

SC 950 Soil Compaction Meter

Product Manual

FIELDSCOUT[®]

Item #6950



"To Measure Is To Know"

info@specmeters.com

www.specmeters.com

815.436.4440

General Overview

Thank you for purchasing the FieldScout® SC 950 soil compaction meter. This manual describes the meter's general features and operation.

Soil compaction prevents moisture penetration, reduces fertilizer and chemical uptake and hinders plant root growth. In some cases, yield losses can run as high as 30% due to compaction. Soil depth readings are determined by a sonic depth sensor. Cone index values are measured by a load cell sensor and can be displayed in PSI or kPa.

The SC 950's shaft-mounted probe allows the user to easily and rapidly take many measurements. The LCD displays a bar chart of the compaction at each depth and saves the values. With integrated Bluetooth and GPS (GNSS), use the FieldScout® Mobile app to also view readings not only on the meter but real time in the app. For instantaneous data upload and more detailed reporting and mapping abilities, add a SpecConnect FieldScout® Cloud Solution Subscription. Data can also be collected with a USB flash drive. The probe has options for a 1/2" or 3/4" diameter cone tip, and the shaft can be disassembled into 2 pieces for easy storage and transport. Measurements can also be saved to an external USB flash drive using the built-in USB port.

Includes the following components:

- SC 950 meter (with Extension Rod & Cone removed)
- 1/2" Soil Cone (0.505"/13mm)
- 3/4" Soil Cone (0.798"/20mm)
- Carrying case
- 4 x AA Lithium batteries already installed
- Depth Target Plate

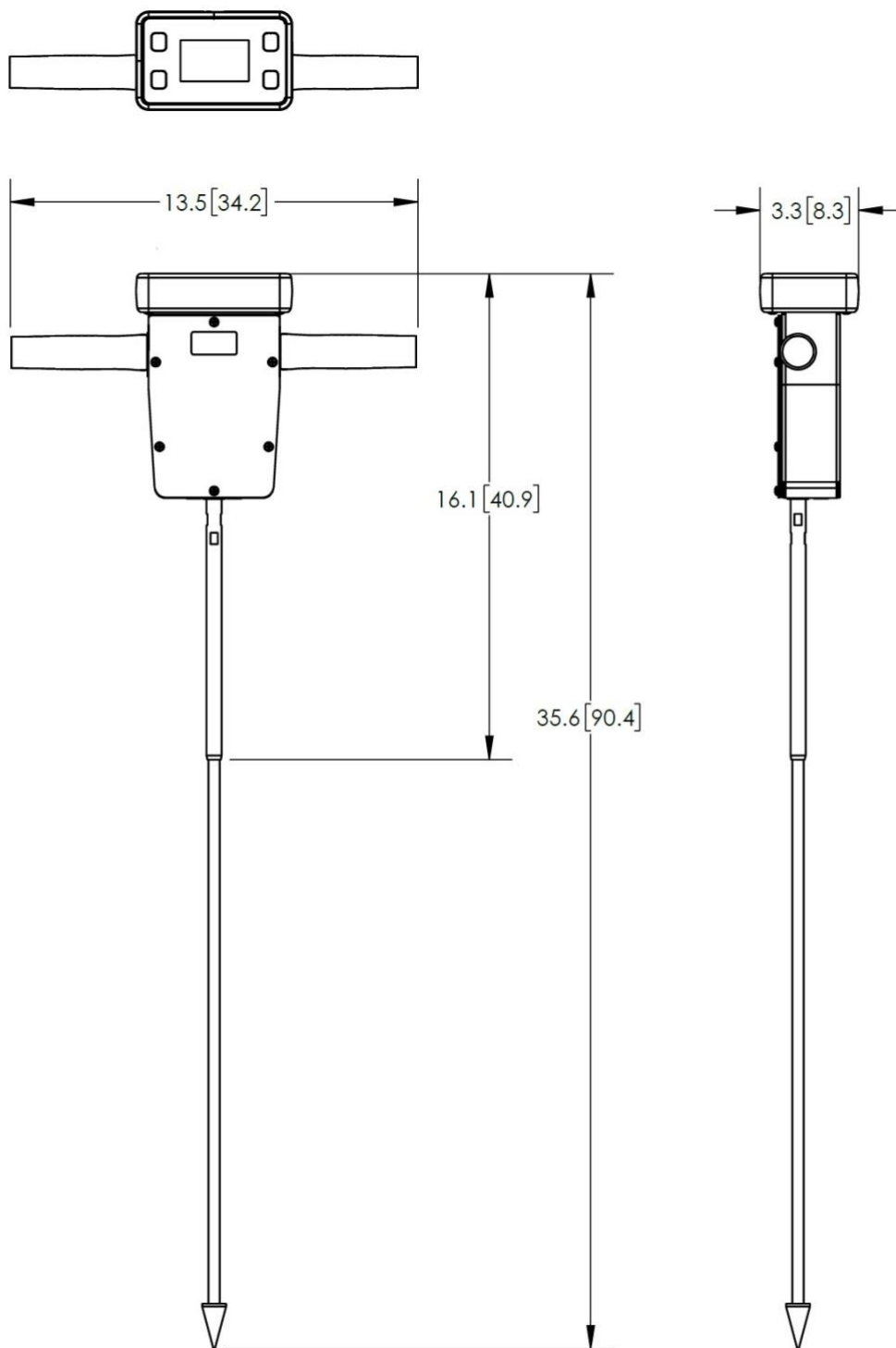
This manual will familiarize you with the features and operation of your new FieldScout® SC 950 Soil Compaction Meter. Please read this manual thoroughly before use.

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Product Dimensions



Meter Care

The FieldScout® SC 950 compaction meter will function properly under normal conditions experienced in field use. The meter is not waterproof so it should not be used during heavy rainfall or left exposed during irrigation events. If the meter does get wet, it should be dried out immediately.

Follow these tips to prolong the life of the device:

- Store in a cool and dry place when not in use.
- Keep the meter, rod and cones clean and dry in between uses.
- Remove the batteries if not used for an extended period (i.e.: between seasons).

Battery Life

A low battery level or improper installation of the batteries will show the low battery message briefly then, the display will power off.



Battery life is affected by the enabled features, connected accessories, and the frequency of use. If not needed, the Bluetooth, GNSS Location, and backlight features can be disabled individually to increase the battery life. The backlight can also be set to AUTO mode which illuminates the LCD screen when a button is pressed allowing time to view the screen, then will switch off the backlight to prolong the battery life.

Calibration

The FieldScout® SC 950 compaction meter is fully calibrated at the factory. Further calibration is neither required nor recommended.

Taking Compaction Measurements

The SC 950 is a state-of-the-art electronic cone penetrometer for use in soil density, trafficability and compaction studies. This soil compaction instrument measures cone index data, logs the data and allows the user to review the data to make soil management decisions.

When to Sample

It is recommended that compaction measurements be taken after rain, or in the spring when the soil has good moisture content. Measuring soil compaction in dry soil conditions will not yield meaningful results.

