all of the screens using the “CAL” switch until you return to the screen of interest to undo the mistake.

SYSTEM LINEARITY:

The linearity of the system is dependent on the input to the sensor being linear with a change in height.

SENSOR CONSIDERATIONS:

The full useable stroke of the sensor is divided into 255 steps. In order to obtain maximum resolution try and set up the system to use as much of the sensor stroke as possible to within 2mm off the stops (the first and last 2mm of the sensor’s stroke are not useable).

UNITS SELECTION:

When selecting inches or centimetres only a label is chosen to be displayed on the screen, no conversion is preformed. If the system is set up in centimetres then the units are changed to inches, the word inches will be displayed on the screen but the measurement will still be in centimetres. To correct this reenter the range value in inches.

“EPROM” ERROR:

If calibration settings are not successfully retrieved from memory the unit will display “EEPROM ERROR” and the calibration settings will be set to the following default values:

ZERO = 0, DEPTH = 255, RANGE = 100, UNITS = CM

The unit will not go into operational mode until the unit is recalibrated.

WIRING:

The two core figure eight wire is the unit’s power cable. Connect this cable’s red wire to a 12 volt power source, and then connect the red wire with the black stripe to ground. The three-pin connector is used to connect the sensor and sensor regulator. The sensor regulator is fitted in line in-between the sensor and the unit. One end plugs directly into the sensor and the other into the unit (via an extension cord if necessary). The unit is supplied with extension cords for each cable.