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Digital Control DCI TeraTrak R1 User Guide

**DCI TeraTrak R1
User Guide**

Contents

Before You Use the TeraTrak R1

1. Insert the handle until it locks in place.

2. Attach the smart device mount.

3. Use the buttons on the back of the handle to adjust to a comfortable height. The handle also pivots.

4. Insert the charging plug.

5. The battery gauge flashes red during charging.

Charge the R1

Charge the R1 for at least four hours prior to first use. The power icon flashes red while it is charging and turns solid green when it is fully charged. The R1 uses the same battery charger cable as your locator. The TeraTrak R1 App can also display battery life.

Install the TeraTrak R1 App

The R1 requires the TeraTrak R1 App on your smart device to collect terrain data. Download and install the free TeraTrak R1 App from your device's App Store.

Connect R1 to Your Smart Device

On the R1, press and hold the power button for three seconds until the power icon turns green. The Bluetooth icon flashes until it is paired to your device.

On your device, tap **Pair** to connect to the R1. Under Discovered Devices, tap the R1's name to pair. When

paired, the Bluetooth icon on the R1 turns to steady blue and the Pair icon in the TeraTrak R1 App changes to .

Get Started

1. On the Jobs page, tap.
2. Select your job type:
   - Standard Terrain – Chart a site's terrain, mark utilities, and other features.
   - Two-Point Calculation – Create a rod-by-rod bore plan between two points (Max 125 ft).
   - Setback Calculation – Calculate where to set your rig (Max 125 ft).
3. Enter the job name and info, and then start walking and gathering data.
4. Use these controls while gathering data. Not all controls appear at the same time.

| Pause | Resume Job | Return Path | Finish Job | Add Marker | Quick Marker |

Important Practices for Data Collection

- The precision of R1 data depends on maintaining as much contact between the crown of R1's tires and the ground surface as possible at all times. Losing ground contact for even a moment can reduce the accuracy of R1 measurements.
- Ensure wheels are free of debris. Walking speed and bumpiness of the surface can reduce wheel contact with the ground. Follow the Dynamic Speed Gauge carefully and minimize "red zone" readings while using R1.
- Don't use R1 on snow or sand, and walk slowly over cobble. Also take care to proceed slowly over curbs. Keep R1 upright while operating, do not tilt to a side.
- It is critical that all inputs be as precise as possible. Inaccurate input data will impact the accuracy of R1 output.

 For the best results, keep the dynamic speed gauge in the green zone.
If a warning appears, slow your pace.

Add Markers for Utilities and Waypoints

1. Stop the R1 with the reference point over the spot to mark.
2. Tap Pause to stop data collection. Place a physical mark on the ground at the reference point.
3. Tap +, and then select the type of marker.

- Utilities – Marks utilities and their clearance. Select the type of utility, enter the depth to center of the utility, the diameter, and the clearance from the side of the utility.

- Waypoint – Marks an underground target. Enter the desired depth and pitch.

- Flag – Marks points of interest on the bore path, such as a curb.

- ♦ Pin – Marks points of interest to right or left of the bore path, such as a fire hydrant. You can define which side and the distance.

- Obstruction – Use in areas where you can't walk the terrain or it isn't safe to walk, like a road. See the next section for details.

The selected marker appears on the chart. Tap the marker to see or edit the details. Tap Resume to continue collecting data.

Cross Obstructions

For impassable areas that cannot be crossed with a R1, such as a busy road, creeks, or holes, stop the R1. To stop gathering data, tap Pause.
Tap +, and then Obstruction. Enter the information about the obstruction.

 A golf or hunting laser range finder with slope/angle capability can help determine an obstruction's elevation difference and distance.
The operator must enter the distance of the obstruction and the elevation difference before starting to gather data on the other side. Obstructions display as a dotted line on the chart.

Return Path

To gather accurate data for a Standard Terrain job, you need to walk the same path in the opposite direction. Stop at the end of the bore path, tap Pause , mark the ground, and tap Return . Turn the R1 around over the reference point and tap Resume . Rewalk the path as close to the original as possible. The return path is displayed as an orange line. A return path is not required for other job types, such as Setback Calculation.

 Walk the bore path further than needed for flexibility. Once you start the return path you cannot add terrain data to the forward path.

Finish Data Gathering
To complete gathering data on a job, tap Finish Job , and confirm. For Standard Terrain jobs, the TeraTrak R1 App compensates the two paths and displays the corrected terrain.

