



LESSON 4.1: INTRO & SETUP OF ELECTRONIC TOTAL STATION AND DATA COLLECTOR

Introduction

Like all electronic measuring devices, the Electronic Total Station comes in a variety of sizes, shapes, and colors with each having its' own procedures for start up and measuring. For now, let's not worry about which brand of total station we use in the field but instead, focus on the basic principles for setting the Total Station up over a control point and plugging it into a Data Collector--It's practically the same procedure for all.

In this lesson you will be introduced to the proper care, setup, and use of the Electronic Total Station and Data Collector for measuring and recording horizontal and vertical angles and horizontal distances. You will also watch video lessons on how basic Trigonometry and Coordinate Geometry are applied to your turned angles and distance measurements while in the field. After working through the lessons you will be required to know the proper care, setup, and use of the electronic Total Station and Data Collector for measuring angles and distances. In addition, our field lab will require you to submit to your instructor a properly setup Field book containing pertinent field conditions, crew, and data--to include station and backsight setups and field sketch's.

- Watch the video lessons below.
- Take the Review Quiz 4.1 after watching the videos.

In the webpage and following videos you will be shown the proper procedures for setting up the "Gun" and Data Collector in the field and how basic coordinate geometry and trigonometry are applied to our measurements in the field.

Start Here: Read the following information on Angles and Directions: <http://surveying.structural-analyser.com/chapter06/>

Videos:

- [SETTING UP A STATION](#)
- [MEASURING VERTICAL ANGLES](#)
- [HOW TO MEASURE A HORIZONTAL ANGLE](#)
- [HOOKING UP THE RECON DATA COLLECTOR TO A TOTAL STATION](#)
- [ADDING POINTS TO THE RECON DATA COLLECTOR](#)
- [TAKING A SIDESHOT WITH THE RECON DATA COLLECTOR](#)

Review Quiz

- Review Quiz 4.1



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