Laser Technology, Inc.

LaserSoft®

Measure

User’s Guide

4th Edition for Android
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1. Introducing Measure

Thank you for downloading LaserSoft® Measure for Android! Now you can quickly and easily record, save and share measurements from the TruPulse laser rangefinder to your phone or tablet. Measure can also take a photograph and store it within your measurements. A virtual “pick-list” can be created with categories and subcategories for your measurement records as well as additional notes.

Technical Specifications

LaserSoft Measure has been designed to run on Android operating platforms for use in conjunction with Laser Technology’s TruPulse® Bluetooth enabled laser measurement devices.

<table>
<thead>
<tr>
<th>Specification</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supported Operating Systems</td>
<td>Android version 4.1 or newer</td>
</tr>
<tr>
<td>Supported Devices</td>
<td>Most smart devices running Android 4.1 or newer</td>
</tr>
<tr>
<td>Connectivity</td>
<td>Bluetooth</td>
</tr>
<tr>
<td>Hardware</td>
<td>• Laser Technology, Inc. TruPulse® 200X, 360R, 360B, and 200B</td>
</tr>
<tr>
<td></td>
<td>• Optional specially designed mounting brackets for Android phones etc. (Figure 1)</td>
</tr>
<tr>
<td>Supported Languages</td>
<td>English; templates available for translation</td>
</tr>
</tbody>
</table>

Specially designed mounting brackets attach the phone to the laser device to photograph exactly what is seen through the scope. The device does not need to be physically connected to the laser to obtain measurements. This feature allows for a photo of the measured object through the scope:

NOTE Contact LTI for further information on compatible mounting brackets and other accessories.
2. Getting Started with Measure

This chapter describes the basic knowledge necessary to get started with Measure. It explains how to get the Measure app from Google Play and launch the app. Once the application has been successfully launched, follow the directions in this chapter to use the main menu and configure the settings.

**Getting the Measure App from Google Play**

To get the Measure app from Google Play:

1. Use the Google Play search function to search for “LaserSoft Measure”.
2. Tap the Measure icon to install the app as you would for any other Android application.

**Pairing a Phone to the Laser**

To ensure the phone is properly communicating with the laser, it must be connected with Bluetooth. To begin this process, verify that the laser is powered on and within range:

1. Find and tap the Settings icon on the Applications screen.
2. Tap Bluetooth on the Settings list to bring up the list of available devices (Figure 2).
   
   If prompted to enter a PIN, the PIN number is 1234 or 1111 to connect to the laser via Bluetooth.
3. Tap the TruPulse laser device’s serial number, for this example, it is “TP200X-TP000179” (which should be listed among the other devices connected via Bluetooth with on the phone) (Figure 3).
4. Enter the device’s PIN (Figure 4) or confirm the passkey. The passkey is random and different every time a phone is paired with a laser.
5. Tap “OK”. After tapping “OK”, the laser is paired with the Android phone and will appear in the “Paired Devices” list.

**NOTE** Sometimes more than one attempt is necessary when establishing the Bluetooth connection between laser and phone. It may be necessary to “forget” the laser device from the Bluetooth list and then re-pair them or totally shut down and restart the phone.
Launching the Measure App

To launch the Measure app:

1. Find the Measure icon on the phone.
2. Tap the Measure icon (Figure 5).

Using the Main Menu

This is the Measure main menu screen (Figure 6):

- Tap the "Measure" button to begin taking measurements. For more information on using "Measure," see page 11.
- Tap the "Projects" button access all saved measurements. For more information about "Projects," see page 8.
- Tap the "Share" button to send saved measurements or projects to others.
- Tap the "Settings" button to add, edit or delete pick list style categories and subcategories and to choose the default unit of measurement. For more information about “Settings”, see the following section.
- Tap the “Remote Fire” button to access remote fire capability.
Configuring the Settings

The Settings area enables the configuration of the settings that will remain constant to a set of measurements taken during a measurement session. In this area, select the desired unit of measurement and build potential categories and subcategories of items you intend to measure.

Settings Screen Description

When Settings is selected from the Main screen, the user may select the unit of measurement as well as add multiple categories and subcategories of measured items that will be referred to throughout a measurement project. See an example of the Settings screen below (Figure 7):

- **Category Tab**: Because Measure allows measurements to be taken without any defined category or subcategory, the default category "NA" is displayed as a choice. Once the user defines additional categories, they will be displayed here as well.

- **Subcategory Tab**: For some projects, it may be necessary to break down categories even further into subcategories to add more clarity to shots. For example, the category “Trees” may require subcategories of Aspen, Juniper, Pine, etc. Categories can be broken down under the Subcategory tab.

- **Unit Tab**: The measurement unit options match those of the laser device. The radial button of the selected unit will be green.

- **button**: Tap to add category and/or subcategory selections as defined by the user.

- **button**: Tap to delete existing category and/or subcategory entries.

