ARES™
GENESIS

DIGITRAK ARES GENESIS

DCI DigiGuide User Manual

2026.10.20

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Quick Start

WHAT'S IN THE BOX?



1. DigiTrak ARES GENESIS locator
2. FCD and antenna
3. DigiTrak 6-inch transmitter - DT6-G
4. ARES GENESIS rechargeable locator battery (USB-C)
5. Locator saddle (Trakstand not included)
6. F-Series battery and charger (FBC) kit (Not shown)
7. Case (Not shown)

GETTING STARTED WITH YOUR ARES GENESIS LOCATOR

These are the basic steps to prepare your ARES GENESIS Guidance System for locating.

1. Register your locator on mydci.digital-control.com to claim your warranty. For instructions, go to Add equipment article or use the QR code in the included Welcome packet.
2. Unlock the locator battery by connecting it to a USB charger. To view the charge level, press the power button before inserting the battery into the locator.
3. Power on the locator, the remote display, and the transmitter. Make sure your locator and transmitter are for the same region. For instructions, go to the Initial Setup chapter.

4. Calibrate the Up and Down frequencies and validate the locator and transmitter's above-ground-range (AGR). For instructions, go to the article Calibrate.
5. Optionally, you can:
   - Set **roll offset *** if the 12:00 position of the transmitter on the locator clock display does not match that of the drill head's position. For instructions, go to the article Enable and set roll offset.
   - Set height-above-ground (HAG) for the height you intend to hold the locator above the ground while taking depth readings. For instructions, go to the article Set Height-Above-Ground (HAG).
   - Set up Bore logs to document the job. For instructions, go to the Log While Drilling (LWD) manual.
6. Start locating. For instructions, go to the article Basic Locating.

GLOSSARY DEFINITIONS

> *ROLL OFFSET

DCI APPS FOR GREATER PRODUCTIVITY

DCI DigiGuide App

The DCI DigiGuide App is your online manual.

- Step-by-step instructions.
- Tips and tricks to help solve problems.
- Troubleshooting help, including links to videos.
- Bookmark articles, share articles with other DigiGuide users, or download pdfs of full articles and manuals.
- A living document. The DigiGuide is updated multiple times a year with new features, information, and links to videos.

Download the app from your device's app store.

myDCI portal

The myDCI web portal is your one-stop, centralized hub to manage your DCI equipment with real-time information. On the portal authorized users can:

- Create a free company account and invite additional users
- Register equipment and view your warranties
- Purchase and manage subscriptions, such as LWD Cloud and Trak-It

DigiTrak LWD App

With the DigiTrak LWD (Log-While-Drilling) app, you can view and manage real-time pilot bore data from your locator.

- All-in-one solution – View all your bore logs in one location
- Enhanced precision – Get detailed position data about each rod
- Increased transparency – Mark obstacles or utilities with ease
- Requires a free company and individual user account on the myDCI portal to transfer data from the locator
- Requires an LWD Cloud subscription on the myDCI portal to store files in the LWD Cloud or share files

Download the app from the App Store and then learn more about data logging in the LWD manual in the DCI DigiGuide App.

Safety

GENERAL SAFETY WARNING

- Only operate your DCI guidance system in accordance with the operating instructions for your system.
- Serious injury and death, as well as property damage, can result if underground drilling equipment strikes a natural gas line, high-voltage electrical cable, or other utility.
- Work slowdowns and cost overruns can occur if you do not use your system correctly.
- Properly calibrate your DCI guidance system anytime you change frequencies, transmitters, or drill heads and validate the calibration before every drilling project. If you fail to do so, depth readings will likely be inaccurate.
- Interference can lead to inaccurate depth readings and/or interruption of data. See "Special Notes About Interference" for more details.
- DCI guidance systems are used to locate and guide the transmitter (housing) underground. They cannot be used to locate underground utilities.
- Failure to find the front and rear locate points can lead to inaccuracies which may result in drilling off-path and striking an underground utility.
- The locate line on a DCI locator does not indicate the position of the drill head. DCI locators track the transmitter in its housing, which sits behind the drill bit. Also, when drilling steep and/or deep, the locate line may indicate a position behind or ahead of the transmitter. Please see the article "Steep and Deep" for important information on accurately locating the drill head when drilling steep and/or deep holes.
- Ensure that all underground utilities have been located, exposed, and/or accurately marked prior to drilling. Follow all proper safety precautions, such as potholing.

