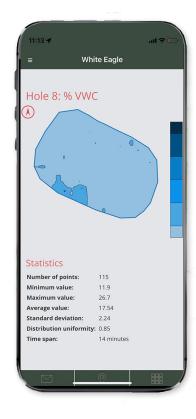


## FieldScout® Mobile App User Manual

Item #3035A, 3035B, 3035C







#### **GENERAL OVERVIEW**

The FieldScout Mobile App provides in field data collection from your Bluetooth FieldScout device to your phone. The FieldScout Pro features in the app can be utilized by purchasing a SpecConnect FieldScout Pro subscription (Item 3035A, B, or C) and uses the same login credentials as the SpecConnect web portal and app (purchased separately, contact us to place an order). FieldScout Pro automatically uploads measurement data to the SpecConnect web portal and launches enhanced features in the app not available in FieldScout Basic. Enhanced features include Guided Mode and Freeform Mode, overlaying measurements on satellite imagery, writing notes/comments associated with zones or sessions and sharing information with other FieldScout Pro users.

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This manual will familiarize you with the features and operation of the FieldScout Mobile App. Please read this manual thoroughly before launching the unit.

For customer support or to place an order, call Spectrum Technologies, Inc. at 800-248-8873 or 815-436-4440, FAX at 815-436-4460, or e-mail at info@specmeters.com.

www.specmeters.com Spectrum Technologies, Inc. 3600 Thayer Court Aurora, IL 60504

#### **Getting Started**



#### 1. Get the App: FieldScout Mobile

Search 'FieldScout' in the Apple App Store or Android Google Play Store.

#### 2. Turn on FieldScout Meter and Bluetooth

TruFirm: Press the ON button to power-up both the meter and the Bluetooth. TDR 150/350: Enable the Bluetooth capability on the meter's menu screen.

#### 3. Open FieldScout Mobile App

Select Basic login or use SpecConnect credentials for FieldScout Pro login.

#### 4. Add New Course or Farm

Select Course/Farm or add New Course/Farm. Each course/farm is a location.

#### 5. Start New Session

A session represents a sampling date/time. SpecConnect reports use sessions to organize data. Select meter type and give the session a name.

#### 6. Connect App to Bluetooth

Select Session mode (grid or freeform).

For Grid Mode, select the desired hole and surface. Tap a zone. Initiate pairing procedure by tapping the "Connect FieldScout Device via Bluetooth" button.

For Freeform Mode, activate Location capability on the phone. Pairing procedure will begin automatically.

#### 7. Take Measurements

Readings will stream to the app

For Grid Mode, use grid icon to return to the main grid screen to select the next sampling zone.

For Freeform Mode, the locations are tracked automatically by GNSS.

#### 8. View Data in the App or on SpecConnect

Track historical data and manipulate current data to show trends.

#### **SPECIFICATIONS**

#### Compatibility

Apple Bluetooth Low Energy devices Android Bluetooth Low Energy devices (partial list) Spectrum devices

- TDR 350/150
- TruFirm Item 6490S

#### Pairing FieldScout Device with FieldScout Mobile

The radio is activated when the TDR 350/150 or TruFirm meter is powered up. For some smartphone operating systems, it may be necessary to manually enable Location Services.

- 1. Activate Bluetooth feature on the smartphone
- 2. Open the app
- Tap the Course/Farm icon. Select an existing course or create, name and select a new course
- Select an existing session or create, name and select a new session. This will bring up the Select Session Mode (Figure 1). Select whether you are using Grid or Freeform (Pro version only) mode to collect data



SCAN TO DOWNLOAD

Collect data, evaluate trends and analyze

multiple data points!

Figure 1 - Session Mode Screen

- a. For Grid Mode, the Main Grid screen (Figure 2a) will appear. Confirm that the meter you are using appears at the top
  of the screen. If not, a new session must be created. Tap any of the zones to bring up the Take Reading screen
  (Figure 2b)
  - b. For Freeform mode, the app will immediately transition to the Take Reading screen (Figure 3)
- Tap the Connect FieldScout Device via Bluetooth button. If the Bluetooth feature has not been activated, you will prompted to do so.
- 7. The app will search for the Bluetooth device. It should appear in the list of scanned devices.