**NOTE** The category and/or subcategory assigned to a shot are selected within the Settings area. Tap the name of the category and/or subcategory to select. Selected categories, subcategories, and units of measurement for the upcoming measurements are displayed at the bottom of the Settings screen. Placing a checkmark in the checkbox next to the category or subcategory ONLY marks that item for deletion.
Categories and Subcategories

Adding a category:

1. Tap the button (Figure 7) to begin.
2. Tap in the empty field under "Add category" to make the cursor appear and bring up the keyboard (Figure 8).
3. Enter the category name. In this example, "Trees" is entered (Figure 9).
4. Tap "Add." The category "Trees" now appears in Measure’s category list and will remain until deleted (Figure 10).

Adding a subcategory:

1. Tap to place a checkmark next to the category under which the subcategory belongs.
   In this example, the category "Trees" is selected to add species subcategories (Figure 10).
2. Tap the Subcategory tab located near the top center of the Settings screen.
   The subcategory list is displayed (Figure 11).
3. Tap .
4. Tap in the empty field under "Add subcategory" to make the cursor appear and bring up the keyboard (Figure 12).
5. Enter the subcategory name here. In this example, "Aspen" is used.
6. Tap "Add." Now "Aspen" is displayed in the Subcategory list under the category "Trees" (Figure 13).
Deleting a category:

1. From the Category tab, tap to place a green checkmark next to the category to be deleted (Figure 14).
2. Tap the button to delete the category. The deleted category (and all of its subcategories) will no longer appear in the Category List (Figure 15).

Deleting a subcategory:

1. From the Category tab, tap to place a green checkmark next to the category that contains the subcategory to be deleted (Figure 16).
2. Tap the Subcategory tab located near the top center of the Settings screen. The subcategory list is displayed.
3. Tap to place a green checkmark next to the subcategory to be deleted (Figure 17).
   In this example, the selected subcategory is “Juniper.”
4. Tap the button. The deleted subcategory will no longer appear in the Subcategory list (Figure 18).
Units of Measurement

Within the Measure app, users may take measurements in three different units of measurement: meters, feet, and yards. The units of measurement can be changed within the Settings screen under the Unit tab. Whichever unit of measurement is selected here will be the default unit of measurement for the app, but units may also be set by project. The unit selected when a project is built will override the default unit setting. To change the default unit of measurement, follow these steps:

Changing units of measurement:

1. From the Settings screen tap the Unit tab.
2. Tap the radial button next to the unit of measurement to select it for default measurements (Figure 19).

3. Projects

Within the Project area of Measure, a user can set up projects that can store a group of measurements together as a unit. Projects can be created, deleted or shared through various medium. This section explains how to create and edit Measure projects. Projects must be created before measurements are taken.

Creating a Project

1. Tap “Projects” from the Measure main screen. A list of existing projects will be displayed (Figure 20). The project “Default Project” may be the only one if it’s the first time a project has been created.
2. Tap the button in the upper right-hand corner of the screen.
3. Tap in the empty field under “Project name” to make the cursor appear and bring up the keyboard.
4. Enter the project name (Figure 21).
5. Tap to select the preferred unit of measurement for all shots in the project, and then tap “Add.” The new project will appear in the Projects List (Figure 22).
NOTE  The project under which shots are assigned is selected within the Projects area.  Tap the name of the project to select.  The selected project under which upcoming measurements are saved will appear at the bottom of the Projects screen.  Placing a checkmark in the checkbox next to a project name will ONLY mark that item for deletion.

**Accessing and Sharing Projects**

**Accessing a Project**

1. Tap "Projects" from the Measure main screen.  A list of existing projects will be displayed (Figure 23).  The project "Default Project" may be the only one if no other projects have been created.
2. Tap the blue arrow button next to the project to be accessed. A list of shots contained within that project will appear (Figure 24).
3. Tap the shot to expand it and review its measurement details and/or photo (Figure 25).

**Sharing Individual Projects**

1. To share an individual project, tap to select its name.  The selected project will appear at the bottom of the screen.
2. Tap the "Send Project" button at the bottom of the screen and a list of delivery methods will display (Figure 26).
3. Tap to select the delivery method, in this example, email was selected (Figure 27).
4. If email is the selected delivery method, the user may choose to email the project immediately or to save it as a draft for later reference (Figure 28).
Sharing All Projects

1. Tap “Share” from the Measure main screen (Figure 29).
2. Tap “Upload to Dropbox” (Figure 30). Measure loads ALL projects to Dropbox and notifies the user when uploading is complete (Figure 31).

NOTE Users must have a Dropbox account in order to upload files to it. If a Dropbox account does not exist, the user will be prompted to create one.

For all sharing delivery methods, Measure outputs project reports in .HTML format (Figure 32). Double-click the Project file name to open the measurement report details as shown below.

NOTE DO NOT delete the Measure Android folder that is created in your Dropbox upon the very first upload attempt. Doing so will cause an inability to re-connect to Dropbox from the Measure app. Contact Dropbox customer service to re-establish accidentally deleted folders.
Deleting a Project

1. From the Projects screen (Figure 33), tap to place a green checkmark next to the project to be deleted (Figure 34).
2. Tap the  button to delete the project. The deleted project will no longer display in the Projects List (Figure 35).