Use a Chart
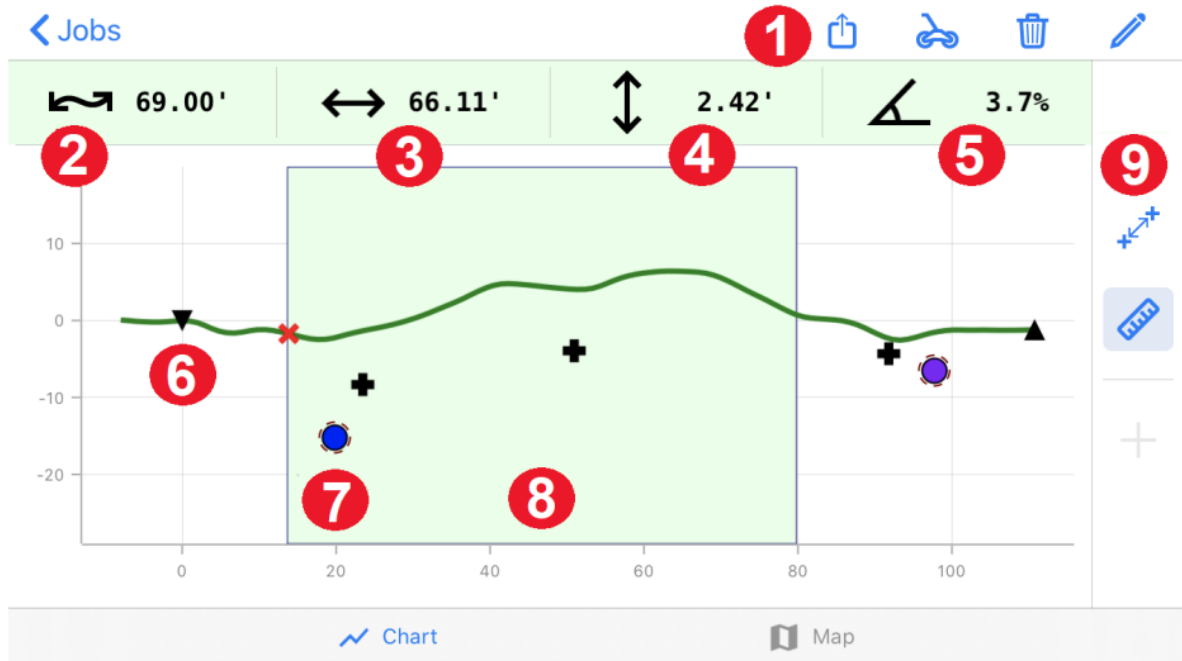
Terrain Chart

1. Export, R1 info, Delete, Edit
2. Surface distance
3. Horizontal distance
4. Elevation difference
5. Average pitch
6. Start point
7. Utility marker
8. Selected area
9. Pitch Calculation mode or Measure mode

- To view details on a specific point, touch and hold the screen to activate the trackball and drag to the point of interest.

- To measure between two points, tap Measure to enter Measure mode. The green block is the area being measured. Touch and hold the edges to move the edges. The green bar displays the Surface distance and the Horizontal distance between the two waypoints.

- To measure and display average pitch between two waypoints, tap Pitch Calc to enter Pitch Calculation mode. The green bar displays the Elevation difference and Average pitch between the two waypoints.
- To change the direction of the bore, tap Job Rotation , and then confirm the change.
- Tap Chart or Map to switch between views.

Create a Drill Plan Between Two Points
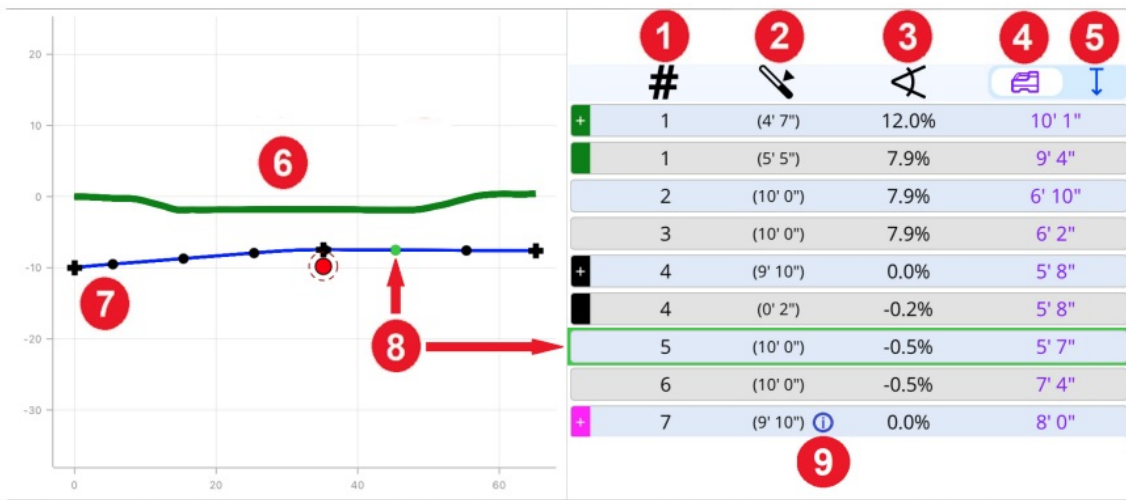
Rod-by-Rod Chart

