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PileSense
WIRELESS STATIC PILE LOAD TEST KIT

PileSense™: Wireless Static Pile Load Test Kit User Guide

Description

This user guide describes PileSense™ by Motionics, a custom wireless solution for conducting pile load tests. The system consists of three major parts:

- BlueDial(s): Bluetooth Dial Indicator(s) up to 6x
- Bluetooth Pressure Sensor (BluePSI)
- Motionics Software (PileSense iPad app or MultiGage (Windows, iOS & Android)

Multiple BlueDials are attached to the test pile to measure movements during load application and removal. The Bluetooth pressure sensor (BluePSI) is mounted on the hydraulic pump to monitor load change. The PileSense iPad app pairs with the BlueDials and the BluePSI. Readings from all wireless gauges will be synced in the app and recorded periodically.

Important Notes

- Do **NOT** open the device. Opening causes permanent damage and voids the warranty
- BlueDial transmitter & digital indicator should be both on before pairing
- Do NOT rotate BlueDial indicator face

Sensor Specs

1) Bluetooth Dial Indicator BlueDial 2”

- Measurement Range: 2 in/50 mm
- Resolution: 0.0005 in/0.01 mm
- Bluetooth Low Energy Wireless Connection
- Wireless Data Transmission Interval: 0.1 s
- Wireless Data Transmission Range: up to 20 m
- Working Temperature: 0 – 50 °C
- Indicator Battery: CR2032
- Bluetooth Transmitter Battery: 400 mAh rechargeable

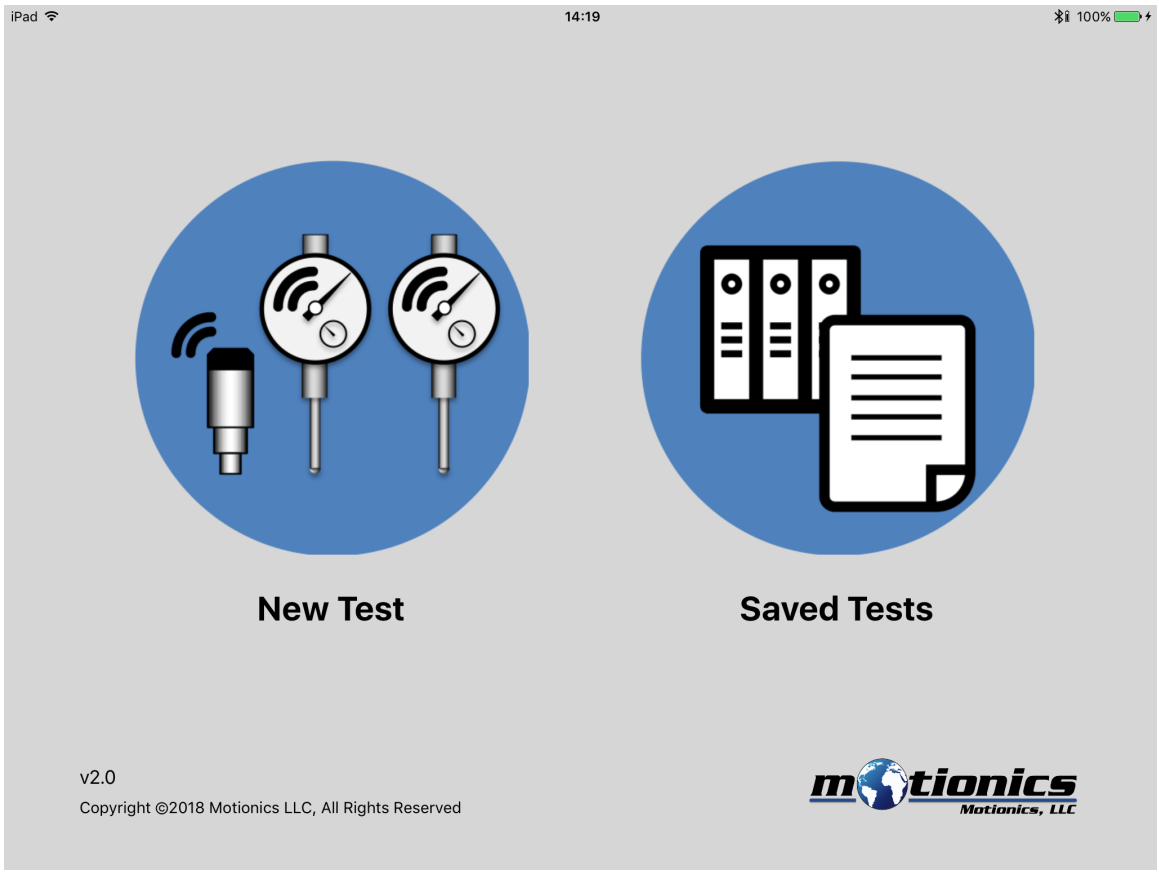
2) Bluetooth Pressure Sensor BluePSI

- Measurement Range: 0-10000 psi (as labeled on device)
- Accuracy: ±0.25%FS
- Bluetooth Low Energy Wireless Connection
- Wireless Data Transmission Interval: 5 s (adjustable)
- Wireless Data Transmission Range: up to 20 m
- Working Temperature: -20 – 85 °C
- Battery: CR2050/CR2032
- Pressure Port: ¼-18 NPT

PileSense iPad App
The PileSense iPad app is installed through App promo code.

