

---

## 6. USING THE TRASE MEASURE SCREEN

### Making a Measurement with the Waveguide Connector

After all the correct parameters have been selected in the Trase Setup Screen, the MiniTrase is now ready for taking and recording moisture readings.

From the Trase Setup Screen, press the Home button at the bottom of the screen (Fig. 6-1).



Fig. 6-1

### Zero Set

Before making a series of readings with the Waveguide Connector (Fig.3-3), it is necessary to “Zero Set” the TDR Processor for the Waveguide Connector and cable to be used. This process establishes the zero time reference for the start of the microwave pulse down the waveguides.

Before you perform the Zero Set, attach the BNC fitting of the Waveguide Connector to the BNC Port on the front of the MiniTrase, as shown (Fig. 6-2a).



Fig. 6-2a



Fig. 6-2b

If there are any waveguides in the Connector handle, remove them, and place the Connector upright on its Clamping Knob so that the Waveguide Sockets are in the air, and not touching any object. (NOTE: For Slammer model use waveguides).

To “Zero Set”, tap the “Zero” button on the Palm terminal with the stylus (Fig. 6-2b). The Zero Set process will take a few seconds (Fig.6-2b). When the process is complete, “Zero Set” will appear in the terminal screen to confirm that the Zero Set was made correctly (Fig. 6-4). Tap “OK” on the Palm Screen.

## Zero Set Failure



Fig. 6-3

If the Zero Set is not completed successfully, an error message will appear on the terminal screen (Fig. 6-3). The most common error during the Zero Set process is not removing the waveguides from the Waveguide Connector before starting the process. Check connections and repeat the Zero Set process.



Fig. 6-4

Once the Zero Set is completed successfully (Fig. 6-4), the Waveguides may now be inserted into the Connector. Be sure to mount them properly as described in “Waveguide Connector and Waveguides” in Section 3, “Acquaint Yourself with the Parts.” NOTE: If the cable is changed you must “zero” again.

## Insert the Waveguides into the Soil

Push the Waveguides into the soil until their full length is in the soil (Fig. 6-5).



Fig. 6-5

---

**Make a Measurement**

Waveguides must be in intimate contact with the soil along their entire length to give accurate moisture readings. Both the standard stainless steel or coated waveguides must be in intimate contact with the soil. Air gaps will be interpreted as air space and will reduce the estimated moisture content value.

**Note**

Tapping on the Measure button will immediately start the measurement process. The Waveguide Connector must be inserted in the soil and ready for the measurement reading BEFORE tapping the Measure button. If the connector is not attached to the MiniTrase and the waveguides are not inserted in the soil, then a “Timeout” error message will appear in the screen.

To start the measurement process, tap the Measure button (Fig. 6-6a) from the Home Screen (or from the measure screen). This will immediately start the measurement process. “Measure” will appear in the terminal screen and it will take a few seconds for the process to be completed.



Fig. 6-6a

**Save the Reading**

Once the moisture reading has been taken, the date and time will appear in the screen, as well as the moisture value in percent and the Ka value of the reading (Fig. 6-6b). The reading may now be tagged before saving the data.



Fig. 6-6b

---

## Tag the Reading

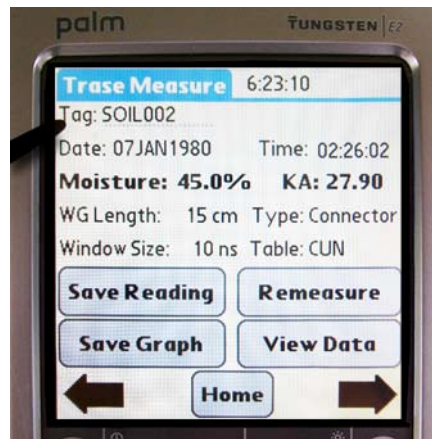


Fig. 6-7

The “TAG” input field (Fig. 6-7) is provided for you to further identify the reading such as the location where the reading was made or for other particulars associated with the reading. This is an 8-digit, alphanumeric field.

To enter a Tag, tap on the dotted line after the word TAG in the terminal screen. Use the Palm stylus to either enter the information with Graffiti or the on-screen keyboard to enter the desired tag label. The tag entered for this reading may now be saved with the reading. If no tag is entered, then the reading will be tagged with a default numeric value, starting with “1”.

### Store Readings/ Graphs

To store the moisture reading, together with its associated identification tag, you tap either the Save Reading or the Save Graph button on the terminal. If you select Save Reading, only the moisture value will be saved. If you select Save Graph, both the Moisture value and the graph will be saved.

### Note

All readings taken are stored simultaneously on both the Palm and the MiniTrase. However, if storing a graph, due to limited memory storage on the Palm, only the moisture reading is stored on the Palm. Graphs are saved and stored separately on the MiniTrase and must be downloaded directly from the MiniTrase to the PC for viewing.

Graphs are not currently viewable on the Palm terminal. They may only be viewed after the data is downloaded from the MiniTrase to a PC and then subsequently viewed in the optional WinTrase software.

### Remeasure Button

If, for any reason, you are not satisfied with the reading, tap the Remeasure button on the screen. This will show the new reading rather than the other one previously taken and the reading may be saved using the same tag information.

### View Data Button

After all measurements have been taken, you can verify that the data was properly stored by tapping the View Data button. The Trase Stored Readings Screen will be discussed in more depth in the next section.