



# TruFirm Turf Firmness Meter

## PRODUCT MANUAL

Item #6490, #6490B, #6491



***Spectrum***<sup>®</sup>  
***Technologies, Inc.***

# TABLE OF CONTENTS

General Overview	3
Specifications	3
Component Part Names	4
Setup	5
Using the TruFirm	6
TruFirm App	8
Bluetooth Option	9
Troubleshooting	13
Warranty	15

---

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](mailto:info@specmeters.com).

[www.specmeters.com](http://www.specmeters.com)

Spectrum Technologies, Inc  
3600 Thayer Court  
Aurora, IL 60504

---

# 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 (Item #6491).

## 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

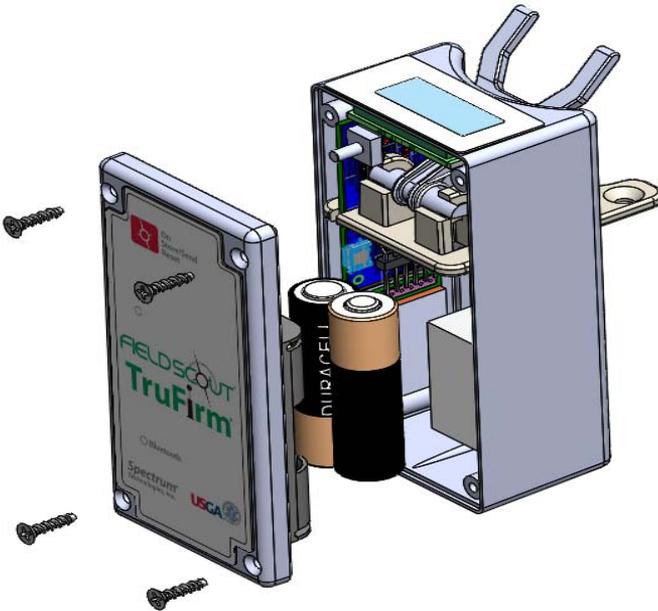
---



# 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.

# TRUFIRM APP

---

## **Using the TruFirm Android App**

The TruFirm Android App will run on select Android Smartphones, Players, and Pads. These devices must be running Android 2.2.1 or newer and have Bluetooth communications. The App receives readings directly from a TruFirm firmness tester that is equipped with Bluetooth.

The TruFirm 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 TruFirm App manual for more information on using the App.

# BLUETOOTH OPTION

---

An optional Bluetooth module (Item #6491) is available for the TruFirm. The Bluetooth module transmits the TruFirm depth measurement to a connected Bluetooth device. It is designed to be used with the USGA TruFirm App on an Android device. (Note: Only the actual measurement, not the average, is transmitted. The TruFirm App will average readings, if desired.)

The Bluetooth module, when installed, will automatically send each measurement. A separate TruFirm App manual is included with the Bluetooth attachment.

## **Pairing the TruFirm module to the Android device:**

Prior to use, the firmness tester and the Android unit must be paired. The App will only pair with one Android device at a time. **When powered on, the TruFirm is always in pairing mode.** No additional steps are required on the TruFirm to allow your Android device to search for and pair with the TruFirm. Consult the TruFirm Android App user manual for additional information on pairing your device with the TruFirm.

# TROUBLESHOOTING

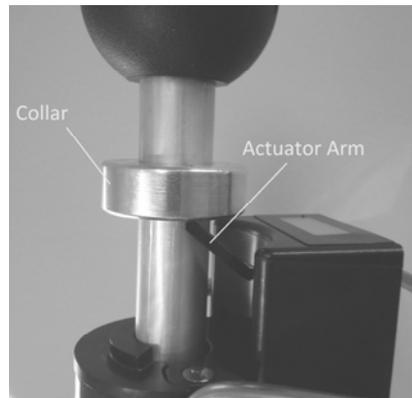
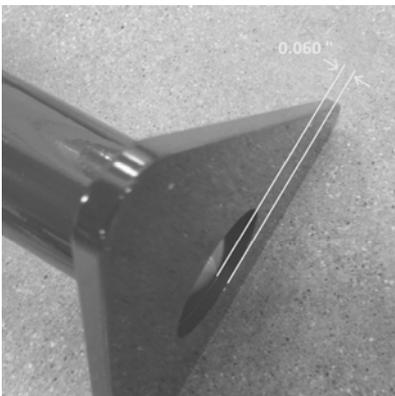
---

## 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.

***Spectrum<sup>®</sup>***  
***Technologies, Inc.***

**3600 Thayer Court  
Aurora, IL 60504  
(800) 248-8873 or (815) 436-4440  
Fax (815) 436-4460  
E-Mail: [Info@specmeters.com](mailto:Info@specmeters.com)  
[www.specmeters.com](http://www.specmeters.com)**