4. Taking Measurements

Measure can provide laser data in four different measurement modes: Distance, Height, Missing Line, and Angle and offers many additional options not possible with a laser device alone. In addition to precise measurements, a user may preview and capture an image and store that image with the measurement record. There are also some organizational features available in MapSmart, Laser Technology’s field mapping software that are also found in Measure without the need for a data collector: Pick list categories and subcategories, Auto Store, and the ability to save projects for later reference.

Using the Measure Screen

To begin taking measurements, it is helpful to understand the Measure screen and become familiar with the terms used. Below is a summary of Measure screen functions (Figure 36):

- Select a measurement mode by tapping Distance, Height, Missing or Angle in the upper left-hand corner of the screen. The selected mode will appear with a white background.
- Measure allows a user to take a photograph with each measurement. This feature may be turned on or off.
- If the Auto Store feature is on, Measure will remember the chosen category, subcategory, and note for each shot from the last.
- The empty fields HD (Horizontal Distance), VD (Vertical Distance), SLP (% Slope), INC (Inclination), SD (Slope Distance), and AZ (Azimuth) will be populated with data when a shot is taken. **NOTE** In order to get an azimuth value, a laser with that capability must be used.
- Above the “Preview” button, Measure displays the chosen project, category and/or subcategory if they were pre-selected in Settings. Otherwise, “Default” and “NA” will appear as placeholders.
- Tap the “Preview” button to open a camera view of the shot and to allow a photograph to be taken.
- Tap the “Save” button to store the shot to the current project.
• A white icon in the upper right corner of the screen indicates the laser and phone are connected and ready to work. If a connection to a laser cannot be found, the Bluetooth icon will appear black and the user may tap it to establish a connection.

• The symbol in the upper right-hand corner pulls up a shortcut to a quick reference guide and link to the full Measure User’s Guide (Figure 37).

Measurement Modes

Distance

1. From the Measure screen, tap the “Preview” button. A screen will appear allowing for a photograph to be taken when “Fire” is pressed on the laser device (Figure 38).

   **NOTE** If a photograph is not necessary for the shot, simply press “Fire” on the laser device without pressing the “Preview” button.

2. The empty measurement fields are populated with the laser measurement response with a mini version of the photograph taken (Figure 39).

3. To save the measurement, tap the “Save” button at the bottom of the screen. At this point, additional notes may be entered. Saved shots may be recalled through the Projects list and reviewed or shared. If you do not wish to save, simply take your next shot and the new measurement results will display on the Measure screen.
**Height**

From the Measure screen:

1. Tap the “Height” button in the upper left-hand corner of the screen. Height is the active measurement mode when it is highlighted in white. When Measure is set in a specific measurement mode, the laser will adopt that measurement mode and does require a separate manual mode change.

2. Tap the “Preview” button if a photograph is desired. Measure will take the photo with the last shot of the height routine.

3. Follow the laser-guided three shot height routine. Upon finishing the third shot of the height routine, the height measurement will display on the Measure screen in the left/center data field (Figure 41).

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**Missing (Missing Line)**

From the Measure screen:

1. Tap the “Missing” button in the upper left-hand corner of the screen. Missing is the active measurement mode when it is highlighted in white. When Measure is set in a specific measurement mode, the laser will adopt that measurement mode and does not require manual mode change.

2. Tap the “Preview” button if a photograph is required. Measure will take the photo with the last shot of the missing line routine.

3. Take the shots following the laser-guided missing line routine. Upon finishing the third shot of the missing line routine, the measurement will display on the Measure screen (Figure 42).
Angle

From the Measure screen:

1. Tap the "Angle" button in the upper left-hand corner of the screen. Angle is the active measurement mode when it is highlighted in white. When Measure is set in a specific measurement mode, the laser will adopt that measurement mode and does require manual mode change.

2. Tap the "Preview" button if a photograph is required. Measure will take the photo with the last shot of the angle routine.

3. Take the shots following the laser-guided angle routine. Upon finishing the last shot of the angle routine, the measurement will display on the Measure screen (Figure 43).

**NOTE** Tap the "Save" button after each measurement that should be saved. If the "Save" button is not tapped between shots, Measure is designed to continuously override the previous shot.

Deleting a Measurement

A single measurement shot may be deleted from a project as follows:

1. Tap the "Projects" button from the Measure main screen.
2. Tap to the blue arrow next to a project to open it.
3. Tap the checkbox next to the shot to be deleted. Tap the ☑ button.
4. The deleted shot will no longer display in the list of shots.

Remote Fire

To simply fire a laser without using the Measure module, tap the "Remote Fire" button from the Measure Main Screen (Figure 44).

Wait until the Bluetooth icon in the upper-right corner of the screen turns white before firing (Figure 45). If a laser has not yet been paired to the phone, the Bluetooth icon will remain black, which indicates there is not a connection. If a laser has already been paired, tap the Bluetooth icon to display a list of the phone’s connected devices and manually choose the laser from that list. Refer to Page 3 for instructions on pairing a phone to a laser.

Be advised that using this trigger function is just like pressing fire on the laser device. Press and hold it very briefly until the measurement appears in the heads-up display (Figure 46). If the laser has Continuous Mode functionality, press and hold the FIRE button until finished, and then release the button.