The SC 950 compaction meter should be used before tillage to determine where the compacted areas of a field/plot are. Once the compacted areas, along with compaction depths, have been determined, a much more effective tillage system can be employed.

The unit works as an efficient diagnostic tool as well as a management unit after the tillage operation has been performed. One can determine how deep the soil has been worked and if the tillage operation has solved the compaction problems.

Selecting the Cone Tip

The 1/2" (13mm) cone is appropriate for most soils. The 3/4" (20mm) cone is recommended for coarse and sandy soils that provide less resistance to penetration. The cone selection option appears in the Settings Menu (see Settings Menu). Use the MENU button to select the desired cone tip option.

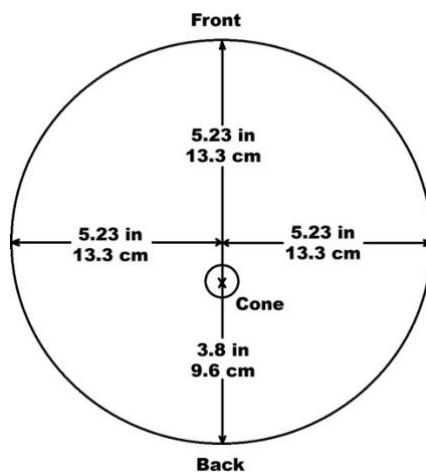


Depth Sensor

An ultrasonic sensor located at the base of the meter is used to measure the depth of penetration. The field of view extends about 20° from the shaft. The sensor measures distance by emitting a sound wave and measuring the travel time of the first reflected wave.

Usually, this first reflection will come from the ground just adjacent to the shaft. However, if an object with a surface oriented toward the sensor is within the field of view, an erroneous depth measurement may be made. This can lead to depth error messages (see Diagnostic Messages). If possible, try to remove the object and/or smooth the surface. Remove any excess soil from the shaft.

Repositioning your feet and knees may also eliminate these errors. If the problem persists, use the depth target plate included with the meter to test the depth sensor and, if necessary, to take measurements. If the depth target plate is not available, one can be made from cardboard or something sturdier if more durability is required. To test the depth sensor, lay the target on the ground and place the shaft in the hole. Have another person slowly raise the depth target plate while you verify the meter is incrementing the depth.



Button Functions



ON/OFF | BACK button

- Press briefly to power on.
- Press and hold to power on and stay on the startup screen.
- Press for 2 seconds to power off.
- Press briefly within a menu to return to prior screen.



MENU | SELECT button

- Press to enter available menus.
- Press to select or confirm a menu selection.



DELETE | ▲ up arrow button

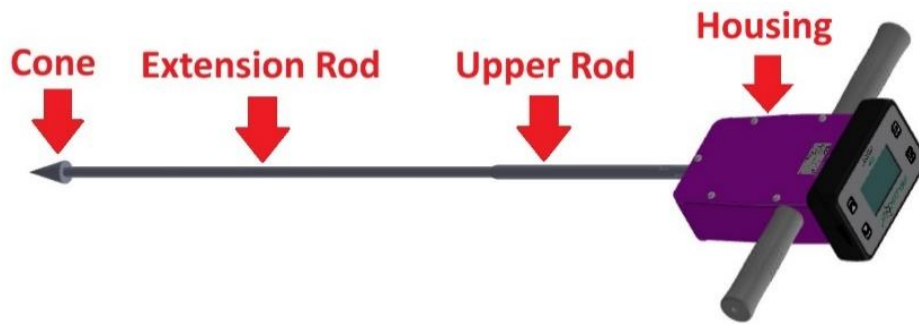
- Press to move up within a menu.
- Delete the last measurement from the internal data log.



READ | ▼ down arrow button

- Press to move down within a menu.
- Press to start a reading from the Reading screen.

Meter Operation



Cone, Extension Rod, Upper Rod, and Housing

Setting up the Meter

1. Pull the clear battery transport tab out of the display unit.
2. Screw the Extension Rod into Upper Rod mounted on the meter's housing.
3. Screw in and tighten the selected Cone type to the bottom of the Extension Rod.
4. Set the desired user settings in the Settings Menu (see Settings Menu).

Powering up the Meter

The ON button turns the meter on and off. When the meter is powered up, it will display the serial number and firmware version status for 3 seconds.

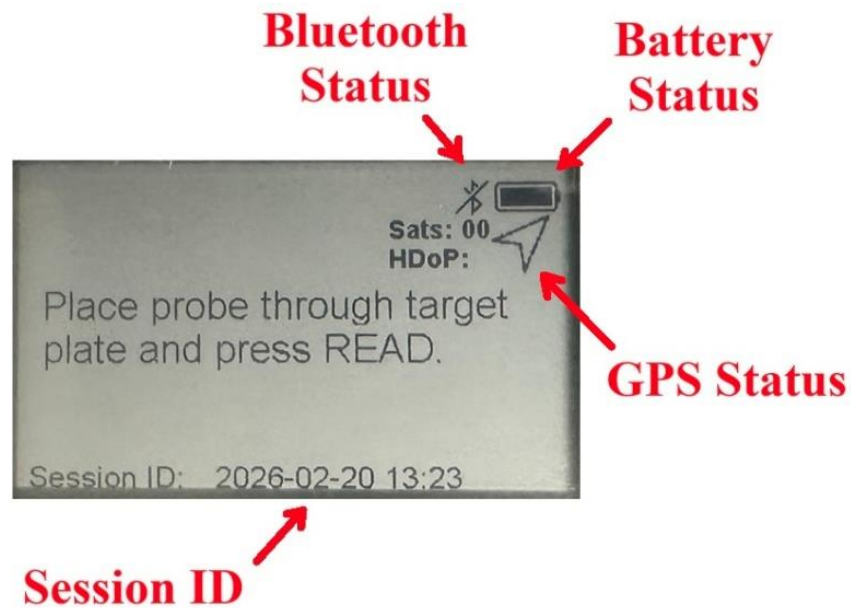


Mode of Operation

www.specmeters.com

+1 (815) 436-4440

When using the FieldScout® phone app, set the Menu “Data Mode” to “Live (App)” option. The meter’s Bluetooth must be connected to the phone before this option can be used (see Settings Menu).



When the meter completes the startup procedure, it will proceed to the initial operation screen. From the initial operation screen, press the READ button to put the meter into measurement mode. The meter will then be ready to take readings (see Measurement Procedure).