App Promo Code: 7X7TLK3HJKJA

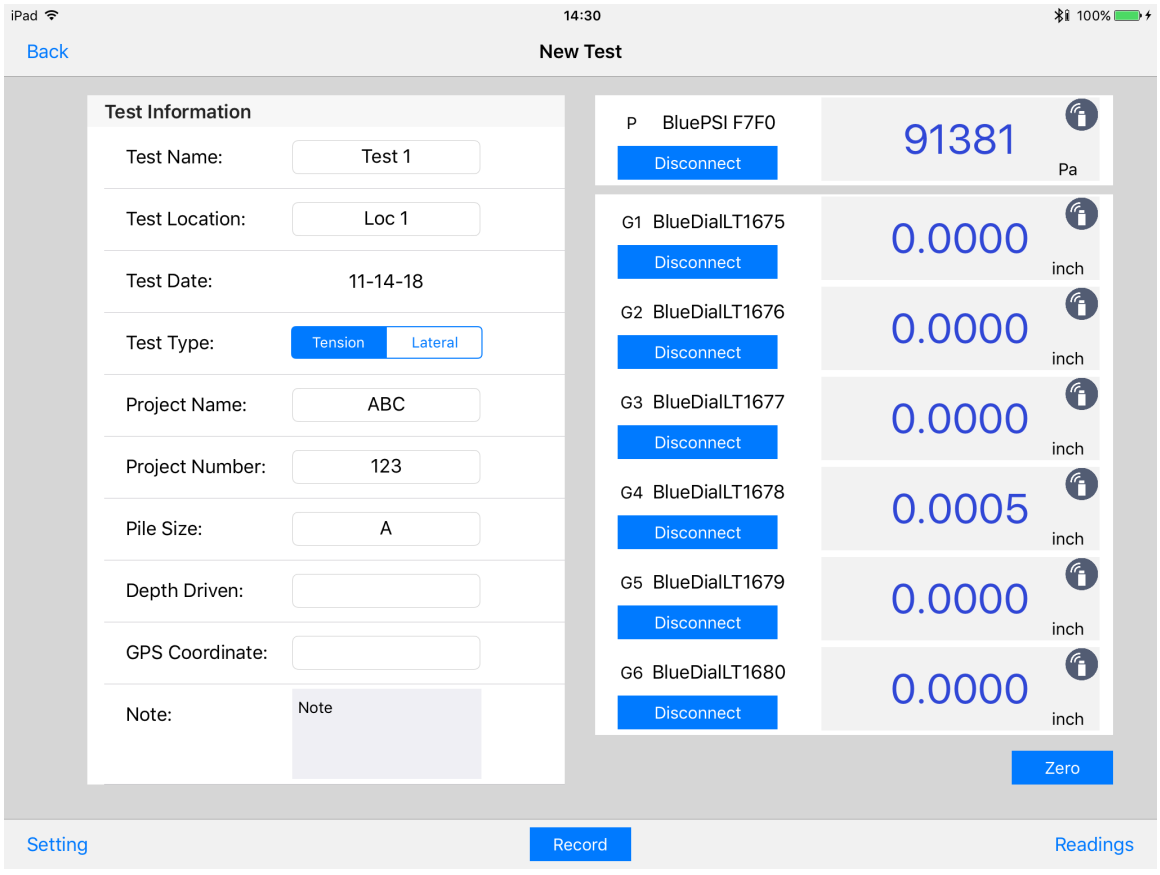
Installing the app
1. If you're not signed in with your Apple ID, do steps 1a-1b. Otherwise, begin step 2.
    a. Open Settings on your iPad, scroll down, and tap iTunes & App Store.
    b. If you don't already have an Apple ID, tap Create New Apple ID and create one in the prompted window. Otherwise, sign in with your Apple ID.
2. Open the App Store on your iPad and go to the Apps section by hitting Apps on the bottom of the screen.
3. Scroll down to the bottom of the page and tap Redeem. If a window pops up showing Sign Into iTunes Store, enter your Apple ID and password and hit OK.
4. Tap Enter Code Manually, enter one promo code, and tap Redeem. The app will start to download automatically.



