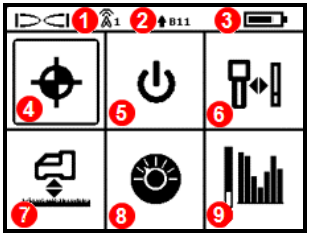
DigiTrak Falcon F2® Quick Start Guide

Power On the Locator

1. Install the battery pack and hold the trigger for one second.
2. Ensure the region number in the globe icons on the startup screen and transmitter match.
3. Click the trigger twice to open the Main menu (or toggle down at the Locate Mode screen).

1. IR port
2. Toggle
3. Trigger

Main Menu

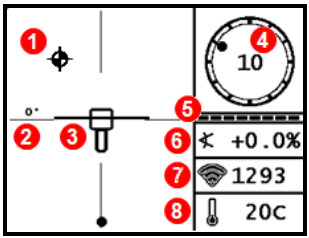


1. Telemetry channel
2. Transmitter (Tx) band up/down
3. Locator battery status
4. Locate Mode
5. Power off
6. Calibration
7. Height-Above-Ground (HAG)
8. Settings
9. Transmitter/Frequency Optimization (FO)

Toggle to menu options, and then click the trigger to select.

Locate Mode Screen

Select **Locate Mode** from the Main menu to start locating.



1. Locate point (ball)
2. Yaw
3. Locator with Locate Line (LL)
4. Roll indicator and value
5. Roll/pitch update meter
6. Transmitter pitch
7. Transmitter signal strength
8. Transmitter temperature

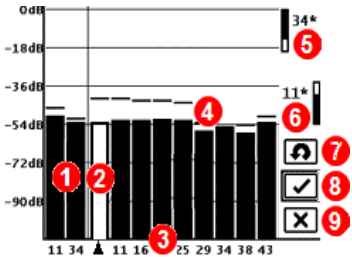
Transmitter and locator must be paired before data will display. For DigiTrak remote displays, see the ***DCI DigiGuide App****.*

Steps Required Before Drilling

1. *Scan the jobsite for interference.*
2. *Pick the frequency bands.*
3. *Pair the locator with the transmitter.*
4. *Verify data range.*
5. *Calibrate both bands.*
6. *Check Above Ground Range.*

1. Scan the Jobsite

a. With the transmitter off, select **Transmitter/FO** from the Main menu, then **Frequency Optimization** (FO). The FO will show active interference (noise) readings for current bands. Select **Scan/rescan** to see nine newly optimized bands.



Frequency Optimization Results

1. Current bands
2. Selector
3. Band number
4. Maximum noise level
5. Up band
6. Down band
7. Scan/rescan
8. Pair
9. Exit

Run the FO for each new project to select an optimal set of frequencies for each band every time.

b. With the FO results displayed, walk the locator along the bore path while observing the noise readings. Mark those points where significant increases occur.

If noise levels rise substantially at any point along the bore, consider selecting and pairing one band (see next step) that performed well up to this point. Cancel calibration, and select **Transmitter/FO** to repeat *Step 1 - Optimize*. Perform a new scan, select and pair a second band for use in this higher-interference area.

Your locator can only detect active interference, not passive interference, such as rebar. Lower frequency bands tend to perform better around passive interference. Middle bands can perform better in deeper bores and may have longer steering capability. High bands have slightly less signal strength, but tend to offer better performance around active interference such as power lines.

2. Pick the Frequency Bands

Toggle to and select the band of your choice, then click **Up** to assign this first band as Up band. Toggle to and select the second band, and then assign as Down band.

3. Pair the Locator with the Transmitter

a. Install transmitter (Tx) batteries and endcap; the increase in FO noise readings shows the Tx is on.

b. Select **Pair** ☑ to pair the locator and Tx.

If you assigned two new bands, both will pair at the same time, and the locator will be set to use the Down band first.

c. Position the transmitter's infrared (IR) port within five cm of the locator's IR port.

1. IR port

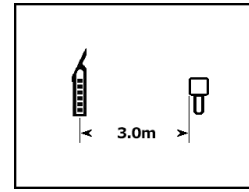
d. Select **Pair Request** . The locator beeps and displays a check mark after a successful pairing.

4. Verify Data Range

Optional Step - Requires exiting Calibration Mode.