Measurement Procedure

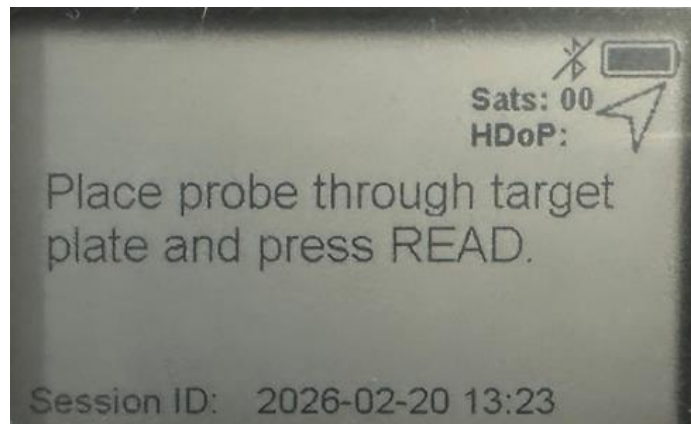
Recording the best quality data requires some practice. Your objective is to uniformly push the probe into the ground using an even motion. A status bar will indicate acceptable insertion rate, specified in the ASABE standards, which is at most 1 inch per second. If this rate is exceeded, the meter will display a warning message (see Diagnostic Messages)

Taking a Profile Measurement

1. Grip the meter's handles to the left and right of the display. Stand with your feet at least 9 inches (23cm) from the probe tip. This ensures the sonic depth sensor will measure accurately. Tall, nearby objects or walls will also inhibit the ability of the depth sensor to "see" the ground surface. If you are working in turf or an especially uneven soil surface, you may need to use the depth target plate to ensure reliable performance (see Depth Sensor section). When not using the depth target plate, it is advisable to smooth the soil surface as much as possible before inserting the probe. As the probe is inserted into the soil, the depth measurement on the display will increase in 1-inch (2.5cm) increments. The pressure value will change in response to soil compaction differences.

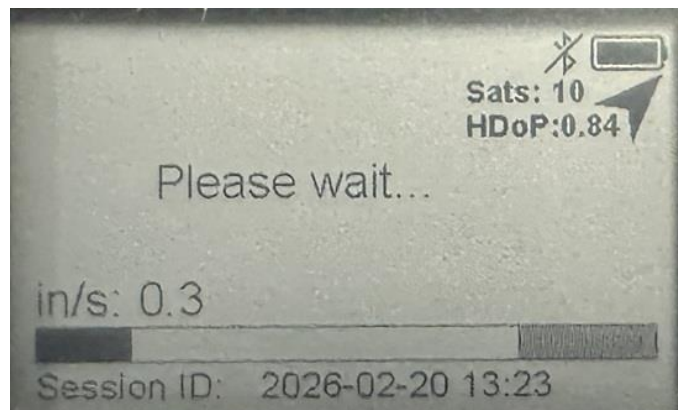


2. With the Initial Operating Screen visible, press and release the READ button. The top right corner shows the Bluetooth, Battery and GPS (GNSS) status. The last line shows the session number if in Logging mode.



Initial Operating Screen

3. The meter's screen will show "Please wait..." while the sensors are taking initial readings.

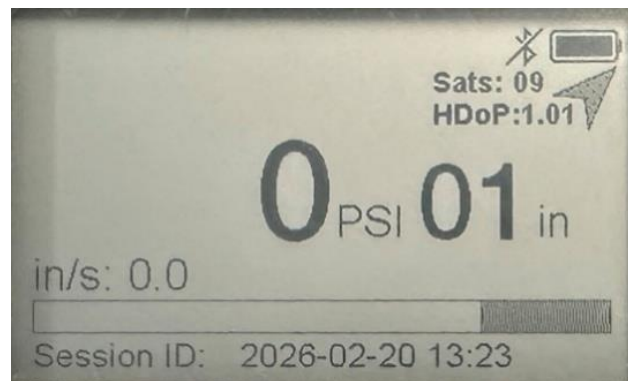


4. Wait for the meter's screen to display the Profile Information screen. The screen will begin to show the average compaction level followed by the depth level. The

next line shows the insertion rate status bar.

Push down on the handles maintaining a steady downward pressure to drive the cone straight into the soil until the display stops and shows the profile. The insertion speed must be kept below the hatch area on the right side of the speed bar, which indicates the standard insertion speed of at most 1 in/s (2.5 cm/s). Refrain from any back and forth or side to side movement which can alter the reading accuracy.

Caution: Exercise care not to bend or damage the Extension or Upper Rod.



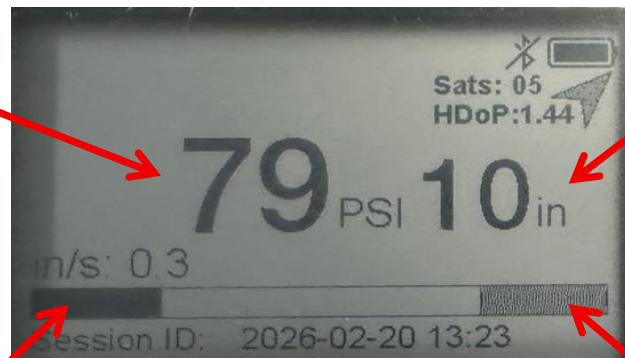
Profile Information Screen

**Average
Compaction
Level**

Insertion Depth

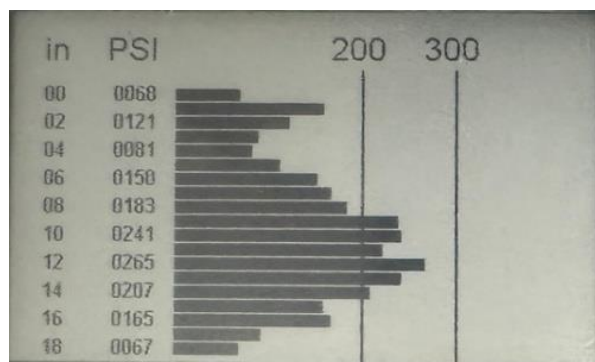
**Insertion
Rate Status Bar**

**Maximum
Insertion Speed**



Reviewing the Most Recent Profile

Immediately after the meter has successfully taken a full profile measurement, but before measuring another profile, the Data Graph will be shown. Press SELECT to toggle between Data Graph and Data Table. Press BACK to return to the main screen, or press READ while viewing the Data Graph, to start another measurement. When the Data Graph Screen is shown, if desired, press DELETE to discard the profile measurement (see Deleting Data).



Data Graph Screen

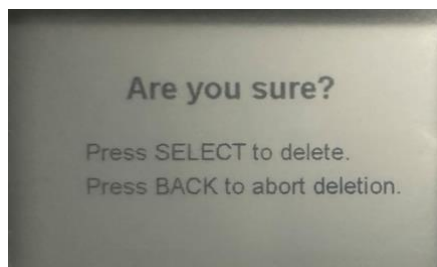
When the Data Table Screen is shown, use the ▲ up or ▼ down arrows to scroll through the profile values. Press SELECT to toggle between Data Graph and Data Table. Press BACK to return to the main screen.

Session ID:	2026-02-20 13:23
00 in	0005 PSI
01 in	0057 PSI
02 in	0077 PSI
03 in	0087 PSI
04 in	0101 PSI
05 in	0102 PSI

Data Table Screen

Deleting Profile Data

After a profile measurement is taken and the Profile Graph Screen is shown, press the DELETE button to discard the measurement. When the confirmation message is shown, press the SELECT button to delete the profile results. The screen will then indicate the reading has been deleted, and then the meter will return to the Initial Operating Screen.



