FIELDSCOUT TruFirm

USGA

TruFirm
Turf Firmness Meter

PRODUCT MANUAL

Item #6490, 6490S, 6491S

Spectrum®
Technologies, Inc.

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This manual will familiarize you with the features and operation of your new Field Scout TruFirm Turf Firmness Meter. Please read this manual thoroughly before using your instrument. For customer support, or to place an order, call Spectrum Technologies, Inc. at 800-248-8873 or 815-436-4440 between 7:30 am and 5:30 p.m. CST,
FAX at 815-436-4460, or E-Mail at info@specmeters.com.
www.specmeters.com

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General Overview

Based on technology developed by the USGA, the Field Scout TruFirm Turf Firmness Meter is used to measure the firmness of sports playing surfaces, especially golf greens, fairways and bunkers. The device consists of an impact plunger and a rotary position sensor. Once motion of the plunger is detected the electronics will collect and process the signal and send a measurement to an LCD display. The measurement may also be streamed to a handheld device via a wireless communications protocol using a Bluetooth accessory (items 6490S, 6491S).

Specifications

Power: 2 AA batteries (included)

Weight: 4.3 lb. (1.95 kg)

Height: 27 in (69 cm)

Height: 46 in (117 cm), with plunger extended

Diameter of Plunger: (1.68 in, 4.27 cm)

Measurement units: Depth of travel (inches)

Range: 0.1 in - 1.5 in

Resolution: .01 in at 1.00 in - 1.50 in

.003 in at 0.100 in - .999 in

Display: LCD with backlight
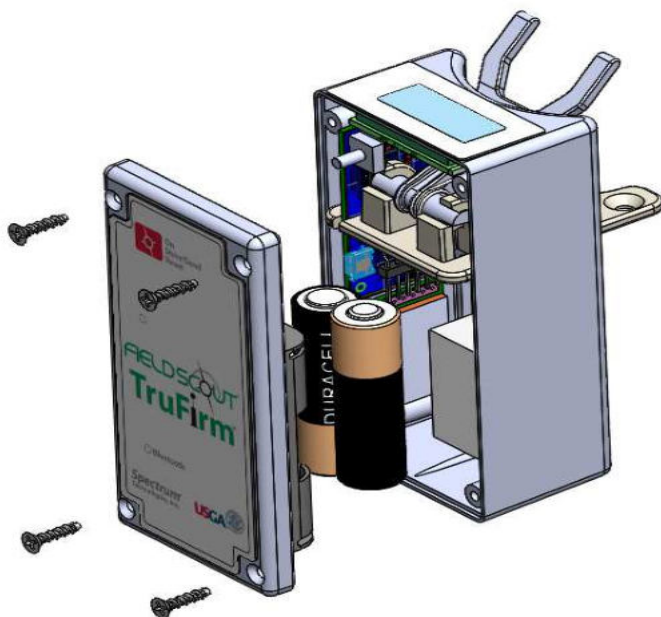
Component Part Names

Collar

Actuator Arm

Plunger Shaft

Button

Base

Foot Support

SET UP

The TruFirm unit requires 2 AA Batteries (included). They are installed inside the plastic housing. Remove the four screws holding the lid in place to access the battery holder.

Note: If the TruFirm will not be used for an extended period of time (over one month), it is recommended that you remove the batteries.

Using the TruFirm

The TruFirm Model measures the depth the plunger depresses a surface when it is released from a set height. The value of this depth is displayed on an LCD readout.

The unit will also display the average of a series of measurements and the number of measurements included in the average on its LCD.

Activating/Deactivating the Display:

The unit is activated by briefly pressing the Button. The LCD will display the percent battery life for 5 seconds and then show zeros when it is ready to take a measurement.

The TruFirm will power off after 5 minutes of inactivity.

Taking a reading:

1. Place the unit on the surface being measured. If the surface is sloped, orient the Base so that it is pointing downhill.

2. Step lightly on the Foot Support. This will ensure the unit does not tip over after the reading is taken.

3. If the Display is blank, press the Button briefly and wait for the unit to turn on.

4. Lift up the Plunger all the way. The display will now show the number of measurements that have been included in the average (or zero for the first reading).

5. Release the Plunger so that it drops smoothly.

6. On the first measurement, the value of the current measurement is displayed. For subsequent measurements, the LCD will display the current reading for 2 seconds and the average after 2 seconds.

To reset the average, press the Button briefly while the average value is being displayed. If the average is not reset, the next reading will be included in the average as well. The average will also be reset if the meter is powered off.