Exit to the Locate Mode screen. Have a coworker hold the transmitter beside you at the approximate distance of the maximum intended depth of the bore. Walk the bore together in parallel, with the locator over the bore. Wherever the data or signal strength becomes unstable or disappears, try the other band, or consider re-optimizing a band in that area (see Step 1).

5. Calibrate Both Bands



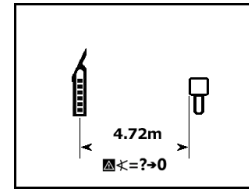
Calibration in an interference-free environment is required after any optimization.

a. Place the Tx in a housing on level ground 3 m from locator as shown.

b. From the Main menu, select **Calibration** > **1 PT CAL** and calibrate each new band.

After the calibration, the Above Ground Range (AGR) screen opens automatically.

6. Check Above Ground Range (AGR)



Always check AGR with a tape measure to verify depth readings on each band at various distances up to the maximum expected bore depth. Distance readings should be within ±5%.

Access AGR directly on the **Calibration** menu. Calibrate and check AGR for both new bands.

If you selected two bands, repeat steps 5-6 (Calibration and AGR) for the second band. An error symbol will display in the roll indicator on the Locate screen until a 1 point calibration is completed for the current band.

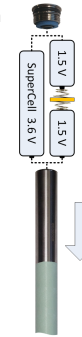
Settings Menu

Use the Settings menu to set the depth units, pitch units, telemetry channel, contrast, LOC security options, level check, and roll offset.

Height-Above-Ground (HAG) Menu

Height-Above-Ground (HAG) is the distance from the ground to the bottom of the locator while it is held. Setting HAG on the Main menu lets you take accurate below-ground depth measurements without having to place the locator on the ground.

Changing Transmitter Frequency Band



Switch between Up and Down bands during pre-bore calibration or mid-bore to overcome interference. See next page to change bands on the locator.

Both optimized bands remain stored on both the locator and transmitter even after a power cycle.

Above Ground – Power-On Method

Insert transmitter (Tx) batteries with the Tx pointing down (battery compartment on top, shown at right) to power on in the Down band. Insert batteries with the Tx pointing up to power on in the Up band.

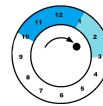
Above Ground – Tilt Method

You must hold the Tx at the same general clock position (±2 CP) for this whole procedure. Hold Tx powered on at level (0±10°) for at least five seconds (sec.). Tilt Tx up at approx. +65° (almost vertical) for 10–18 sec., then return to level for 10–18 sec. When the Tx changes bands, data disappears from the locator.

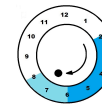
Below Ground (Mid-Bore) – 10/2/7 Roll Method

Disable Roll Offset (if enabled).

1. Roll clock-wise to approx. 10 o'clock ± 1 CP. Wait 10-18 seconds.



2. Roll clock-wise to approx. 2 o'clock ± 1 CP. Wait 10-18 seconds



3. Roll clock-wise to approx. 7 o'clock ± 1 CP. Wait 10-18 seconds.

Data should disappear in 10-15 seconds. Re-enable Roll Offset, if needed. The Aurora display has a built-in app that can walk you through this method. See the **DCI DigiGuide App** for more details.

Below Ground (Mid-Bore) – RRS3 Roll Method

Remain at any clock position for at least 40 seconds (sec.) to clear timers. Complete one full clock-wise rotation (±2 CP) within 1–30 sec., wait 10-18 sec., and repeat this sequence twice more for a total of three rotations. After 60 sec. the Tx should change frequency band and the locator will stop receiving data and depth. The Aurora display has a built-in app that can walk you through this method. See the **DCI DigiGuide App** for more details.

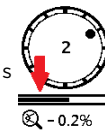
Changing Locator Frequency Band

If you change bands on your transmitter, you must also do so on your locator. At the Locate Mode screen, hold the toggle right briefly to open the Band Selection window. Select the Up or Down band, or select **Locate Mode**, to return to the Locate Mode screen without changing bands. The data should begin displaying as transmission resumes in the new band.

MAX Mode

MAX Mode helps obtain depth/data readings in high-interference areas and at the edge of the Tx's range, when readings are unstable.

- The drill head must remain stationary during MAX Mode readings.
- Hold the trigger at least five seconds to enter MAX Mode. Do not consider the data reliable unless the reading is stable before the MAX Mode timer bar under the roll clock is full.
- Always take three MAX Mode readings; all three must be consistent.



See the **DCI DigiGuide App** for important information on this feature.

