# Appendix IV Procedure for Calibrating the Digital Level

Calibration of the digital level (SAGIAN Part Number G1203-61420) must be performed at the same location on the work surface. Calibrating the level at different locations over time can result in inconsistent results that can cause improper calibration of the robot arm

Requirements:

- Level sensor properly mounted in the leveling block
- Flat surface
- Small, flathead screwdriver

1. Place the level sensor on the flat surface and record the angle, including the sign (i.e., positive or negative). Call this angle A1. (See figure IV-1.)
2. Rotate the level sensor 180 degrees (see figure IV-1) and replace the level sensor on the flat surface. *Be sure to place it in exactly the same location as it was for the initial reading taken in step 1.* Record this angle and call it A2.
3. Calculate the magnitude of the error as follows: Error = (A1 – A2)/2
4. Remove the plastic cap with the "CALIBRATED" sticker from the digital display housing. Place the level sensor as in step 2. If A2<A1, then adjust the calibration screw until the readout equals the value calculated for Error in step 3. If A2 > A1, then adjust the calibration screw until level reading equals the *negative* of the value calculated for Error in step 3.
5. Repeat steps 1-4 until A1= –A2.
6. Replace the plastic cap.

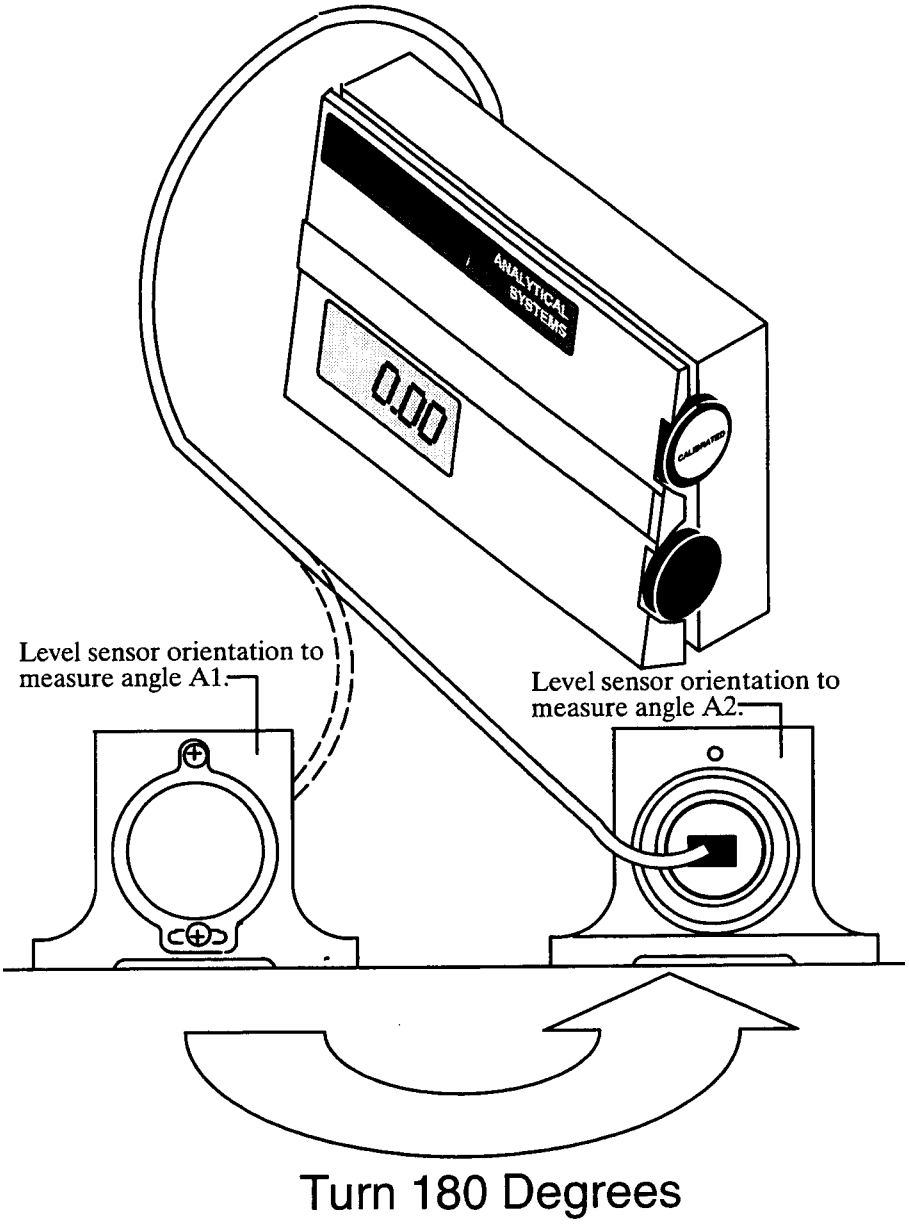


*Figure IV-1. Calibrating the digital level*