Confirmation Screen



Results Deleted Screen

Settings Menu

Use the arrow buttons ▼ ▲ to scroll through settings in menu. Once the parameter is selected, press SELECT to pick from the available menu options. Press BACK to exit the menu.

Session ID	Show Session ID number
2026-05-13 20:00	Increment session number (Disabled when in Live (App) Mode)

Data Mode	Select data mode
Logging	Log data to meter's memory
Live (App)	Send current data to phone App

Bluetooth	Bluetooth connectivity to the FieldScout® Mobile app
DISABLED	Bluetooth off (Forces Logging Mode)
ENABLED	Bluetooth on

If too fast	Insertion speed mode (maximum 1" per second)
End meas.	End reading if the insertion speed is greater than 1 in/s
Ignore Speed	Continue readings even if the insertion speed is greater than 1 in/s (2.5cm/s)
Mark as 0	Saves zero value to any depth level that exceeds the maximum insertion speed

Save New to USB	Save current session to USB drive
SELECT	Save to USB
BACK	Cancel and exit

Save All to USB	Transfers data logs to a USB flash drive if attached.
SELECT	Save to USB
BACK	Cancel and exit

Clear Logs	Clear all Sessions in meter's memory
SELECT	Clear all session logs
BACK	Cancel and exit

Settings Menu Cont'd...

Backlight	Display Backlight mode
OFF	Display Backlight off
AUTO	Display Backlight will shut off 5 seconds after a button press.
ON	Display Backlight on

GNSS Location	GNSS location mode
DISABLED	GNSS/GPS Location mode off
ENABLED	GNSS/GPS Location mode on

GNSS Power Save	GNSS power save mode
DISABLED	GNSS/GPS power save mode off
ENABLED	GNSS/GPS power save mode on

GNSS Use QZSS	Activate a complimentary regional Asian GNSS constellation (QZSS) mode for enhancing precision
ENABLED	QZSS mode on
DISABLED	QZSS mode off

Sound	Beeper mode for key press audible feedback
ON	Beeper on
OFF	Beeper off

Too Fast Alarm	Insertion speed audible alarm function
OFF	Insertion speed audible alarm off
ON	Insertion speed audible alarm on

Auto-Off	Display Backlight mode
15 min	Meter powers down 15 minutes after a button press
30 min	Meter powers down 30 minutes after a button press
45 min	Meter powers down 45 minutes after a button press
60 min	Meter powers down 60 minutes after a button press

Settings Menu Cont'd...

Current Date	Changes Current Date
SELECT	▲ up arrow to manually enter (see Setting Date/Time section for details)
	▼ down arrow for GNSS Date

BACK	Cancel and exit
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Current Time	Changes Current Time
SELECT	▲ up arrow to manually enter (see Setting Date/Time section for details)
	▼ down arrow for GNSS Time
BACK	Cancel and exit

Time Zone	Offset from GMT, As the offset changes, the Time and Date will update.
GMT	Greenwich Mean Time
GMT + Time	Offset time to GMT

Daylight Savings	Time adjusted for Daylight Savings
ON	Daylight Savings on
OFF	Daylight Savings off

Units	Select meter's units
in, PSI	Imperial
cm, kPa	Metric

Cone Size	Select cone index
½ in or 13 mm	½ in or 13 mm size
¾ in or 20 mm	¾ in or 20 mm size

Factory Defaults	All menu settings restored back to factory values
SELECT	All settings defaulted (Calibration not affected.)
BACK	Cancel and exit

About	General information Model, Serial number, Main, GNSS, Sensor, BLE Firmware revision
SELECT	Momentarily shows values for 3 seconds

Setting Date/Time

By default, the SC 950 gets the date and time from the satellite signal. These values are displayed in the Settings Menu. The date and time can also be set manually. When the time and date are set manually, they will override the default value.

Note: When the batteries are removed, the date/time are reset and the meter resumes getting this information from the satellites.

Updating the Date and Time

1. Press the MENU button to get to the Settings Menu.
2. Press the ▲ or ▼ arrows to navigate to either the Current Date or Current Time option.
3. Press the SELECT button to access the Time/Date update screen.

There are 3 options:

- A. Press the ▼ down arrow button to download an update from the GNSS satellites. Proceed to an area with a good view of the sky and press the Menu/Select button to initiate the process.
- B. Press the ▲ up arrow button to set the date and time manually. The current settings will be displayed. Use the ▲ and ▼ arrows to adjust the highlighted selection. Press the SELECT button to confirm and proceed to the next parameter. After pressing the SELECT button to set the minutes, the display will return to the Reading screen.
- C. Press the BACK button to return to the Settings Menu without making any change.

GNSS (Location) Settings

GNSS Location adds the ability to log global position coordinates with measurements to aid in irrigation mapping of crops and turf greens. Location references are stored with the measurement in the data log and can be uploaded to the SpecConnect cloud through the FieldScout® Mobile App.

The following menu settings apply to and affect the GNSS location feature:

GNSS Location

- Enabled: Measurements will include global position coordinates of the meter position in the data log and/or FieldScout® App.
- Disabled: No location coordinates appear in the Data Log. SpecConnect and FieldScout® App measurements will include the global position of the mobile device running the app.

GNSS Power Save

- Enabled: After periods of inactivity, the GNSS receiver will be placed in standby to improve battery life. The receiver resumes after the next read button press. A brief pause may be noticed as the receiver resumes operation.
- Disabled: GNSS receiver will remain on for faster measurements. It is recommended to keep disabled during the first few days of use to improve accuracy and mapping.

GNSS Use QZSS

- Enabled (Default): Improves location accuracy in Australia, Bangalore, Guam, Hawaii, Japan, Singapore and surrounding areas.
- Disabled: Can improve location referencing time when outside of the referenced regions.

GNSS Location: Features, Use and Optimization

When enabled, the GNSS Location feature provides active location referencing information to aid in measurement mapping.

HDoP: Actively transitions from a high to low value as the level of precision improves. It may increase in value if conditions degrade. Values typically range between 9.99 to as low as 0.2. The value will appear blank until satellites in range are received and precision is calculated.

Sats: Active number of satellites used for position and location measurements. The value will increase from 00 as more satellites are received and used.

GNSS Location: Status Icons

Transitions with changes in conditions, available satellites, and higher levels of precision are reached.



Blank Icon - GNSS feature is enabled and not ready for location referencing of measurements. Measurements made with this icon will not have a geo-referenced location.



Partially Shaded - HDOP level is high and the satellite count is low. Measurements will have geo-referenced coordinates with a low level of accuracy (< 10m typical).



Dark Shaded - High satellite count without supplemental augmentation. Measurement location accuracy will depend on HDOP and Sats count.



Dark Shaded with Blank Dot - Low Satellite count with supplemental augmentation available to improve accuracy. Measurement location accuracy will depend on HDOP.