Signal Attenuation

Signal attenuation may occur due to excessive interference or if the locator is within 2.4 m of the Tx, such as when locating at a shallow depth. If an **A** icon appears on the roll indicator for depths shallower than 2.4 m, you can ignore the warning. This is normal.

If the **A** icon and signal flashes on the Locate Mode screen or appears on the Frequency Optimization screen, there is extreme interference. Depth and locate points could be compromised and the locator will not calibrate. Relocate to a quieter location before recalibrating.

For detailed information, see the **DCI DigiGuide™ App**. If you have questions, contact your regional DCI office at 425.251.0559 or U.S. Customer Service at 1.425.251.0559.

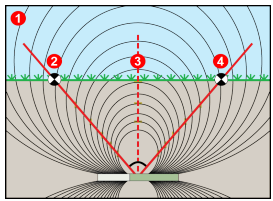
Watch our DigiTrak® training videos at
www.YouTube.com/DCIKent

Basic Locating

1. Find the Front Locate Point (FLP) and the Rear Locate Point (RLP) by centering the target ball in the box. Mark the positions.
2. At the FLP, hold trigger for predicted depth reading. The Reference Indicator **R** icon will appear. The Locate Line (LL) may not appear if this step is skipped.
3. Find the LL by centering the line in the box between the FLP and the RLP (see Locate Mode screen on next page).
4. View depth by holding the trigger at the LL on the line connecting the FLP and the RLP.
5. Holding the trigger longer than five seconds enables MAX Mode (see page 6). MAX Mode does not have to be at LL or FLP.

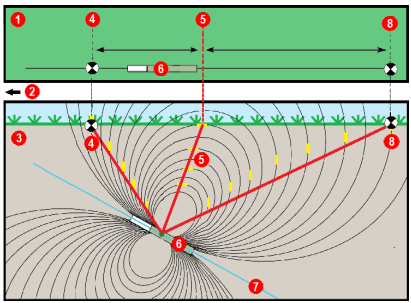
Transmitter Signal Field Geometry

Level Transmitter



1. Side view
2. RLP: Rear Locate Point
3. LL: Locate Line
4. FLP: Front Locate Point

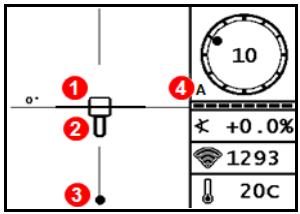
Pitched Transmitter



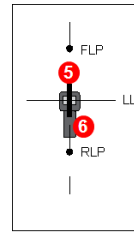
1. Bird's-eye view (top down)
2. Drill Rig
3. Side view (underground)
4. RLP: Rear Locate Point
5. LL: Locate Line
6. Transmitter (Tx)
7. Bore path
8. FLP: Front Locate Point

FLP and RLP are not equidistant from the LL when the transmitter is pitched. For more information, see the **DigiTrak DigiGuide App**, **Advanced Topics > Steep and Deep**.

Bird's-Eye View on Locate Screen



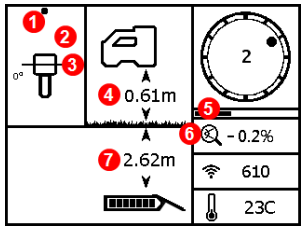
Locate Screen
(Line-in-the-box at LL)



Actual Position of Locator and Transmitter

1. Locate Line (Tx)
2. Box (Locator)
3. Locate Point
4. Attenuation
5. Tx
6. Locator

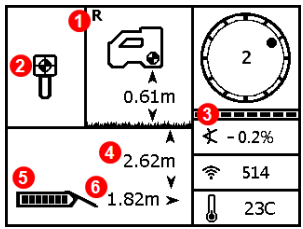
Depth and Predicted Depth Readings



Depth Screen

Trigger held at LL

1. Locate Point (FLP or RLP)
2. Bird's-eye view
3. Line-in-the-Box at LL
4. HAG on
5. MAX Mode timer
6. MAX Mode icon
7. Tx depth



Predicted Depth Screen

Trigger held at FLP

1. Reference indicator
2. *Ball-in-the-Box*
3. Roll/pitch update meter
4. Tx predicted depth*
5. Tx battery strength
6. Horizontal distance between Tx and FLP*

* Only valid at FLP. Invalid at RLP.

The predicted depth is the depth the transmitter is calculated to be when it reaches the Front Locate Point (FLP) if it continues on the current path and pitch.