Lift plunger straight up to top of travel. Use foot support to stabilize the unit.

Release smoothly to avoid affecting drop speed.

FieldScout Mobile App

Using the FieldScout Mobile app

Download the free FieldScout Mobile app in the App Store or Google Play Store.

The FieldScout Mobile app will run on iOS (Apple) and Android smart devices with Bluetooth Smart. The App receives readings directly from a TruFirm firmness meter that is equipped with Bluetooth Smart (item 6490S) or basic and legacy units that have been upgraded (see **Bluetooth Option**, p. 9). The FieldScout app for Android can also receive data from legacy TruFirm meters with Bluetooth (item 6490B).

The FieldScout Mobile app allows you to store firmness measurements on multiple courses, multiple holes, multiple surfaces (green, fairway, etc.) and at multiple times (sessions). It will also allow you to define additional surfaces from those pre-defined. The App has a reporting function that plots the measurements. See the FieldScout Mobile app manual for more information on using the app.

FieldScout Pro for SpecConnect (item 3035) users can sign in to a Pro account in FieldScout Mobile using their SpecConnect username and password. FieldScout Mobile Pro users can use Pro features in the app as well as transmit all TruFirm data to the SpecConnect Cloud. Call Spectrum Technologies or look online for more information on the SpecConnect FieldScout Pro web portal.

Bluetooth Option

FieldScout TruFirm meters can be purchased with a Bluetooth Smart module installed (item 6490S), or an optional Bluetooth Smart upgrade (Item 6491S) is available for the original TruFirm (item 6490) or original TruFirm with Bluetooth (item 6490B). The Bluetooth module transmits the TruFirm depth measurement to a connected Bluetooth device. It is designed to be used with the FieldScout Mobile app for iOS and Android. Note: Only the actual measurement, not the average, is transmitted. The FieldScout Mobile app will average readings for each measurement zone.

The Bluetooth module, when installed, will automatically send each measurement. A separate FieldScout Mobile manual is available for the app.

Pairing the TruFirm Bluetooth Smart module to a smart device:

The TruFirm meter and the smart device must be paired to share data. In the app, create a new course and data session, then tap on the desired measurement zone to access the Take Readings screen. The app will guide you through the process of connecting to a Bluetooth device.

The App will only pair with one FieldScout meter at a time. The FieldScout Mobile app is also compatible with the TDR 300.

When powered on, the TruFirm is always in pairing mode. No additional steps are required on the TruFirm to allow your Apple or Android device to search for and pair with the TruFirm. Consult the FieldScout Mobile user manual for additional information on pairing your device with the TruFirm.
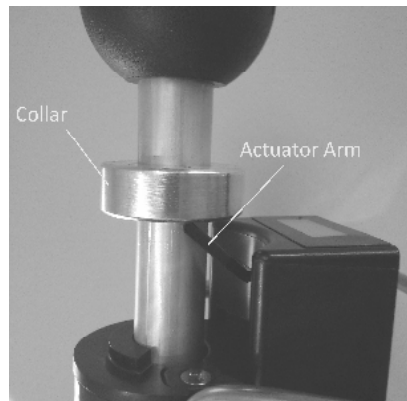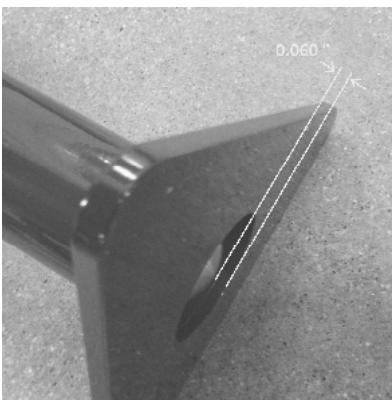
TroubleShooting

Resetting The Zero Point

The TruFirm is calibrated at the factory and should not need recalibration under normal usage. If the unit is disassembled or the collar is moved for any reason the collar point should be reset.

Start by placing the TruFirm on a hard flat surface such as a floor or table top with the plunger raised 0.06". This can be accomplished by placing a flat object about the thickness of 15 sheets of paper under plunger. The collar should just touch the actuator arm in its up-most position as shown below when the plunger is raised 0.060" above the bottom of the base. The flat object should only raise the plunger, the base must remain on the flat surface.

To adjust the collar, loosen the bolt in the collar until it slides easily. Make sure the collar is not depressing the actuator arm and then retighten the bolt.

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, 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.

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