

Instruction Manual

L-Series Cellular Soil Moisture Sensors

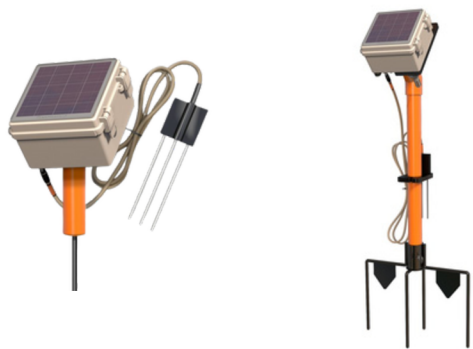


Table of Contents:

Welcome Video.....	2
Download the EarthScout Mobile App.....	2
Field Installation Guide.....	4
Outdoor Grow Table.....	6
Uninstalling Your EarthScout.....	7



EarthScout Setup Steps

1. Watch EarthScout Welcome Video

Activate your camera on your phone and hold the camera over the QR code to the right. A link to the EarthScout YouTube Channel (www.youtube.com/@earthscoutLLC) should appear. Tap the link and watch the “Welcome to EarthScout” video.

2. Download the EarthScout Mobile App

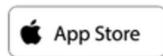
The EarthScout app is easy to install and simple to use. Activate your camera on your smartphone and hold the camera over one of the QR codes shown on the right to download the EarthScout app for your Apple or Android phone or tablet. It only takes a few minutes.

3. Sign In to the EarthScout Mobile App

Go to the EarthScout YouTube Channel and watch the EarthScout “Email Invitation & Sign In” video. The video will walk you through the steps to sign in to the desktop and mobile app. Also check out the other EarthScout App tutorials to learn how to access your field data.



EarthScout
YouTube





EarthScout® Field Installation Guide

L-Series Outdoor Models

EarthScout Installation with Burial Tube Video

If you purchased a burial tube with your EarthScout scan the QR code to watch a video with detailed instructions on how to install. If you don't have a burial tube, follow the directions below.



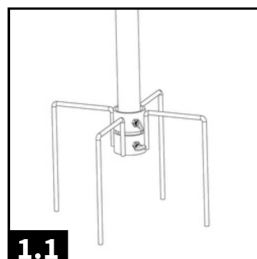
EarthScout YouTube

What You'll Need:

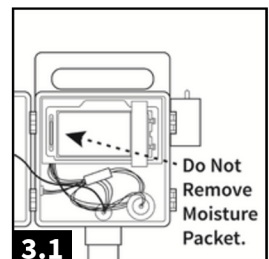
- 15-20 Minutes
- Earth Auger or Shovel
- Tape Measure
- Garden Trowel
- Pocket Knife
- Smartphone with EarthScout App

EarthScout Installation Step-by-Step Guide

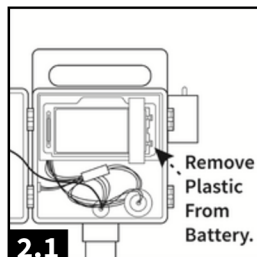
Step 1: Remove EarthScout from packaging and stand up device on level ground, being careful it doesn't tip over. (Fig. 1.1).



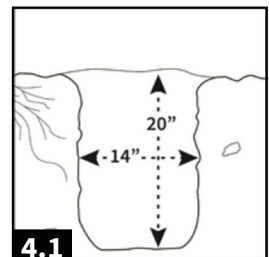
Step 3: Close door by fastening clasps on side of gray box. **Do not remove moisture absorbing packet** (Fig. 3.1).



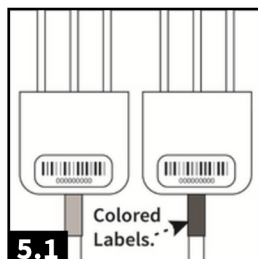
Step 2: Power on the device, unclasp clips on side of the gray box and open the door. Insert the battery making sure to remove any plastic coverings on the battery terminals. Ensure the metal tabs of the battery are making a good connection with the metal tabs in the battery housing (Fig. 2.1).



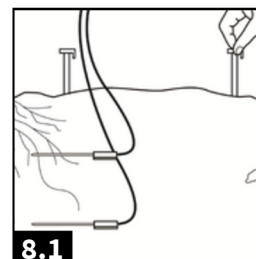
Step 4: Choose location for Soil Sensor placement at edge of root zone 12 to 20-inches from plant. Use earth auger or shovel to dig a hole wide enough to insert the soil sensor horizontally into the sidewall of the hole and deep enough to install to desired monitoring depth. Avoid cutting roots (Fig. 4.1).



