TECHNICAL BULLETIN NO. 20120110 January 10, 2012

SUBJECT **Calibration Feature of Field Scout TDR Meters**

PRODUCT FAMILY **TDR 100, TDR 200, and TDR 300**

This bulletin describes a modification to the TDR family of meters that allow for a meter's output to be adjusted based on measurements in air and distilled water. The change outlined below took effect with firmware version 6.5 and is included with units shipped after January 1, 2012.

Background
The meter has internal calibrations for standard and high-clay soil types. These calibrations will work for a large number of soils. However, individual meters may respond differently to identical soil conditions though still within specified tolerances. This is due to sensor wear and/or variability in the electronic components used during manufacturing. The meter calibration feature allows for adjustments to account for these differences. Therefore, if two meters are giving slightly different readings in the same soil, the output of the meters can be standardized such that they can be used interchangeably.

Calibration Procedure
1. Use the MODE button to put the meter in Calibration mode. Press the READ button.
2. Hold the meter so the rods are in the air. Press the READ button and wait until the meter indicates that it is ready.
3. Immerse the rods completely in distilled or de-ionized water. The container should have a minimum diameter of 3 inches. Press the READ button and wait until the meter indicates that it is ready.

The meter will then show that the calibration is complete for that specific rod length. If more than one rod size is being used, a separate calibration operation must be done for each length.

Upgrading Older Meters
Meters with firmware versions earlier than v. 6.5 can be upgraded by purchasing and installing an updated microcontroller chip (Item # CHIP-TDR3). After installing the new firmware, the calibration must be performed for any rod length used with that meter.