- DCI equipment is not explosion-proof and should never be used near flammable or explosive substances.
- Wear jobsite protective/safety clothing such as dielectric boots, gloves, hard hat, high-visibility vest, and safety glasses.
- Install transmitters into the drill housing as soon as possible after powering on. If you can't, unscrew the cap to power off the transmitter until you can install the transmitter into the drill housing to reduce RF exposure.
- Comply with federal, state, and local governmental regulations (such as OSHA) and all other customary or required safety precautions.

If you have any questions about the operation of your guidance system, please contact DCI Customer Service for assistance.

ARES GENESIS ENVIRONMENTAL REQUIREMENTS

Device (Model Number, Product ID)	Relative Humidity	Operating Temp.
DigiTrak® ARES GENESIS® locator (AEO2, DR-ARES-G)	<80%	Operation 0°C - 45° C Storage -20°C – 60°C
DigiTrak Lithium-Ion rechargeable: battery pack-G4 (MBP6v1)	<80%	-20°C – 60°C
DigiTrak AF8® remote display	<90%	-20°C – 60°C
DigiTrak ARES Genesis 6-inch transmitter (DT6-G)	<100%	-20°C – 104°C

System working altitude: up to 6,562 feet (2,000m).

Operation may be compromised if the equipment is subjected to conditions outside these specified limits.

Ship in the original carrying case or packaging of sufficient durability to prevent mechanical shock to the equipment during transportation. See the Storage and Shipment of Batteries for more information about that equipment.

If you have any questions about the operation of your guidance system, please contact DCI Customer Service for assistance

EQUIPMENT AND BATTERY DISPOSAL

This symbol on equipment indicates that the equipment must not be disposed of with your other household waste.



Instead, it is your responsibility to dispose of such equipment at a designated collection point for the recycling of batteries or electrical and electronic equipment. If the equipment contains a banned substance, the label will show the pollutant (Cd = Cadmium; Hg = Mercury; Pb = Lead) near this symbol.

Before recycling, ensure batteries are discharged or the terminals are covered with adhesive tape to prevent shorting.

The separate collection and recycling of your waste equipment at the time of disposal will help conserve natural resources and ensure it is recycled in a manner that protects human health and the environment.

For more information about where you can drop off your waste equipment for recycling, please contact your local city office, your household waste disposal service, or the shop where you purchased the equipment.

U.S.: Contact The Battery Network's drop-off locator at 1-877-2-RECYCLE or visit: www.batterynetwork.org

The following section is required to remain in French for compliance purposes and not translated.

Ce symbole figurant sur l'équipement indique qu'il ne faut pas le jeter avec les ordures ménagères.

Il vous incombe en effet d'éliminer ce type d'équipement en l'amenant à un site de récupération désigné pour le recyclage des batteries/piles ou d'appareils électriques et électroniques. Si le matériel contient une substance interdite, l'étiquette indiquera le polluant (Cd = cadmium ; Hg = mercure ; Pb = plomb) à côté de ce symbole. Avant de recycler les batteries, assurez-vous qu'elles sont déchargées ou que les bornes sont recouvertes d'un ruban adhésif pour éviter les courts-circuits. La collecte séparée et le recyclage de votre matériel usagé au moment de l'élimination permettront de conserver les ressources naturelles et de veiller à un recyclage en bonne et due forme, qui protège la santé humaine et l'environnement. Pour plus d'informations sur les sites où vous pouvez déposer votre matériel usagé à recycler, veuillez contacter les autorités municipales, votre service d'élimination des déchets ménagers ou le lieu d'achat du matériel.

Bootcamp

HDD LOCATING HISTORY

Locating in the horizontal directional drilling (HDD) industry was initially based on locating a buried cable by sweeping the locator back and forth to find the highest signal strength (peak signal), indicating that the locator was over the cable. Unfortunately, this method did not always guarantee an accurate location of the cable, nor did it provide any depth information.

This “peak signal” method was adapted to HDD with the introduction of a transmitter that provides information on the position and depth of the drill head. However, this method is unreliable and inaccurate because the peak signal strength is not always directly above the transmitter housing.

In addition, peak signal locating doesn’t show where the drill tool is headed. Think of drilling like driving a car: it is more effective to look ahead through the windshield to see where you are going than to look down at the road through the floorboard to keep the car (drill tool) on the road (drill path).