Figure 2a - Main Screen



Figure 2b - Bluetooth Connect Button (Grid)

After selecting the device, the App will be ready to take readings. Note: Although the device appears in the app, it may not show up on the phone's list of Bluetooth devices. Note: Do not pair the device with your phone.



Figure 3 - Bluetooth Connect Button (Freeform)

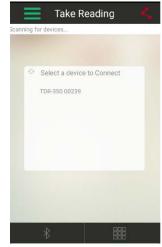


Figure 4 - Scanned Device List

#### SCREEN WALKTHROUGH

#### **Home Screen**

The Home Screen (Figure 5) is displayed when the app is opened and the user has logged in. From the Home screen, you can navigate immediately to a Course/Farm, an existing Session, the Settings screen and the About Spectrum page. From any other screen, the Home screen can be accessed by tapping the icon with 3 parallel, green lines (Figure 6) and selecting "Home" from the menu.



Figure 5 - Home Screen

#### Main Grid Screen

After selecting a grid mode session, you will be taken to the **Main Grid** screen (Figure 6). Here you can review the averaged data by hole and surface or access the measurement screen.

In Golf mode, select the hole number and surface type. Tap a zone to access the **Take Reading** screen and begin

recording data to the app from the meter. Tap and hold on a zone to begin the process of creating a user-definable configuration of zones.

Farm mode is similar but has no *Select Hole* option and the golf-specific surface names are removed.

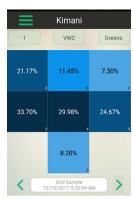


Figure 6 - Main Grid Screen

# Take Reading 1 TDR150/TDR350 Greens Zone Reading Counter: 2 VWC Zone Average: 20.65 Last Reading: 21.9 Zone Average: 0.03 Last Reading: 0.03 Petiod Zone Average: 245.5 Last Reading: 2454 Soil Francischurc Zone Average: 69.62 Last Reading: 70.16 Easing/ Januar Zone Average: 0.15 Last Reading: 70.16 Last Reading: 70.16 Last Reading: 70.16 Last Reading: 70.16 Last Reading: 0.14

Figure 7 - Take Reading Screen

#### **Take Reading Screen**

The Take Reading screen is displayed while making measurements in Grid Mode.

The value(s) measured by the FleldScout meter will be instantly transmitted to the app. Readings are automatically accepted and the zone's reading counter and average values are modified. Tap the Delete button to delete the most recent reading or all readings for this zone. When a reading is deleted, you are taken back to the Main Grid screen. Tapping the grid icon will also return you to the Main Grid screen. Continue taking measurements by selecting another zone or moving to a different surface/field. Tapping the Notes button allows you to enter notes on this specific zone.

Note: The hole number, meter type and surface/field cannot be modified from this screen.

#### **Settings Screen**

The **Settings** screen (Figure 8) can be accessed from the **Settings** button on the **Home** screen. This screen is used to select whether the app runs in **Golf** or **Farm** mode. If it is being used with the TDR 350, select the units temperature data. With either mode, it is possible to choose which color profile is used in the data screen and how that color scheme is sub-divided.

Click the "Configure Profiles" button to display the current list of available color profiles (Figure 9). Intially, only the Default profile will be displayed. Click the "Add New Profile" button to create a new profile. Type in the name of this profile and click "Save". Otherwise, select the profile you wish to use for the course or session of interest.

The app then displays the legend scale screen (Figure 10). The top toggle button allows you to indicate the data parameter for this scale. The options are TruFirm, VWC, EC, Period and Temperature. To adjust the current values, enter values in the top (minimum value) field and buttom (maximum value) field. Only the high value for the lowest range and the low value for

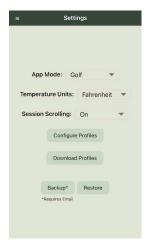


Figure 8 - Settings Screen

the highest range are entered in the keypad. The rest of the legend is auto-filled. Pressing and holding one of the color panels will take you to the Color Profile screen (Figure 11). You have the choice of 4 color schemes. Select the desired scheme and tap the "OK" button to return to the legend scale screen. Tap the "OK" button to save the changes. Tap the "Cancel" button to ignore the changes. The app will then return to the **Home** screen.