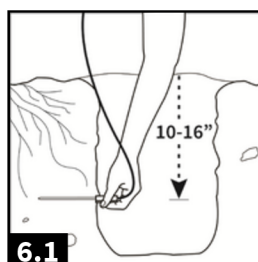
Step 5: Remove black cap from soil sensors. If you have two sensors, hold them as shown and take a photo of the sensor serial numbers (Fig. 5.1). Save image for reference.



Step 8: Backfill hole and make cables exit hole close to plant as shown. Compact dirt to match surrounding soil to avoid water pooling. Optional: put 1st survey stake above sensors and 2nd on opposite edge (Fig. 8.1). *If you are installing with a burial tube skip this step.*



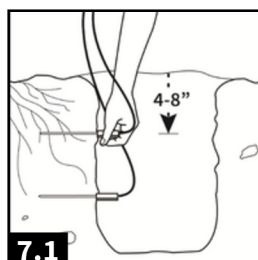
Step 6: Holding the first sensor level reach down into the hole and insert the sensor into the sidewall of the hole at the desired depth. (Fig 6.1). See Grow Table on next page for recommended sensor depth by crop.



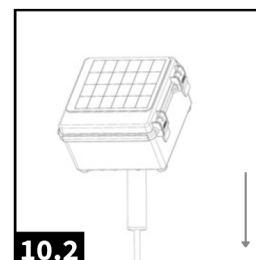
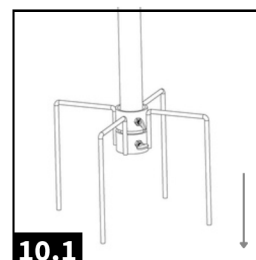
Step 9: Face solar panel of EarthScout south to ensure the best light for charging (Fig. 9.1).



Step 7: If you have a second sensor, insert it horizontally above the first sensor to compare soil data at two depths (Fig 7.1).

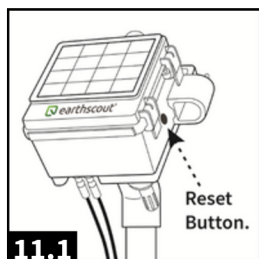


Step 10: Press the legs or stand of the unit into the ground near the installation hole (Fig 10.1). If crop grows taller than the EarthScout unit, add a marker flag for easier location identification.

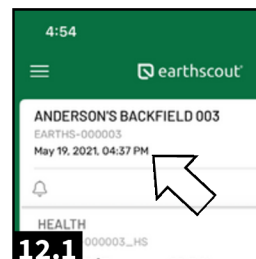


Test Your EarthScout Before Leaving Field

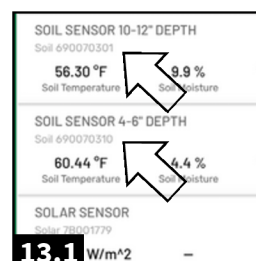
Step 1: Test your EarthScout by pressing the black reset button on outside of gray box, or inside the box under the battery compartment. The button will light up briefly during data transfer (Fig.11.1).



Step 2: Check EarthScout App dashboard polling data timestamp on phone (Fig. 12.1). If the time didn't update to a current time after pressing button, press it again. First Data Transfer may take a few minutes to appear in the App.



The two soil sensors should appear on your app dashboard. Reference your photo of the sensors to know which serial number represents the deep sensor (e.g. 690070301), and which one is shallow (Diag. 12.2). We recommend renaming your sensors based on their installation depths for easier data interpretation in the App



If you are seeing data in your EarthScout Mobile APP with the correct date/time stamp, your EarthScout install is complete. If you are experiencing issues or have any questions, please visit our FAQ page or call customer support at 877-443-7632.

EarthScout® Outdoor Grow Table

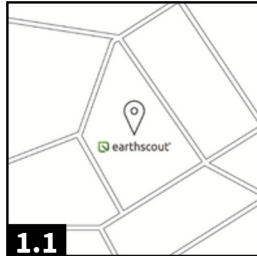
Reference this chart with recommendations on sensor depth and placement. This is simply a guide, sensor placement is flexible and should be based on your specific wants and needs.