SPECIAL NOTES ABOUT INTERFERENCE

While DCI guidance systems provide you with technology to combat active interference (and passive interference, with the Sub-K® rebar-enabled transmitter), no guidance system is immune to all interference.

Interference can lead to inaccurate depth readings and/or interruption or loss of data. Never rely on data that does not display quickly and/or remain stable.

Interference levels change with time and with even minor changes in location. If performance drops while drilling, consider switching to the other selected frequencies or use **Max mode *** .

Attenuation is normal in shallow depths less than 8 ft (2.4 m). If the signal strength is in a red box this indicates extreme interference. Depth and locate points may be compromised and the locator will not calibrate.

Interference is classified as either active (generating electro-magnetic signals) or passive (material that can conduct or block electro-magnetic signals). Sources of interference may include:

Active	Passive
• Traffic signal loops • Buried dog fences • Cathodic protection • Radio communications • Security systems • Microwave towers • Power, phone, fiber-trace and cable TV lines	• Metal pipes • Rebar • Trench plates • Chain-link fences • Vehicles • Saltwater/salt domes • Conductive earth, such as iron ore

If you have any questions about the operation of your guidance system, please contact DCI Customer Service for assistance.

GLOSSARY DEFINITIONS

> ### *MAX MODE
>
> Max Mode can stabilize roll/pitch data and depth readings when drilling at the transmitter's range limit due to extreme depth or interference, which will vary by jobsite. See the Max Mode topic for use and important safety information.

*ATTENUATION

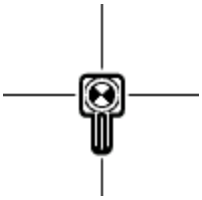
The locator automatically attenuates the transmitter signal when locating at shallow depths to reduce excessive signal strength. Attenuation is in effect whenever an "A" appears on the Falcon Locate screen or the attenuation warning icon on the ARES locate mode screen. Attenuation can also indicate the presence of excessive interference, which can make depth readings inaccurate.

Attenuation is normal when the locator is close to the transmitter; attenuation during calibration is a warning to relocate to and calibrate in an area with less interference. The locator will not calibrate when the signal strength is flashing, which indicates the presence of extreme interference.

BALL-IN-THE-BOX GUIDANCE

DCI's design uses a "locate point" in the transmitter signal. The Front Locate Point (FLP), which is out ahead of the transmitter, shows where the transmitter housing is heading.

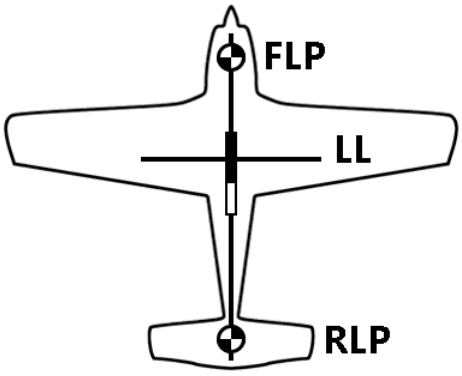
DCI invented the *Ball-in-the-Box* user interface to make it quick and intuitive to find a locate point, speeding up drilling jobs: just move the locator so the ball moves into the box on the screen.



Finding a locate point also helps you find the drill head itself.

There is a second locate point behind the transmitter called the Rear Locate Point (RLP). The two locate points, combined with a Locate Line (LL), pinpoint the precise location of the transmitter housing below ground.

They are arranged like an airplane, where the Front Locate Point is the plane's nose, the Rear Locate Point is the tail, and the Locate Line is the wings.



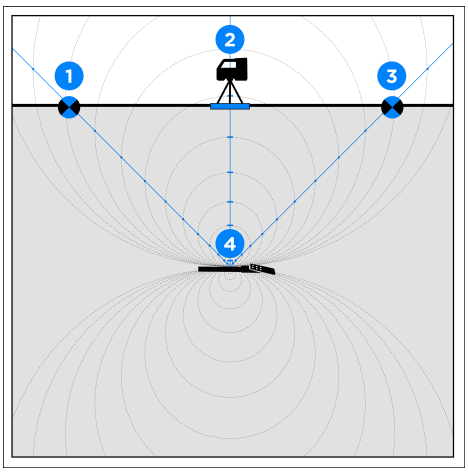
If your drill path requires a consistent depth or to maintain a constant pitch, use the predicted depth feature at the Front Locate Point. This eliminates the need for depth readings over the transmitter, speeding up the drilling process.