Figure 9 - Profile Selection Screen

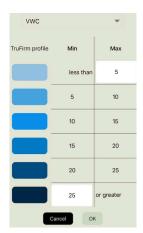


Figure 10 - Legend Scale Screen

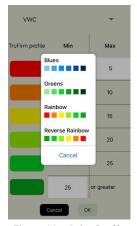


Figure 11 - Color Profile Screen

#### **MANAGEMENT**

#### Courses/Farms

Before a new data collection session can be created, the location where that data will be taken must be selected. For the Golf setting, this will be a Course. For the Agriculture setting, this will be a Farm.



Figure 12 - Select Course Screen

#### Selecting an Existing Course/Farm

From the Home screen, tap the Course/Farm button. This will bring up the Select Course/Farm screen (Figure 12). Select the desired Course/Farm name from the list.

#### **Creating a New Course/Farm**

From the Select Course/Farm screen, tap the Add New Course/Farm button. Enter the new name on the Course/Farm Name screen (Figure 14) and tap the Start button. This will take you back to the Select Course/Farm screen with the new course included in the list.



Figure 13 - Create Course Screen

#### Sessions

A data session identifies the date and time when data was collected. After selecting a course or farm location, the app will take you to the **Select Session** screen (Figure 14). If you are beginning a new session, tap the **Start a New Session** button. This will bring up the **Name Sessions** screen (Figure 15). Name the session and identify the type of meter you are using. Tap the **Save** button to return to the **Select Sessions** screen. Otherwise, if you would like to continue an existing session, select it from the list.

If you are logged in to the Basic version of the app, your only data collection option is grid mode and you will be taken to the **Main Grid** screen.



Figure 14 - Select Session Screen



Figure 15 - Name Session Screen

If you are logged in to the Pro version of the app, after selecting a session, you will be taken to the **Select Session Mode** screen (Figure 16). Select whether the data will be collected in Grid or Freeform mode. You will then be taken to the **Main Grid** screen or the **Freeform Data** screen.

Once in the data collection screen, it is also possible to navigate between sessions for the same surface/field and hole (golf mode only) by tapping the green arrows on either side of the session identifier window.

The red "minus" button allows you to delete a session. The green thumbtack icon allows notes to be included with the session (Figure 17).





Figure 17 - Session Notes

#### Sampling Site

BThe Zone Editing menu (Figure 18) is accessed by pressing and holding on any zone in the Main Grid screen. From here you can customize the configuration of zones at a given sampling location. This is useful for non-rectangular shaped sites such as a golf course green.

When a column is added, it is added on the far right side. When a row is added, it is added at the bottom. When a row or column is deleted, the row or column is removed is the one in which that cell is located. The grid has a maximum of 5 rows and 5 columns. If the Delete this Cell option is selected, that individual cell will be deactivated and grayed out. The Add Cell option can only be used to reactivate cells that have already been removed. When a cell is added, the reading from that cell will reappear.

The final two options are only available for the Pro version. The Add Notes option is specific to the selected zone and is the same as the notes button on the Take Reading screen. The Set Profile option allows you to change the color profile associated with this site. If this option is set to "Default", the course profile is used.



Figure 18 - Zone Editing

Below shows some examples of manipulating the default 3 x 3 grid to create a customized shape. Modify the zone configuration to better approximate the shape of the area being sampled.



Figure 19 - Freeform Sampling

#### **MODES**

#### Freeform Mode

Freeform Mode (Pro version only) allows the user to take measurements without the constraint of grid zones. Instead of averaging all measurements taken in a zone, each measurement taken in Freeform Mode will be shown independently as a color-coded pushpin icon (Figure 19). The Freeform Data screen can be reached by selecting the Freeform option in the Select Session Mode screen or by clicking the Freeform Mode icon on the Main Grid screen.

Any pushpin can be moved. Press and hold the pushpin until it moves slightly above its current location. Slide you finger to the new position. When you release your finger, the pushpin will be placed in the new location. When a data point is moved, the GPS coordinates for that data point are also adjusted based on where they appear in the satellite image.

