• Handi-TRASE unit consists of a Trase™ Time Domain Reflectometer (TDR) and an Android Tablet.

Fig. 1. A Handi-TRASE Unit.

• Handi-TRASE should arrive already charged and ready to use. Use the power adaptor to recharge it if needed. For more details about the Android Tablet refer to its User Manual.

Fig. 2. Charge Handi-TRASE using its power adaptor.
• Connect the Handi-TRASE unit to the Slammer Probe using the coaxial cable.

![Diagram showing connection between Handi-TRASE unit and Slammer Probe]

**Fig. 3. Main Components of a Handi-TRASE system.**

• Push and hold the Power button to turn on Handi-TRASE.

![Image of the Handi-TRASE unit with a marked Power button]

**Fig. 4.**
• Once the Tablet is initiated, swipe up on the screen to unlock the tablet. If the date and time is not correct, set the correct date and time (refer to the Tablet Manual for more details).

![Fig. 5.](image)

• Touch the Handi-TRASE application icon to start.

![Fig. 6.](image)
Get familiar with the Handi-TRASE application main page:

1. GPS coordinates. If red, then there is no GPS reception.
2. Makes a soil moisture measurement.
4. Zero Button initializes the probe.
5. Cable Test Button (not covered in this document).
6. Current Settings for Cable Test.
7. Select location list.
8. Number of readings saved.
9. Device settings
10. Help Menu
11. Current date and time
12. User Name. It is not visible when Logging in is not required.
13. Battery status
14. Unique serial number of the reading (automatically assigned).
15. Measured soil moisture (volumetric moisture content).
16. Apparent dielectric permittivity.
17. Date and time of the last reading
18. Prints the reading info
19. Shows the reading waveform and other details.
20. Progress bar
21. Add, edit, or delete location info
22. Access saved readings
23. Administrative settings (not covered in this document).
24. Exits the Handi-TRASE application
- **Adding a New Location:**
  - Touch the “Edit Locations” link.

  ![Fig. 8.](image)

  If you do not have any location already saved, then you’ll go directly to the “Add Location” page. If you already have some Locations saved, then you’ll go to the “Locations” page. Here you can select a location to edit or delete, or add a new one.

  - To add a new Location (if you are in the “Locations” page), touch the “Add Location” button.

  ![Fig. 9.](image)
Enter the Location name in the corresponding field (maximum 10 characters). You can also add descriptions.

If you are currently at this location, you may optionally press the “Get GPS” button to assign your current GPS coordinates to this entry.

Touch “Save” when done. It saves your Location and takes you back to the “Locations” page. Touch “Close” to go back to the main page.

- **Probe Settings:**
  - At the main page, touch “Settings” to go to “Settings” page.

  Select the suitable language and date and time formats.
If you are using a Coated Slammer probe, then select “FCT – Field Coated Probe” from the “Probe Type” drop-down list. Observe that the “Moisture Table” field will change to “FCT”.

If you are using an Uncoated Slammer probe, then select “FLD – Field Probe” from the “Probe Type” drop-down list. Observe that the “Moisture Table” field will change to “SOIL”.

Select the correct Probe Length (it is usually 40 cm for a Slammer probe).

If the “Auto” check box is checked, the best interval time will be selected automatically. You should only uncheck this box and set the interval time manually if you are certain that the default interval is not working for you. Touch “Save” to save the settings and go back to the main page.

### Zeroing the Probe:

- Make sure that the Slammer Probe is properly connected to the Handi-TRASE unit. Holding the Slammer in air, touch the “Zero Trase” button. You need to Zero the Handi-TRASE each time you connect a different probe to the Handi-TRASE unit. Once connected and zeroed, you do not need to Zero the probe again.
• **Take a Reading:**
  - Insert the Slammer probe rods vertically in soil. Note that the rods need to be completely in soil. Use the Slammer’s sliding hammer if needed. Make sure that the rods are completely parallel and do not diverge while penetrating the soil.
  - Once the Slammer rods are completely in soil, touch the “Take a Reading” button.

![Fig. 14.](image)

  - Wait for the progress bar to go to 100%. It might take up to 10 seconds. Once the reading is done, you’ll see the result on the screen. The reading will be automatically saved.

![Fig. 15.](image)

  - If you would like to see the reading waveform and details, touch the “Details” button.
  - If you would like to see a list of all saved readings, touch the “View” button.
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