Chapter 2

The Trimble TSC2 Data Collector

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2. The Trimble TSC2 Data Collector

A. Introduction

In 2008, WYDOT began purchasing Trimble TSC2 data collectors. These data collectors were initially used to operate Trimble GPS receivers. The TSC2 controller is now used to operate optical total stations as well. The TSC2 utilizes Bluetooth technology to connect to the newer Trimble S6 robotic total station which eliminates cable hookups and expedites setup. However, a cable is required to operate the older Trimble 5600 series and Geodimeter 620 optical total stations.

The TSC2 data collector is equipped with an internal 2.4 GHz radio that enables the surveyor to operate the S6 total station remotely. When the TSC2 data collector is attached to the prism rod, a single person is able to perform stakeout or collection surveys without assistance.

Note: The data collector operations in this manual pertain only to conventional surveying. Surveying operations using the TSC2 with GPS equipment will not be covered.

Figure 2-1. Trimble TSC2 Data Collector.

B. TSC2 Keypad

As shown in Figure 2-2, The TSC2 has a full alphabetic and numeral keyboard. Some of the more commonly used keys are the *Power* key, *Enter* key, *Function* key, and *Trimble Function* key.

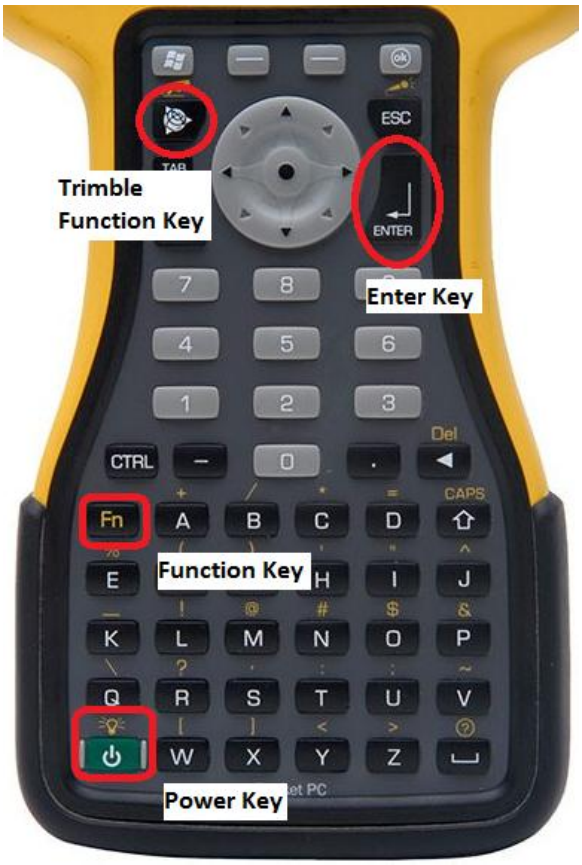

Figure 2-2. TSC2 keypad.

Note: Whenever the *Function* key (Fn) is pressed, the symbol or function above each key (displayed in yellow) is activated.

C. Operating the Data Collector

1. Turning the TSC2 on and off

To turn on the TSC2, press and release the *Power* button on the lower left portion of the keypad. To turn the controller off, press and release the *Power* button again.

2. Battery Life

Battery life is dependent on the application and operating environment. Using the backlight function is the most significant factor in battery life. Operating the data collector in cold temperatures may shorten the battery life by 30 to 70 percent.

3. Touch Screen

Utilize a stylus or any other device specifically designed for touch screen use. Using pens, pencils, nails, etc. will scratch and/or damage the screen. The use of screen protectors are recommended to protect the touch screen.

4. Using the Stylus

The touch screen on the data collector is similar to using a mouse with a PC. Use the stylus to navigate and select objects on the screen.

a. Tap

Tap the screen with the stylus to select or open an item. Tapping on the screen is equivalent to clicking on an item with the left mouse button on a PC.

b. Touch and hold

Touch and hold on the screen with the stylus to open a menu. This is equivalent to right-clicking with the mouse on a PC.

5. Start Menu

To display the Start menu, tap on *Start* from any screen. The following tools can be accessed from the Start menu:

- *Survey Controller*
- *Programs*
- *Settings*
- *Help*

Figure 2-3. Start menu.

6. Backlight

To turn the backlight on or off, press the *Fn* key and then the *Power* key.

7. Additional button functions

Several screen functions can be initiated from the keypad. Press the first key and then the second to initiate the action. The following table displays the most commonly used.

Backlight toggle	Fn +
Caps lock	Fn + CAPS
Delete	Fn + Del
Disable touch	Fn +
Start recording	Fn +
Windows Start	

Table 2-1. Keypad functions.

8. Resetting the Data Collector

Should the keyboard or touch screen become locked or frozen when the TSC2 is turned on, reset may be required. To reset the data collector, press and hold the *Power* button. After approximately five seconds, a countdown timer appears indicating that the controller will reset. Continue to hold down the *Power* button for another five seconds, then release it. The TSC2 briefly displays a "booting" screen and then a Trimble screen before restoring internal files. The screen will eventually reset to the Trimble desktop. No stored data will be lost during this procedure. Losing power will not impact any data, programs, or configuration setting other than the real-time clock.

9. Accessing the Survey Controller

To activate the survey controller main menu from the Desktop screen, scroll down to *Survey Controller* option as indicated by the red box in Figure 2-4 and press the *Enter* key or tap the screen. The *Trimble Function* key (see Figure 2-2) will also activate the survey controller main menu.

Figure 2-4. Desktop screen.

Figure 2-5. Survey controller main menu.

D. Help

As previously discussed, the Trimble *Help* function may be opened from the Start menu. It can also be opened by pressing the *Fn* key (see Figure 2-2) and then the *space* key as indicated by the red box in Figure 2-6. The help function can be accessed from any screen. When the *Help index* page is displayed, simply key-in the first few letters to search for the topic of interest. The display will then jump to the index list beginning with those letters. Once the desired topic is displayed, select it with the stylus to access the contents for an in-depth explanation.

Figure 2-6. Access the help function.

E. Operating Manuals

For a more complete guide to operating the Trimble TSC2 data collector, open the Trimble *Getting Started Guide.pdf*, *Help.pdf*, and *TSC2 Getting Started Guide.pdf*. These Trimble operating manuals can be accessed from the Trimble Survey Controller software CD.