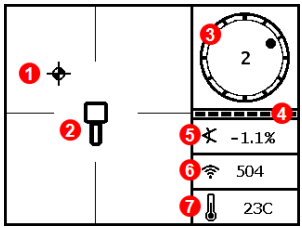
Power On Receiver

1. Install battery and click trigger to power on the receiver.
2. Ensure the region number in the globe icons on the startup screen and transmitter match.
3. Click the trigger to reach the Locate screen.

1. IR port 2. Trigger

Receiver Locate Screen

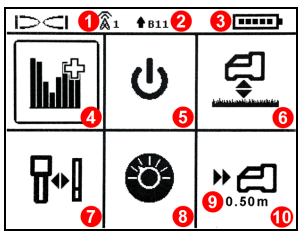


1. Locate point (ball)
2. Receiver
3. Roll indicator
4. Roll/pitch update meter
5. Transmitter (Tx) pitch
6. Tx signal strength
7. Tx temperature

Transmitter and receiver must be Paired before data will display (page 3). For DigiTrak remote displays, see separate manual or Quick Start Guide.

Receiver Main Menu

Click to open the Main menu. Click between menu options, hold briefly and release to select.



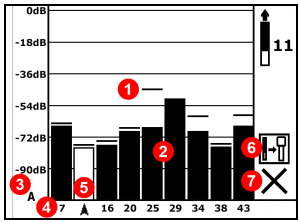
1. Telemetry channel
2. Frequency band
3. Battery strength
4. Frequency Optimizer
5. Power off
6. HAG
7. Calibration
8. Settings
9. Target depth
10. Target Steering

Steps Required Before Drilling

1. *Optimize and measure active interference.*
2. *Select frequency Band 11.*
3. *Pair the receiver with the transmitter.*
4. *Check for background noise.*
5. *Calibrate.*
6. *Check Above Ground Range.*

Optimize and Measure Active Interference

1. With the transmitter off, select **Frequency Optimizer** (FO) from the Main menu. The FO will show active interference (noise) readings for Band 11 (and other bands not available on Falcon F1).



Frequency Optimization Results

1. Maximum noise reading
2. Noise
3. Attenuation in effect
4. Band number
5. Selector
6. Pair
7. Exit

2. With the FO results displayed, walk the receiver along the bore path while observing the noise readings and mark those points where significant changes occur. If noise levels rise substantially at any point along the bore, consider re-optimizing at this higher-interference point.

Select Frequency Band 11

3. Click to move the selector to Band 11, hold briefly to select, then assign as the Up band.

It is important to run FO for each new project. FO selects different frequencies for Band 11 based on the noise at each jobsite.

Your receiver can only detect active interference, not passive interference. Falcon F1 uses Band 11 in part because frequencies in this band tend to perform well despite passive interference.

Pair the Receiver with the Transmitter (Tx)

4. Install transmitter batteries and endcap; the increase in FO noise readings show the Tx is on.
5. Select **Pair** (flashing).
6. Position the transmitter's infrared (IR) port within five cm of the receiver's IR port.

1. IR port

7. Select the check mark ✓ to complete pairing.

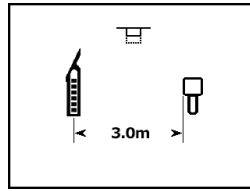
Check for Background Noise

8. Exit to the Locate 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 receiver over the bore. Wherever the data or signal strength becomes unstable or disappears, consider re-optimizing in that area (see step 1).

Calibrate

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

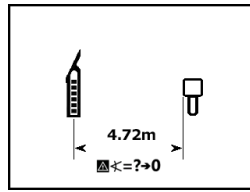
9. Place the Tx in a housing on level ground 3 m from receiver as shown.
10. From the Main menu, select **Calibration**, **1PT CAL**, and click to calibrate.



This error symbol will display in the roll indicator (Locate screen) if the frequency band is not calibrated.

Check Above Ground Range (AGR)

11. Always check AGR with a tape measure to verify depth readings for Band 11 at various distances up to the maximum expected bore depth. Distance readings should be within ±5%.