Dark Shaded with Crosshair - High satellite count with supplemental augmentation available to improve accuracy. Measurement location accuracy is optimal (< 2.5m) and will depend on HDOP.



Clock icon; HDOP: Zzz - GNSS Power Save has placed the receiver in standby mode. Press the READ button to resume.
Note: First reading will have a slight delay.

GNSS Location: Best Practices

Initial Use:

During the first three days of use, the meter's GNSS receiver will build an internal satellite record used for tracking and accuracy. Accuracy may appear low during this time, will depend upon the accuracy of available satellite systems, and can vary to within 10 meters.

After the third use, the satellite record will be complete; the speed and accuracy of the location referencing will be at its best as the record is synchronized with the area where the meter is being used.

Preparing for Measurements:

- Expect the first geo-referenced location to take place within a minute or so of operation on a clear day.
- A minimum of 4 received satellites are necessary for a location fix. Achieving 10 or more satellites will yield better position data.

For Best Results:

- Keep the meter active for more than 6 minutes per session.
- Avoid powering off the meter between measurement locations within a use session.
- The meter will acquire the most satellites and better position data when remaining on for longer periods of use.
- Position the meter upright (cone facing down) while moving between locations to allow continued satellite tracking.
- When positioning the meter for a measurement, observe the display for a dark arrow icon, low HDOP value, and high Sats number.
- If possible, keep the meter stationary in position for a moment before pressing the READ button.
- For faster results, disable GNSS Power Save to keep the receiver active. When enabled and the meter has been inactive, GNSS receiver may take a few seconds to resume from standby.
- Avoid using close to structures and dense tree canopies which can block satellite signals.
- Adjust standing position to acquire best icon shading and sat count prior to pressing the READ button.

Data Logs

Downloading Data Logs to a USB Flash Drive

1. Remove the protective cap and insert the flash drive into the meter's USB port.
2. Press the MENU button to open the Settings Menu.
3. Press the ▼▲ arrow buttons to highlight the options "Save New to USB" or "Save All to USB". Note: Save New only saves the last session and Save All saves all previous sessions.
4. Press the SELECT button to start saving data to USB.
5. Display shows "SAVING DATA" then "Logs Saved!" when the data saved is completed.
6. Press the BACK button to exit the Settings Menu.
7. Remove the USB flash drive and reinstall the protective cap.

The data will be saved to the flash drive as a comma-separated text file (.csv) named with the serial number as the filename. These files can be opened with common text-editing or spreadsheet software. If a previous data file exists on the flash drive with the same filename, it will be over-written. Be sure to save any existing data logs on the flash drive prior to saving a new file.

Erasing the Internal Data Log

1. Press the MENU button to open the Settings Menu.
2. Press the ▼ arrow button to reach the Clear Logs option
3. Press the SELECT button to select the option.
4. Press the SELECT button again to start the process or the BACK button to return to the menu.

Data Logs Cont'd...

Data Collected

The following information is logged with each reading:

- Format#: Data Format identifier
- Session ID: Six-digit number
- Measurements: Measurement count
- Units: Unit of measure 0 = Imperial, 1 = metric
- Satellites: Number of Satellites
- GNSS Fix: GNSS location fix level; 0 - unreferenced, 1 - fixed reference, 2 - fix with additional accuracy correction (SBAS, WAAS, EGNOS)
- Latitude, Longitude: Geo-referenced coordinate acquired in decimal degrees format. *Note: A negative sign may appear indicating South or West coordinates.*
- Batt%: Remaining battery percent
- Cone Size: Cone index 0 = $\frac{1}{2}$ " (13mm), 1 = $\frac{3}{4}$ " (20mm)
- Status: 0 = no errors, 1 = measurement stopped because one depth was too fast, 2 = at least one measurement was too fast, 3 = READ pressed to abort measurement
- Time/Date: MM/DD/YYYY HH:MM:SS based on the GMT offset selected in the Time Zone option.
- PSI (0-18): Soil compaction at each measured depth of 0" to 18".

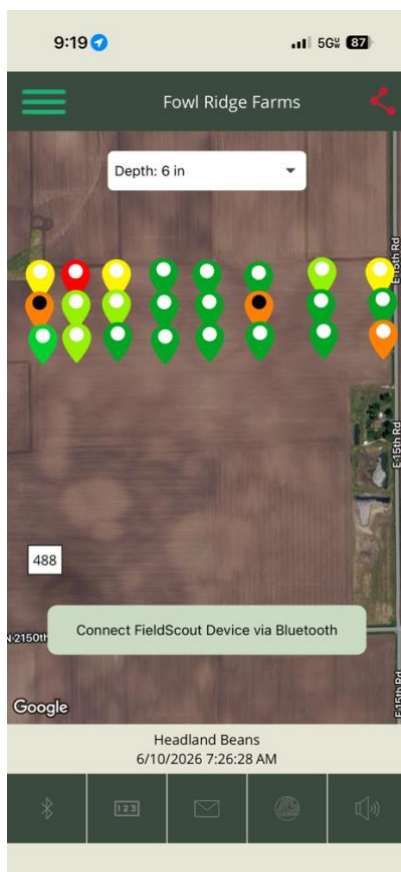
FieldScout® Mobile App / SpecConnect

The FieldScout® Mobile App can be used to view measurement results directly on your mobile device and send data directly to the SpecConnect web interface. Data can be viewed on a Smartphone with a SpecConnect subscription.



Color-coded location icons are placed at every measurement point using the coordinates from the meter. If the meter's GNSS location is disabled or a blank arrow appears on the meter, the app will use the internal location of the app's mobile device.

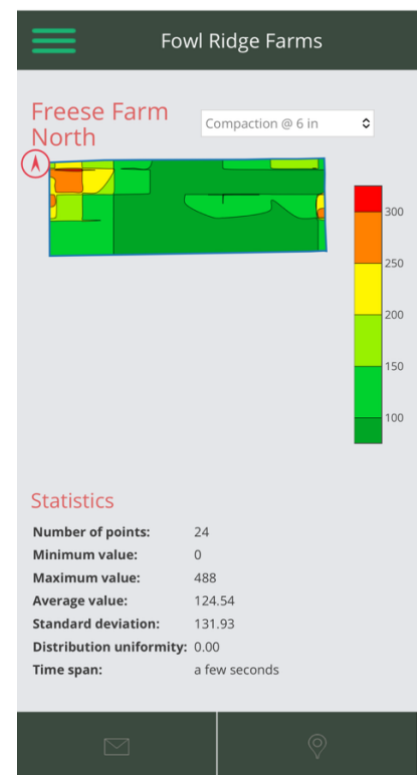
The data from the app is sent instantaneously to SpecConnect. Data can be viewed in map form, exported to a spreadsheet, or viewed as a Trend Report. More details are available in the user's guide for the app.