Quick Start

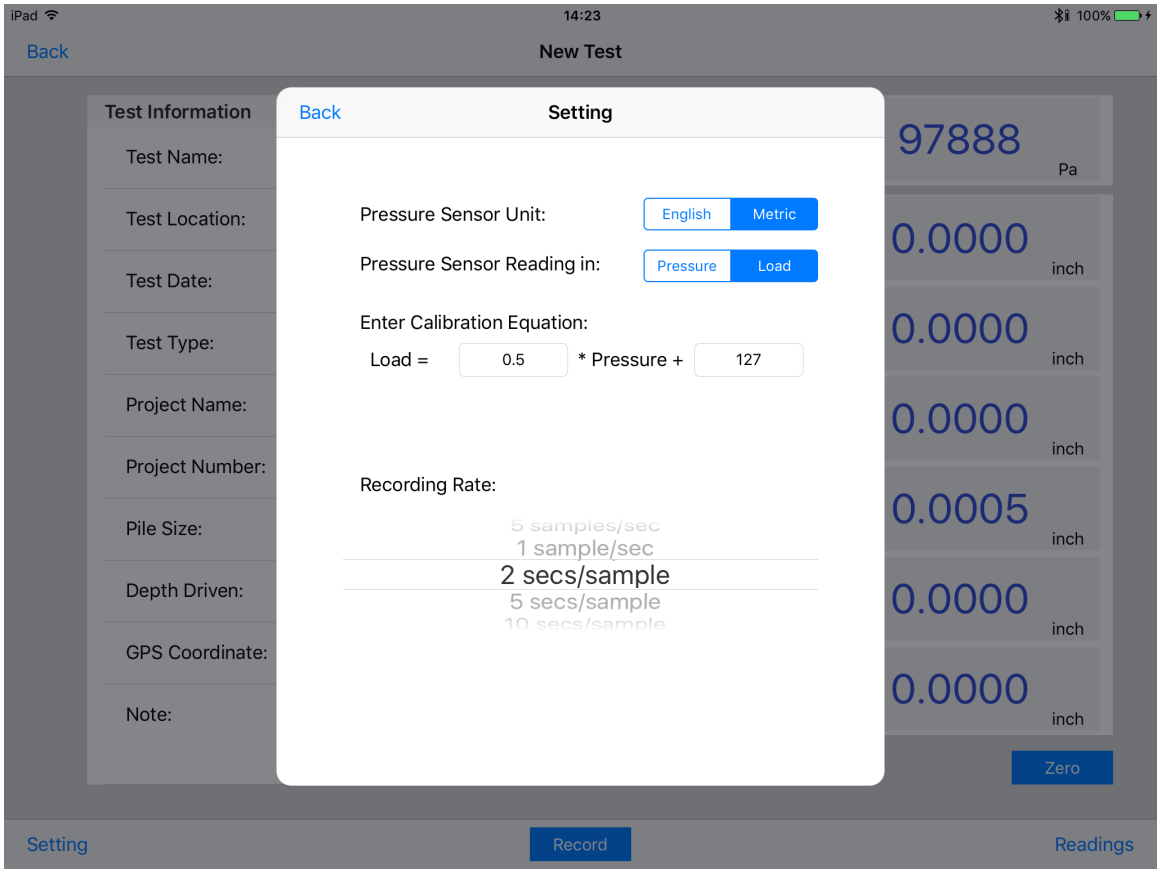
1) Sensor Connection and Data Collection

- Turn on both dial indicator and Bluetooth transmitter of BlueDials
- Launch **PileSense iPad App** and tap **New Test** from main page
- On **New Test** page, there are 7 sensor panels to connect to BluePSI and up to 6 BlueDials
- Tap **Connect** button to search and connect to gages individually. Pressure sensor name will be "BluePSI" plus the last 4 letters of the MAC address on sensor.
- On **New Test** page, enter test information to the table on the left
- Tap **Record** button to start data collection, you can choose to start a new record or select a saved record to resume test. Data is saved automatically during the recording. Tap again to stop data collection.
- Tap **Zero** button to remotely zero readings of BlueDials
- Tap **Sensor** button in each panel to view sensor status
- Tap **Readings** button to view recorded data
- Tap **Setting** button to change setting options



2) Setting

- On **New Test** page, tap **Setting** button to bring up **Setting** page
- Select pressure sensor unit English or Metric
- Select to display pressure or load
- If load is selected, two text boxes will appear for entering the two jack calibration parameters
- Calibration values will be saved on device automatically
- Select data recording rate



3) View and Export Previous Tests

- Tap **Saved Tests** from main page to view previous tests
- Saved tests are displayed in chronological order in the record table
- Tap one record to view detailed test information and results
- To export test results, tap **Share** button
- To delete one record, slide the corresponding row in the record table
- Tap **Save** button to save changes in test information