



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 4 hours prior to first use. The battery loses about 2% of its charge every day while in storage. 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.

Sign into DDM (Digitrak® Data Management)

Go to mydigitrak.com and sign in. An R1 subscription on DDM is required for some R1 features, including unlimited bore plans.

Install the TeraTrak App

To collect terrain data from the R1, download and install the free TeraTrak R1 App on your smart device from your device's App Store.



First-time Setup Wizard

The first time you start the TeraTrak R1 App, the setup wizard helps you with required app permissions, R1 settings, and connecting to the R1. The wizard only runs once.

To edit these settings later, go to **Settings**. To pair with another R1, tap **Pair**  and then select the R1 from the list of **Discovered Devices**.

See the **DCI DigiGuide™ App** for more details.

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. Create a rod-by-rod bore plan. (Max 150 ft between waypoints without signing into DDM).
 - **Two-Point Calculation** - Create a rod-by-rod bore plan between two points.
 - **Setback Calculation** - Calculate where to set your rig.
 - **Distance Measurement** - Measure terrain distance.
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 always maintaining good contact between the crown of R1's tires and the ground surface. Losing ground contact for even a moment can reduce the accuracy of the 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 the R1.
- Don't use R1 on snow or sand, and walk slowly over cobble. Also take care to proceed slowly over curbs. Keep the 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.

- **Waypoint** - Marks an underground target. Enter the desired depth and pitch.
- **Utility** - Marks utilities and their clearance. Select the type of utility, enter the depth to center, the diameter, and the clearance from the side of the utility.
- **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.
- **Entry/Exit Point** - Marks the point of entry ▼ and exit ▲ of the bore.
- **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.
- **Reference Elevation** - Marks a known elevation, such as elevation above sea level. The R1 App will calculate other elevations based on that reference.

The selected marker appears on the chart. Tap the marker to see or edit the details.

Tap **Resume** ▶ to continue collecting data.



To adjust a waypoint on a chart, tap the waypoint. Tap **Nudge** ⛶. With the Nudge control make adjustments with either the arrows or type a value. Tap either **Revert Changes** or **Save**.

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.

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.

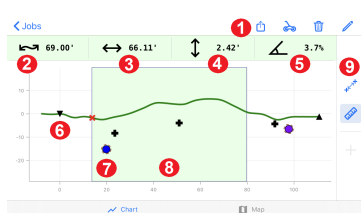


Walk the bore path further than needed for flexibility. Once you start the return path you cannot add terrain data to the forward path.

Finish Data Gathering

To complete gathering data, 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 adjust a waypoint on a chart, tap the waypoint. Tap **Nudge** 📏. With the Nudge control make adjustments with either the arrows or type a value. Tap either **Revert Changes** or **Save**. To change how much the waypoint moves with each nudge, tap the number in the center of the Nudge control and select the increment.
- 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 change the direction of the bore, tap **Edit** ✎, and then tap **Rotate Job and Save**, confirm the change.
- Tap **Chart** 📈 or **Map** 🗺 to switch between views.

Create a Drill Plan Between Two Points



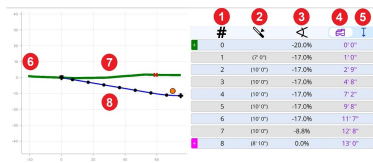
Rod-by-Rod Chart

- When you start walking a path, the bore path appears as a dashed red line (invalid). When the line turns blue, the bore plan is valid.
- To generate a rod-by-rod bore plan between consecutive waypoints, tap **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 it. 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.



If the R1 fails to create a valid bore path, go to the **DCI DigiGuide App** for how to work with an invalid paths and learn more about R1 App messages.

Create and Change a Setback Calculation



Setback Calculation Chart

- 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.
- 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.

- Rod number
- Rod length
- Pitch
- Locator depth
- Vertical depth
- Entry point
- Terrain
- Bore path with start, rods, a utility marker, and an end point

3. Mark the spot on the ground where the rig will be placed. If the rig cannot be placed in that spot, continue 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.

Find the Most Efficient Entry Point for a Boreplan

Tap the entry point. Tap **Nudge**  and then **Auto-Place Entry**. The entry point is moved to the most efficient location to minimize steering to the first waypoint. Tap **Revert Changes** or **Save**.

Create a Boreplan that Maintains a Grade

Tap a waypoint and then tap **Maintain Grade**. Choose to use either the same grade as the previous waypoint or use the grade of the selected waypoint for the next waypoint. This creates a plan between the two waypoints with the same grade. Tap **Revert Changes** or **Save**.

Share Your Data

Tap **Export**  to share the data as a PDF or CSV file or to send a boreplan to an Aurora remote. To adjust the page size and what details are included, go to **Settings**.

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.

For detailed information including safety warnings, scan the QR Code to open the TeraTrak R1 DigiGuide Manual or install the DCI DigiGuide App on your smartphone. If you have questions, contact Customer Service at 425.251.0559 or 800.288.3610 US/CA.



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

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