Crop Type	Root Depth Shallow/Deep		Typical Root Structure	Sensor Placement (prongs horiz. unless specified)
Corn	8"	12-16"	Fibrous with seminal and nodal roots.	Within 1 foot of the row, prongs going through the row and within 1 ft. of the specimen plant.
Soybean	6"	12"	Taproot with linear lateral roots forming squared or elongated cone. Up to 2' depth & strongly effected by soil structure.	Within a foot of the specimen plant, prongs facing the row or the plant. Lighter soils may mean up to 2' effective root depth.
Wheat	8"	16"	Fibrous, mat-like structure.	Prongs going through the planting row.
Cotton	8"	16"	Taproot with deep cone.	Within the row or through the row, between plants
Truck Crop (Produce)	6"	12"	Strongly species dependent and great variability within the group.	Within 18" of the specimen plant, prongs within the row or under mulch facing the plant or along side.
Strawberries	2-4"	6-12"	Fibrous shallow root system	Tines faced toward plants in between rows or placed
Potato	4"	12"	Fibrous shallow root system	Tines faced toward plant in mound at various depths or placed in between rows with tines facing toward the plant
Most Fruit & Nut Trees	4-6"	10-16"	Taproots common but also fibrous or framework-style secondary roots, structure depends on branch pruning techniques and spacing.	Inside the drip line, prongs facing any direction. Place 1-3" from main trunk and prongs facing into row if trellised.
Turfgrass, Med Height	2"	6"	Fibrous, mat-like structure.	Prongs facing in direction of water flow.
Turfgrass, Greens Height	1-2"	4-6"	Fibrous, mat-like structure.	Prongs facing into the green, and/or in direction of water flow.
Grapevine	8"	Call Agronomist	Varies, depending on pruning, stock age and soil conditions.	Near permanent irrigation structures, or between emitters, prongs facing row or trunk. Place close to emitters to reduce overwatering.
Hemp (low pop. and/or seed start)	6"	12"+	Taproot with deep core.	1-1.5' from center of plant.
Hemp (high pop. and/or transplants)	4"	8"	Mostly fibrous, expect mass of roots within 4-10"	Between plants, in the row.

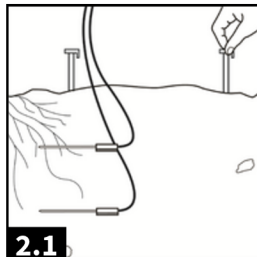
Uninstalling Your EarthScout

To properly uninstall EarthScout, you will need a hand trowel and towels to clean it before re-use or storage.

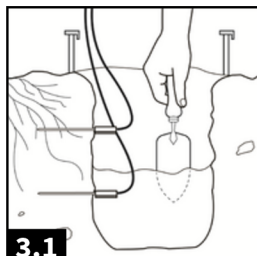
Step 1: Locate EarthScout on property using GPS coordinates or flag marker, and travel to that location (Fig. 1.1).



Step 2: Locate 2 survey stakes (if used) around edge of hole, marking where sensor(s) are buried (Fig. 2.1).

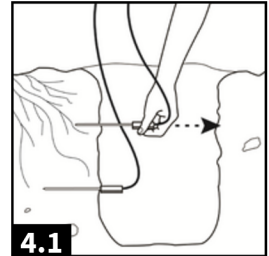


Step 3: Using hand trowel, excavate hole starting at the survey stake furthest away from the plant. Dig straight down. Remove dirt, carefully working towards cords and sensors (Fig. 3.1). Using a small hand trowel is preferred over a shovel, as it reduces the risk of damaging sensor cords during the uninstallation process.

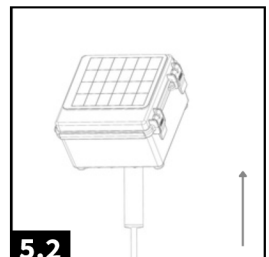
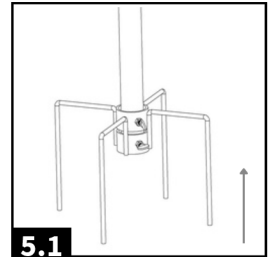


*If you have a burial tube installed, remove the cover and remove sensors carefully. Place the cover back on the tube when finished or remove the tube completely if you will not be installing in that location again

Step 4: Remove sensors by pulling horizontally from root zone (Fig. 4.1). **DO NOT PULL ON CABLES DURING UNINSTALL, THIS MAY CAUSE DAMAGE TO THE SENSOR.** Clean sensors with cloth, coil cords and place in holder.



Step 5: Gently pull the EarthScout legs or stake out of the ground. Wipe down with a clean cloth for storage. Store your EarthScout unit in a cool, dry, safe place (Fig. 5.1).



Tips

- If you remove sensors from an EarthScout unit, take note which sensor goes with which EarthScout unit to ensure the same sensor configurations at the next installation.
- Make sure to remove the battery from your unit while it is in storage or the unit will continue to take readings until it dies.
- Charge the EarthScout's battery before installing again next season.

Don't forget to check out all of the great App tutorials
and case studies on our Youtube Channel at
www.youtube.com/@earthscoutLLC



EarthScout YouTube

We understand the importance of having a strong support
network for our customers. If at anytime you need assistance,
please call 877-443-7632. We want you to be 100% satisfied
with your new EarthScout.



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