



DigiTrak® Eclipse™ – The World's Most Advanced HDD Tracking System

The DigiTrak Eclipse is a revolutionary new tracking system for the horizontal directional drilling industry. It is the first of its kind to display the drill head location and locate points in a “real-time” bird’s-eye view. This unique tracking system advances the state of the art of locating systems in a number of ways. First, the operating frequency used in the system was selected by surveying various sites and determining the most interference-free operating frequency. Second, the 3D antenna configuration (patent pending) enables the unit to “see” the locate points and allows the “target in the box” technique to be used for locating the drill head, as well as left/right and up/down remote steering. The large menu-driven display provides an “at-a-glance” view of all the transmitter’s information, including exact location and orientation. The graphic format is simple, and you’re not



DCI's Soggi Finsson and Joe Zeck using the new DigiTrak Eclipse System.



- Real-time dimensional display
- Revolutionary “target in the box” locating
- Left/right and up/down remote steering
- “Look ahead” locating
- Easiest locating on the fly ever



required to interpret bar graphs, arrows, or noises.

The first thing you notice when locating with the Eclipse is the intuitive way of finding the locate points and finding the exact position of the drill head. In the center of the display window is a box that represents the receiver. To find a locate point, you simply maneuver the receiver so that the target representing the locate point moves into the center of the box. It’s that simple. You can walk directly to the locate point from any direction—once the target is in the box, you’ll be on top of the locate point.

With the DigiTrak Eclipse, when you’ve found the front locate point you can determine the left/right direction as well as the depth of the drill head without stopping the drill. By being out in front of the drill head, you are actually driving or controlling it using “look ahead” locating.

The DigiTrak Eclipse makes remote steering easier and more precise because you can program in your target depth at various locations along the intended borepath. During remote steering, the intended depth is displayed to help the operator achieve both the depth and left/right positioning of the tool. A symbol on the remote display represents both the left/right and up/down steering directions.

Because of its unique features, the Eclipse system requires a different transmitter and a different remote display unit than the previous DigiTrak equipment. The

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DigiTrak® Mark IV – The Best Locator on the Planet Just Got Better

DCI recently introduced the DigiTrak Mark IV system—the latest version of the DigiTrak receiver. The Mark IV has a single display window with simple graphics and menu-driven operations. It employs all of the advanced features of the Mark III, including the patented “look-ahead locating” capability, and uses the same operating frequency. This means the system is compatible with all of the previously manufactured DCI transmitters, remote displays, DataLog equipment, and Ni-Cad battery packs.

The DigiTrak Mark IV Receiver simplifies locating by providing the operator with a large easy-to-read graphic display. This display illustrates how to position the receiver to find the

locate points, the position above the transmitter, and the predicted depth out in front of the drill head. A “box” on the display represents the DigiTrak receiver. As the operator moves towards a locate point, a bull’s-eye (representing the locate point) will appear on the display screen. As the receiver passes directly over the locate point, the bull’s-eye moves into the box. Turning the box 90 degrees over the locate point further pinpoints the locate point’s position. As you approach the drill head, a line will appear on the display; once the line moves into the box, the receiver is over the tool.

Locating the transmitter with the Mark IV no longer requires you to hold in the trigger. All of the transmitter’s information, including signal strength, is displayed in the window without the trigger being held in. When the trigger is held in, the display shows the tool’s depth below ground and the ultrasonic distance (height-above-ground measurement). When the trigger is held in at the front locate point, you will observe the predicted depth along with the ultrasonic measurement.

Other Mark IV features include the capability to view depth measure-




The DigiTrak Mark IV graphic display provides simple intuitive graphics and menu-driven commands.



The DigiTrak Mark IV Receiver looks the same as previous versions—the differences are in the display and in the software.



ment modes in metric or English units; the depth reading will display as meters and centimeters or feet and inches, respectively. The transmitter’s temperature is available in both centigrade and Fahrenheit, and the pitch angle can be read in either percent slope or degrees. All Mark III receivers can be upgraded to the Mark IV system. 

DigiTrak® Eclipse™ (continued from page 1)

same types of batteries are used to power the Eclipse transmitters and receiver, however—C-cells for the transmitters and DigiTrak Ni-Cads for the receiver. Although the Eclipse transmitters are not compatible with the other DigiTrak receivers, they have the same dimensions, so new

downhole tooling is not required.

This brief article cannot do justice to how easy and intuitive locating is with the Eclipse. And training someone to use it couldn’t be more simple. The Eclipse will be available during the first quarter of the year 2000.



DigiTrak® LT™ – Locating for Smaller Jobs

The DigiTrak LT Locating System has been specifically designed for pit launch machines and smaller horizontal directional drilling rigs. It is ideal for service drops or shallow installations in residential neighborhoods. Developed as a less-expensive alternative to its more-sophisticated cousins, the Mark III and IV, the LT system has a large, easy-to-read graphic display that provides the operator with all the information required to guide the tool through the ground—pitch, roll, depth, and location. For contractors who prefer to use a remote display at the drill, an optional remote display is available.

The DigiTrak LT displays the pertinent data for the operator to make an



- Lightweight and easy-to-use
- Reliable
- Powered by C-cell batteries
- No confusing gain control adjustments
- One-hand operation

informed steering decision. Peak signal guidance is provided in a simple graphic format for quick interpretation by the operator. The LT system has an automatic internal gain control and, because of DCI's patented antenna configuration, there are no ghosts or false locates.

The LT system is compatible with the Mark III, Mark IV, and DigiTrak transmitters. Its menu-driven display and single-trigger operation are also similar to those used on the Mark III and IV. The system is powered by three C-cell batteries.



DIGITRAK® LT™

DigiTrak® SuperCell™ – The Longest-Lasting Battery on the Market

The DigiTrak SuperCell lithium battery is DCI's answer to those long bores where valuable time cannot be spent tripping out to change transmitter batteries. When downhole conditions get tough and chattering batteries result in decreased battery life, the SuperCell is the answer.

One SuperCell lithium battery will provide 240 hours of downhole time with a standard-range (yellow) DigiTrak transmitter and 120 hours with a long-range (red) DigiTrak transmitter. The dimensions of the SuperCell are the same as those for two C-cell batteries.



- Long bores
- Tough ground conditions
- Long rock bores
- Mud motor jobs

SuperCell™

Introducing Our New Products Around the World


The recent HDD industry shows held in Louisville, Kentucky (ICUEE) and in Budapest, Hungary (No-Dig) served as great launching grounds for DCI's new products:

- DigiTrak Eclipse Tracking System
- DigiTrak LT Locating System
- SuperCell Lithium Battery
- DigiTrak Mark IV

DCI had quite a turnout at the ICUEE 99 show in late September. Nearly all of our customer service reps were able to attend, along with several engineers. The engineers, in particular, enjoyed demonstrating our new equipment to the many people in attendance.

The International No-Dig 99 show was much smaller, but those who attended were treated to the magnificent city of Budapest in October. The attendees from DCI were Steve Edwards

and Bill Ettel, DCI's customer service managers based in Europe, and Chris Weise, customer service manager at our main office in Renton, Washington.

Come see our new products at booth #438 in Houston at the Underground Construction Technology Show January 25-27, 2000. 



Senior DCI engineers demonstrate Eclipse system at ICUEE 99.



Our booth in Budapest generated a good deal of interest.

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