1. Rod number
2. Rod length
3. Pitch
4. Locator depth (displayed on locator)
5. Vertical depth (drill head to surface)
6. Terrain
7. Bore path with start, rods, a utility marker, and an end point
8. Rod details
9. More information available on this data point

- When you start walking a path, the bore path appears as a dashed red line (invalid).
  When the line turns blue, you have a valid bore path.

- To generate a rod-by-rod bore plan between consecutive waypoints, tap the Table ⊞.
  The plan uses the depth and pitch that was set for each waypoint.

- A red dashed line indicates an invalid bore plan. Tap on a waypoint to adjust the depth and pitch. When the line turns blue, the bore plan is valid.

- To make a change to a marker, tap the marker. In the Mark window, tap Edit , and then make your changes. To change the type of utility, tap the name and select from the list.

- To highlight the details of a specific rod, tap either the chart or the corresponding dot on the bore path.

- To learn more about App information messages, see the DCI DigiGuide App.

⚠ If the R1 fails to create a valid bore path within 125 ft, refer to the DCI DigiGuide App for suggestions how to work with an invalid path.

Create and Change a Setback Calculation

#	🖊️	📐	🚐	⬍
0		-20.0%	0' 0"
1	(7' 0")	-17.0%	1' 0"
2	(10' 0")	-17.0%	2' 9"
3	(10' 0")	-17.0%	4' 8"
4	(10' 0")	-17.0%	7' 2"
5	(10' 0")	-17.0%	9' 8"
6	(10' 0")	-17.0%	11' 7"
7	(10' 0")	-8.8%	12' 8"
8	(8' 10")	0.0%	13' 0"

Setback Calculation Chart

1. Rod number
2. Rod length
3. Pitch
4. Locator depth
5. Vertical depth
6. Entry point
7. Terrain
8. Bore path with start, rods, a utility marker, and an end point
   1. Determine the waypoint where the drill head needs to be at a specific depth on your bore path. Make a physical mark on the ground. This is where you will place the R1 and start to gather data.
   2. Walk towards the anticipated rig set up. The bore path is created as you walk. The line changes from a red dashed line to a solid blue to indicate a valid path.
   3. Mark the spot on the ground where the rig will be placed. If the rig cannot be placed in that spot, continuing walking until you find an acceptable spot. As long as the line is blue, you can place the rig and have a valid entry point.
      • Tap Table to display the rod-by-rod bore plan.
      • To change the Drill Rod parameters, tap Edit on the chart.

Share Your Data
Tap Export to email the data as PDF and CSV file attachments.

Settings

Tap Settings to configure your R1. See the DCI DigiGuide App for more specific instructions.

- Select your Unit settings – Metric or Standard, and degrees or percentages.
- Predefine drill parameters commonly used by your rig.
- Give your R1 a unique name for easy identification during pairing.

Next Steps
See the DCI DigiGuide App for step-by-step instructions and explanations on additional topics, such as:

- Editing and doing more with charts
- Understanding App Information messages

Safety

Failure to follow the operating instructions for the R1, including the "Important Practices for Data Collection" above, as well as other factors, may reduce the accuracy of R1 data. Imprecise R1 data can lead to inaccurate positioning of the drill rig and inaccuracies in your bore planning. Therefore, to avoid striking underground utilities, inaccurate installations and/or lost time, you must also continue following customary safety protocols at the jobsite, including identifying buried utilities and maintaining a customary safety buffer. Do not rely solely on R1 data. DCI strongly recommends matching up DCI locating system measurements against R1 data points to ensure alignment.

Watch our DigiTrak training videos at
www.YouTube.com/DCIKent

For detailed information, install the DCI DigiGuide App from your smart device's App store or download the Operator's Manuals from **digital-control.com**.
Printed manuals are available upon request.
If you have questions, contact your regional DCI office or Customer Service at **1.425.251.0559 or 1.800.288.3610 US/CA.**

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Documents / Resources

Digital Control DCI TeraTrak R1 [pdf] User Guide
DCI TeraTrak R1, TeraTrak R1

References

- ▭◁ **Homepage | Digital Control Inc. | DigiTrak HDD Locating Systems**
- ▭◁ **Homepage | Digital Control Inc. | DigiTrak HDD Locating Systems**
- 🌐 **Patents | Digital Control Inc. | DigiTrak HDD Locating Systems**