Color-coded pinpoints showing compaction at 6" depth across a field



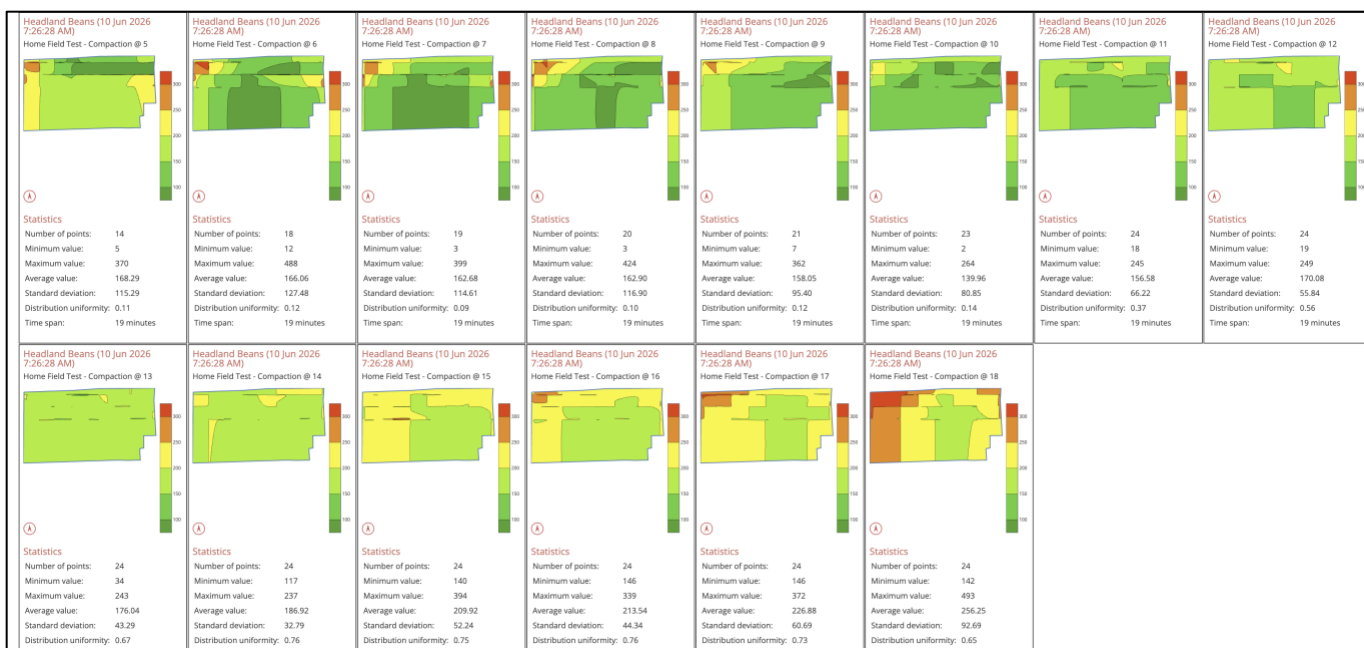
Compaction data at one measurement location showing PSI at 1" increments



Composite view of entire field showing heat map of compaction at 6" depth



SpecConnect: Color-coded measurement points showing compaction at 6" depth across a field, with a corresponding heat map



SpecConnect: Heat Maps across multiple depths with statistics for number of measurements, min/max and average values for each depth

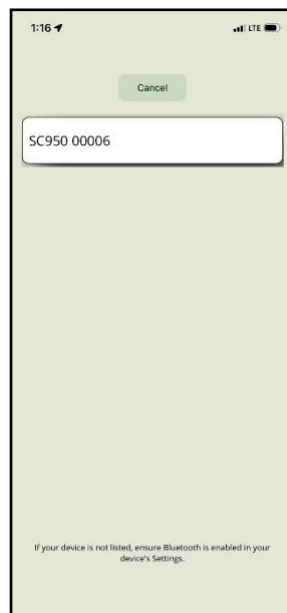
Connecting with The FieldScout® Mobile App

1. Enable the SC 950's Bluetooth and GNSS options.
2. Open the FieldScout® mobile app.
3. Enter the SpecConnect username and password to send measurements to the cloud account.
4. Upon first use, tap the Golf or Farm (agriculture) icon.
5. Add a new course/farm or Select an existing one.
6. Ensure that the SC 950 is in Live (App) mode, then create a new session or select an existing one.
7. The screen will transition to the Freeform View map.
8. Tap the Connect FieldScout® Device via Bluetooth button. If Bluetooth is not enabled on the mobile device, a prompt will appear to enable it.
9. Select the SC 950 from the device list.
10. Follow the instructions in the Taking a Profile Measurement section, and the measurement data will appear on the mobile device.

Note: Although the meter appears in the app, it may not appear on the phone's list of Bluetooth devices. Do not use your phone's Settings app to pair with the meter.



Bluetooth Connect button



Scanned Device List

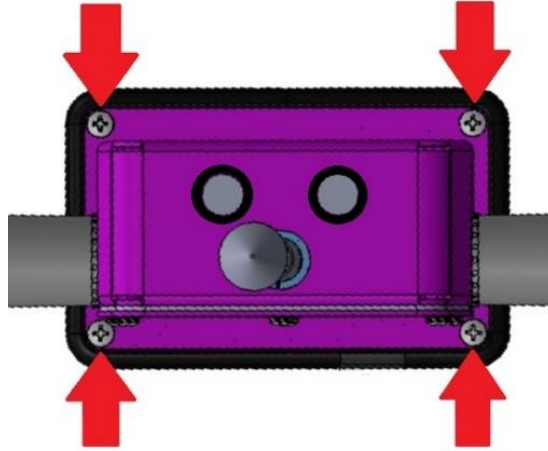


Data Point Graph

Maintenance

Battery Replacement

1. Power down display.
2. Flip the display so the backing plate is facing up.
3. Remove the 4 mounting screws on the backing plate using a Philips screwdriver.



4. Gently separate the display from the base plate. Do not remove display cable or foam spacer from the display. Note: The display cable has limited cable length.
5. Install four new AA batteries observing correct polarity by referencing the (+) positive and (-) negative labels.
6. Guide the excess cable length back down through the base plate.
7. Align the arrows on the base and display in the same direction.
8. Tighten the four mounting screws located on the backing plate.



Accessories

There are various items that can be used to expand the capabilities of the SC 950. Visit www.specmeters.com for more information and installation instructions.

1-Year SpecConnect FieldScout® Pro Subscription:

Upload measurements to the cloud/web interface for real-time monitoring of field and turf conditions. Access historical data, trends, and generate reports.

(Item 3035A) - for up to 3 devices

(Item 3035B) - for 4 to 7 devices

(Item 3035C) - for 8 or more devices

FieldScout® Cell Phone Holder (Item 6050)

Securely hold a cell phone above the meter display to easily monitor the FieldScout® mobile app display.

Appendix 1: Troubleshooting

Unable to save data to or load firmware from a USB flash drive:

Confirm the drive is not full or write protected. Verify the drive has FAT32 format. Firmware should be in the root directory, outside of any folders.

“Sensor Not Detected” appears on the display:

- Communication lost between the sensor and display. The connection may be dirty, unplugged, or broken. Check the cable condition, clean the connection, and reseal. Power off the meter and then back on to reset.