To access the AGR screen later, select **Calibration**, **1PT CAL**, and wait 15 seconds for the AGR screen.

Settings Menu

Use the **Settings** menu to set the depth units, pitch units, roll offset, and telemetry channel. Set the remote display to match receiver depth and pitch settings.

Height-Above-Ground (HAG) Menu

HAG is the distance from the ground to the base of the receiver while it is held. Setting HAG on the Main menu lets you take accurate below-ground depth measurements without having to place the receiver on the ground.

Max Mode

Max Mode helps obtain depth/data readings in high-interference areas when readings are unstable.

- The drill head must remain still during Max Mode readings.
- Hold the trigger at least five seconds to enter Max Mode. Do not consider the data useful unless the reading is stable before the Max Mode timer is full.
- Always take three Max Mode readings; all must be consistent.

See the system operator's manual for additional important information on the use of this feature.

Signal Attenuation

An **A** icon may appear on the roll indicator and FO results when the receiver is attenuating the Tx signal for depths shallower than 3 m. This is normal. See the operator's manual if the signal strength is flashing, indicating extreme interference.

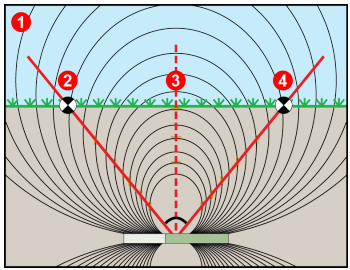
Watch our DigiTrak® training videos at
www.YouTube.com/DCIKent

Basic Locating

1. Find the FLP and RLP by centering the target ball in the box.
2. At the FLP, hold trigger for predicted depth reading.
3. Find the LL by centering the line in the box between the FLP and RLP (see Locate screen on previous page).
4. View depth by holding the trigger at the LL on the line between the FLP and RLP.
5. Holding the trigger longer than five seconds enables Max Mode (see page 4).

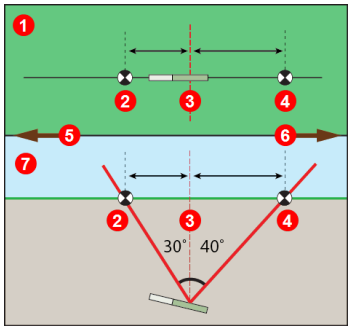
Transmitter Signal Field Geometry

Level Transmitter



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

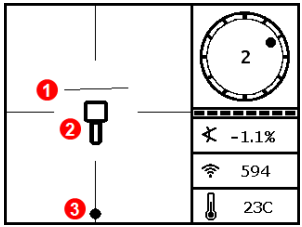
Pitched Transmitter



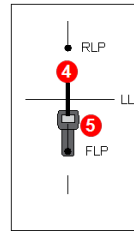
1. Bird's-eye view
2. RLP
3. LL
4. FLP
5. Drill rig
6. Bore path
7. Side view

FLP and RLP are not equidistant from the LL when the transmitter is pitched.

Bird's-Eye View on Locate Screen



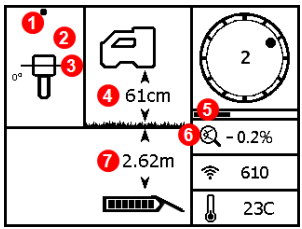
Receiver Locate Screen, Approaching LL



Actual Position of Receiver and Tx

1. LL (Tx)
2. Box (receiver)
3. Locating ball
4. Tx (underground)
5. Receiver

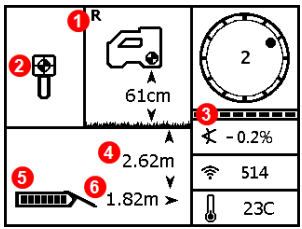
Transmitter Depth and Predicted Depth



Depth Screen

Trigger held at LL

1. Front or Rear 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* at FLP only
3. Roll/pitch update meter
4. Tx predicted depth
5. Tx battery strength
6. Horizontal distance between Tx and FLP

For detailed information, see your system operator's manual, available at www.digital-control.com. If you have questions, contact your regional DCI office or U.S. Customer Service at 1.425.251.0559.