A snapshot of the data for any individual data point can be seen by tapping one of the pushpins. This will bring up a data summary screen (Figure 20). A note can be added to the data point by clicking the thumbtack icon. The red "minus" button allows you to delete the point. The "x" button closes the data summary screen. There are three icons at the bottom of the screen:



The Bluetooth icon turns the Bluetooth radio on or off



VWC: 21.9 EC: 0.02

Period: 2453

Temp: 72.5 Salldx: 0.09



The envelope icon opens up the phone's email app and allows you to send a snapshot of the freeform map as an attached file



The grid icon takes you to the Main Grid screen.

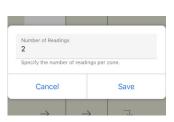


Figure 21 - Selecting Number of Readings per Zone



Figure 22 - Guided Zone Sampling Pattern

#### **Guided Mode**

Guided Mode allows you to take a complete set of grid readings of a surface (or field) without having to tap the grid location before entering each zone. It is selected by tapping the Guided Mode icon from the bottom of the Main Grid screen.

First, choose how many readings per zone to take (Figure 21). This number can be modified by tapping the small pencil icon at the bottom of the zone sampling pattern screen (Figure 22). Second, choose a horizontal or vertical serpentine path by tapping the appropriate button at the bottom of the zone sampling pattern screen. Click the first zone to start and begin taking measurements with the FieldScout meter. The app automatically progresses to the next zone after the required number of readings has been taken.

The app will track progress by highlighting the current zone and showing a readings counter in the bottom right corner of the zone.

### DATA & IMAGES Managing Data in SpecConnect

#### **Sending Data**

FieldScout Pro users will automatically transmit their measurement data, as it is taken, from the app to their SpecConnect web portal account when their phone is connect to a WiFi network or allows the use of cellular data. The SpecConnect icon in the top right indicates if the data is synced (red) or not (gray).



#### **Viewing Data**

There are two ways to view data in SpecConnect. Identify the desired date range and select the session from the dropdown menu.

- To view grid (Figure 23) or freeform data for a selected parameter just as it appears in the app, select the device from the Equipment page. For data taken in Golf mode, use the surface dropdown list to scan to the selected hole and suface. Click the "Settings" button in the lower right corner to select a color profile and adjust the range scale in the same way as it is done in the app.
- SpecConnect also offers a Trend Report (Figure 24) for data taken with FieldScout meters. Select the surface and parameter of interest. The Trend Report will create box plots by date or by session. The average, minimum and maximum values for each segment can be viewed by hovering the mouse over that segment.

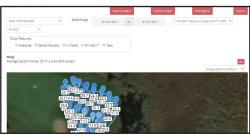


Figure 23 - Freeform Data Map



Figure 24 - Trend Report

Use the Export button to download a comma delimited (.csv format) file of the selected session to your computer. Only the average data for a grid zone will be transferred to the exported data file.

#### **Satellite Images**

**Exporting Data** 

FieldScout Pro users can overlay measurement data on top of a satellite image of their site. Click the satellite button at the bottom of the **Main** screen to add the map. Initially, the map will be centered at the phone location, but the image can be resized, moved and rotated by pinching and swiping with your fingers. The GPS coordinates associated with the data laid over the image are for the center of the zone location. This enhanced image can be replicated in SpecConnect if it is assigned a GPS location in the app.



#### **Emailing Images**

Both FieldScout Basic and Pro users can email images of their measurement grids. Click the email button at the bottom of the **Main** screen. Tap "Select Session" and select the session of interest from the list. Only sessions for the current Course/Farm will be listed. Tap the "Send Email" button to open the email app on your phone. Type in the destination of the email. The default email Subject is the date and time of the sampling session. This can be modified to something more descriptive. Text can also be entered into the body of the email. The images of the currently visible grid for that session will be sent as an attached file.



#### **TROUBLESHOOTING**

Getting the "You have exceeded your SpecConnect FieldScout Pro device subscription limit. Please contact support." message.

FieldScout devices require subscriptions to connect to SpecConnect. Contact Spectrum Technical Support if you have purchased a subscription for this device, or Sales if you wish to purchase a subscription.

#### **WARRANTY**

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, 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.