“No Sensor” appears on the display:

- Sensor unplugged from the display. Be sure to keep the foam insert behind the cable to retain the cable during battery changes. Reconnect the sensor, power off the meter, and then back on to reset.

Clock icon appears on the display:

- May appear with “Zzz” when the GNSS Receiver is in standby.
- Press the READ button to resume.

Appendix 2: Updating Device Firmware

Firmware updates may be made available to add or improve the product features. The firmware can be updated using a USB flash drive. Firmware update files can be found on the Spectrum website.

1. Copy the latest firmware update from your PC onto the root directory of the flash drive. The file will not be seen by the meter if it is renamed or stored within a folder on the drive.
2. Power off the meter.
3. Remove the protective cap from the meter's USB port.



4. Insert the flash drive into the meter's USB port.
5. While holding the DELETE | Up arrow button, press and release the ON/OFF | BACK button. The meter will beep.
6. Release the buttons. *Note: The display screen will remain blank during the update process.* The meter will beep a second time once the process has completed and then reboot to the logo screen. The new firmware will now be displayed below the Spectrum logo.
7. The display will alert the user if further updates are to be made and show a message when completed.
8. Remove the flash drive and replace the protective cap.

Appendix 3: Calibration

The FieldScout® SC 950 is fully calibrated at the factory. Further calibration is not required nor recommended.

Specifications

Measurement Units	PSI/inches or kPa/centimeters
Resolution Distance	1" (2.5cm)
Resolution Compaction	1 PSI (7 kPa)

Accuracy Distance	±0.5" (±1.25 cm)
Accuracy Compaction	±15 PSI (±103 kPa)
Range Distance	0 - 18" (0 - 45 cm)
Range Compaction	0 - 1000 PSI (0 - 7000 kPa)
Maximum Insertion Speed	1 in/s (2.5 cm/s) (Per ASAE S313.3 & EP542)
Maximum Applied Load	220 lb (100kg) ½": 1120 PSI, ¾": 500 PSI
Connectivity	USB Type A Flash drive (FAT32), Bluetooth to FieldScout® Mobile App
GNSS	Supported Systems: GPS, GLONASS, Galileo, BeiDou, QZSS Augmentation: SBAS (WAAS, EGNOS, MSAS — regional availability varies). Horizontal Position Accuracy: <2.5m CEP (50th percentile, open sky, SBAS enabled) <i>Note: Actual accuracy depends on installation environment, sky visibility, and proximity to reflective surfaces. Performance will vary in obstructed or urban environments.</i>
Power	4 AA Lithium batteries (non-rechargeable)
Log Capacity	10,000 profiles
Display	Backlit, high-contrast graphic LCD
Weight	3.4 lb (1.5 kg)
IP Rating	Display: IP53
Cone Size Diameters	1/2" (0.505")/13mm, 3/4" (0.798")/20mm

Glossary

EGNOS: (European Geostationary Navigation Overlay Service) Pan-European satellite navigation system. It augments the US GPS (Global Positioning System) satellite navigation system and makes it suitable for safety critical applications.

GNSS: (Global Navigation Satellite System) - Standard generic term for satellite navigation and positioning systems including GPS, GLONASS, Galileo, QZSS, Beidou and other regional systems.

HDoP: (Horizontal Dilution of Precision) In global navigation and surveying, provides a descending value to gauge how precise a location measurement is across the Earth's surface.

QZSS: (Quasi-Zenith Satellite System) is a regional system launched by Japan and Australia which serves the local region and immediate surrounding area.

SBAS: (Satellite Based Augmentation System) - used to improve satellite ranging errors.

WAAS: (Wide Area Augmentation System) - a system used by the GNSS receiver which augments received positioning data to aid accuracy.

RE-D EU Declaration of Conformity (DoC) #20260527_1

In accordance with European Parliament and Council Decision No. 768/2008/EC Annex III we, Spectrum Technologies, Inc., a corporation validly organized and existing under the laws of the United States of America, having its principal place of business at 3600 Thayer Court, Aurora IL 60504 USA
declare under our sole responsibility that the below named

Product: FieldScout SC 950 Soil Compaction Meter

Model Name (Product Number): SC 950 (6950)

Object of the Declaration:

FieldScout SC 950 Soil Compaction Meter providing a means for determining the soil compaction level in PSI and kPa.

Specifications:

- Battery powered device (4 x AA batteries)
- 6.9cm (2.7") Backlit LCD Display
- Durable powder coated aluminium housing
- Removable / Interchangeable cone sizes required for proper operation

to which this declaration relates, conform with the relevant requirements of the Harmonized Legislations mentioned below. Specifically, but not limited, to the following harmonized standards and/or normative documents:

Harmonization Legislation:

2014/53/EU Radio Equipment Directive

2011/65/EU Restriction of Hazardous Substances Directive

Article 3.1(a) Safety of Information Technology Equipment

EN 62368-1:2020+A11:2020 (as applied to internal Bluetooth module Silicon Labs BGM13P where used)

EN 60950-1:2005(second edition) + Am 1:2009 + Am 2: 2013 (as applied to internal GNSS module Antenova Ltd. M20050-1 where used)

Article 3.1(b) Electromagnetic Compatibility

EN 61000-6-1:2019 Immunity for residential, commercial, and light-industrial environments

EN 61000-6-3:2021 Emission standard for residential, commercial, and light-industrial environments

EN 55032:2015/A11:2020 requirements (CISPR 32) Electromagnetic compatibility of multimedia equipment – Emission

EN 55035:2017 requirements (CISPR 35) Electromagnetic compatibility of multimedia equipment – Immunity

EN 301 489-1 V2.1.1 EMC standard for radio equipment and services; Part 1 (as applied to internal Bluetooth module Silicon Labs BGM13P and GNSS module Antenova Ltd. M20050-1 where used)

EN 301 489-1 V2.2.3; 2019-11 EMC standard for radio equipment and services; Part 1: Common technical requirements

EN 301 489-3 V2.3.2; 2023-01 EMC standard for radio equipment and services; Part 3: Specific conditions for Short-Range Devices

EN 301 489-17 V3.1.1 EMC standard for radio equipment and services; Part 17 (as applied to internal Bluetooth module Silicon Labs BGM13P where used)

EN 301 489-17 V3.3.14; 2024-09 EMC standard for radio equipment and services; Part 17: Specific conditions for Broadband Data Transmission Systems

EN 301 489-19 V2.2.1; 2022 EMC standard for radio equipment and services; Part 19: ... GNSS receivers operating in the RNSS band providing positioning, navigation, and timing data (as applied to internal GNSS module Antenova Ltd. M20050-1 where used)
EN 303 413 V1.2.1 Global Navigation Satellite System (GNSS) receivers (as applied to internal GNSS module Antenova Ltd. M20050-1 where used)

Article 3.2 Spectrum Efficiency

EN 300 328 v2.2.2: 2017-02 Wideband Data Transmission Systems; 2.4 GHz Band; Emissions, EMC (as applied to internal Bluetooth module Silicon Labs BGM13P where used)
EN 300 440 V2.2.1 2018-07 Short Range Devices 1-40 GHz; Emissions; EMC
EN 303 413 V1.2.1 Satellite Earth Stations and Systems; Global Navigation Satellite System (GNSS) receivers; (as applied to internal GNSS module Antenova Ltd. M20050-1 where used)

Article 3.3 Other Requirements

EN 63000:2018 Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances



Thomas Whyte
Job Title: Senior Electronics Engineer, SC 950 Product Manager
Email: twhyte@specmeters.com
Date of issue: 07/07/26
Spectrum Technologies, Inc.
3600 Thayer Court, Suite 200
Aurora, IL 60504

UK Declaration of Conformity (DoC) #20260527_2

In accordance with BS EN ISO/IEC 17050-1:2010 we, Spectrum Technologies, Inc., a corporation validly organized and existing under the laws of the United States of America, having its principal place of business at 3600 Thayer Court, Aurora IL 60504 USA

declare under our sole responsibility that the below named

Product: FieldScout SC 950 Soil Compaction Meter

Model Name (Product Number): SC 950 (6950)

Object of the Declaration:

FieldScout SC 950 Soil Compaction Meter providing a means for determining the soil compaction level in PSI and kPa.

Specifications:

- Battery powered device (4 x AA batteries)
- 6.9cm (2.7") Backlit LCD Display
- Durable powder coated aluminium housing
- Removable / Interchangeable cone sizes required for proper operation

to which this declaration relates, conform with the relevant requirements of the Harmonized Legislations mentioned below. Specifically, but not limited, to the following harmonized standards and/or normative documents:

Harmonization Legislation:

2016 No. 1091 The Electromagnetic Compatibility Regulations 2016

2012 No. 3032 The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012

Safety of Information Technology Equipment

EN 62368-1:2020+A11:2020 (as applied to internal Bluetooth module Silicon Labs BGM13P where used)

EN 60950-1:2005(second edition) + Am 1:2009 + Am 2: 2013 (as applied to internal GNSS module Antenova Ltd. M20050-1 where used)

Electromagnetic Compatibility

EN 61000-6-1:2019 Immunity for residential, commercial, and light-industrial environments

EN 61000-6-3:2021 Emission standard for residential, commercial, and light-industrial environments

EN 55032:2015/A11:2020 requirements (CISPR 32) Electromagnetic compatibility of multimedia equipment – Emission

EN 55035:2017 requirements (CISPR 35) Electromagnetic compatibility of multimedia equipment – Immunity

EN 301 489-1 V2.1.1 EMC standard for radio equipment and services; Part 1 (as applied to internal Bluetooth module Silicon Labs BGM13P and GNSS module Antenova Ltd. M20050-1 where used)

EN 301 489-1 V2.2.3; 2019-11 requirements EMC standard for radio equipment and services; Part 1: Common technical

EN 301 489-3 V2.3.2; 2023-01 Short-Range Devices EMC standard for radio equipment and services; Part 3: Specific conditions for

EN 301 489-17 v3.1.1 EMC standard for radio equipment and services; Part 17 (as applied to internal Bluetooth module Silicon Labs BGM13P where used)

EN 301 489-17 V3.3.14; 2024-09 EMC standard for radio equipment and services; Part 17: Specific conditions for Broadband Data Transmission Systems

EN 301 489-19 V2.2.1; 2022 EMC standard for radio equipment and services; Part 19: ... GNSS receivers operating in the RNSS band providing positioning, navigation, and timing data (as applied to internal GNSS module Antenova Ltd. M20050-1 where used)

EN 303 413 V1.2.1 Global Navigation Satellite System (GNSS) receivers (as applied to internal GNSS module Antenova Ltd. M20050-1 where used)

Spectrum Efficiency

EN 300 328 v2.2.2 (2017-02) (as applied to internal Bluetooth module Silicon Labs BGM13P where used)

EN 300 440 V2.2.1 2018-07 Short Range Devices 1-40 GHz; Emissions; EMC

EN 303 413 V1.2.1 Satellite Earth Stations and Systems; Global Navigation Satellite System (GNSS) receivers; (as applied to internal GNSS module Antenova Ltd. M20050-1 where used)

Article 3.3 Other Requirements

BS EN 63000:2018 Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances



Thomas Whyte

Job Title: Senior Electronics Engineer, SC 950 Product Manager

Email: twhyte@specmeters.com

Date of Issue: 07/07/26

Spectrum Technologies, Inc.

3600 Thayer Court, Suite 200

Aurora, IL 60504



Declaration of Conformity
47 CFR § 2.1077 Compliance Information
Unique Identifier: FieldScout Soil Compaction Meter
3950 SC 950

Responsible Party – U.S. Contact Information

Spectrum Technologies, Inc., 3600 Thayer Ct. Aurora IL 60504
Phone: (800) 248-8873 or (815) 436-4440 Fax (815) 436-4460
E-Mail: info@specmeters.com Web: www.specmeters.com

Directive/Standard:

FCC Part 15: 2026: Emissions for Unintentional Radiators for USA (ANSI C63.4:2014)
ICES-003:2020: ITE Emissions for Canada (ANSI C63.4:2014)

FCC Compliance Statement

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an output on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced RF technician for help.

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

- (1) This device may not cause interference.
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

This Class (B) digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe (B) est conforme à la norme NMB-003 du Canada.



Proper Disposal of Waste Electrical and Electronic Equipment

This symbol when found on the product or packaging indicates that this product shall not be treated as common waste and that an effort to recycle materials should be made or may be required. Disposal of used and depleted electrical & electronic equipment may be subject to local laws and regulations for proper collection and recycling initiatives in the local area. This is applicable to areas within the European Union and other participating countries including the USA. The recycling of materials will help to conserve natural resources and prevent negative consequences of inappropriate waste handling at the end of a product's usable life.

For more information about the recycling of waste electrical and electronic equipment, please contact your local civic office, waste disposal service, or the shop where the item was purchased.

Warranty

www.specmeters.com

+1 (815) 436-4440

This product is warranted to be free from defects in material or workmanship for one year from the date of purchase. During the warranty period Spectrum will, at its option, either repair or replace products that prove to be defective.

This warranty does not cover damage due to improper installation or use, lightning, negligence, accident, or unauthorized modifications, or to incidental or consequential damages beyond the Spectrum product. Before returning a failed unit, you must obtain a Returned Materials Authorization (RMA) from Spectrum. Spectrum is not responsible for any package that is returned without a valid RMA number or for the loss of the package by any shipping company.

Changes, modification, or use of this product beyond the scope of this instruction manual may void the warranty and/or void the user's authority to operate the device.

Spectrum[®] ***Technologies, Inc.***

3600 Thayer Ct.
Aurora IL 60504
(815) 436-4440
Fax (815) 436-4460
E-Mail: info@specmeters.com
www.specmeters.com