STEEP AND DEEP

When a transmitter is level (zero pitch) underground:

- the locate points (FLP and RLP) are at equal distances from the transmitter
- depth displayed on the locator is the actual depth, and

- the Locate Line (LL) indicates a position above the transmitter.



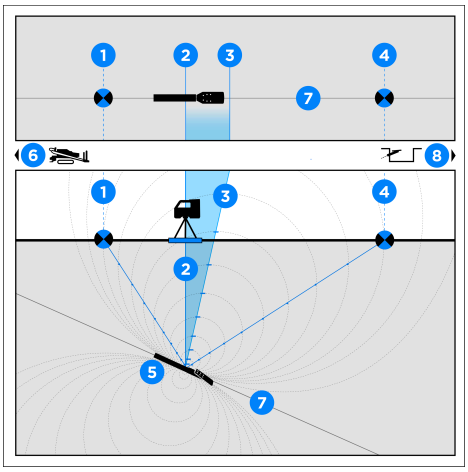
1. RLP
2. LL
3. FLP
4. Transmitter at 0 pitch

When the transmitter is pitched up or down, the transmitter signal field also tilts.

When the transmitter is pitched down (negative pitch), the locate line on the screen reflects a future position of the transmitter, assuming the transmitter stays on the same trajectory (projected depth).

When the transmitter is pitched up (positive pitch, shown below), the locate line on the screen reflects a position behind the transmitter.

The depth reading on the locator is based on the projected depth point, which is not the same as the actual depth of the transmitter.



1. RLP
2. Calculated LL (live pitch required)
3. LL without pitch
4. FLP
5. Transmitter in housing
6. Rig
7. Bore path
8. Bore exit point

The differences in position and depth between the estimated depth point and the transmitter's actual location can be relatively small at low pitch and/or shallow depth. When drilling at a steep pitch and/or significant depth, the differences are greater.

For example, if the transmitter is at a plus or minus 30% pitch and a 33'1" (10.1 m) depth, the locator depth reading will be 35' (10.7 m) (just under 6% difference from actual depth) and the locate line will be 6'6" (2 m) from being directly above the transmitter (-30% places the LL ahead and +30% places the LL behind).

- If the locator does not have a report pitch, the locator can determine the projected LL (#3), but will not display a calculated LL (#2). Depending on whether the pitch is positive or negative, LL could appear in front of or behind the transmitter.
- If the locator is not facing the bore exit, the calculated LL and the calculated depth will be incorrect.
- If the locator does not have a reported pitch or is not facing the bore exit point, the locator cannot determine the position of the transmitter (the LL).

You can use the pitch and the projected depth reading on your locator to determine the actual depth and the position (fore/aft) of the locate line:



For accurate readings, the locator must be pointed towards the bore exit point.

MENU NAVIGATION

The ARES GENESIS locator has a four-way D-pad on top and a trigger switch under the handle to navigate menus and select options.

To turn on the locator, squeeze and hold the trigger for 2-3 seconds.

Use the D-pad to scroll up or down menu options and buttons and then squeeze the trigger to select the button or option. The active button is blue.

The back arrow button takes you back to the previous screen or to the screen indicated by the icon. In this example, the back arrow button returns to the Locate mode screen.



> On most menus, scrolling to the left takes you to the top of the menu. If you are at the top of a list, scroll up to skip to the bottom of the list and scroll down at the end of a list will take you back to the top.

SCREEN ELEMENTS OVERVIEW

The Home screen is an at-a-glance view of your guidance system, including paired transmitter, active bands and frequencies, battery life, connectivity, and quick access to menus.

The Locate mode, Depth, Estimated Depth, and Target mode screens are the primary screens you will use for locating.

When the locator is detecting a signal from a transmitter, the Locate mode and Target mode steering screens provide real-time data about the transmitter's location, temperature, pitch, roll, and signal strength.

From the Locate mode screen, you can take a depth reading at the **Locate Line *** (LL) and predicted depth at the **Front Locate Point *** (FLP). At any other time, you can take a depth estimate between the LL and FLP.

GLOSSARY DEFINITIONS

*ANNULAR FLUID PRESSURE

The pressure of the fluid found in the space between a drill string and casing.

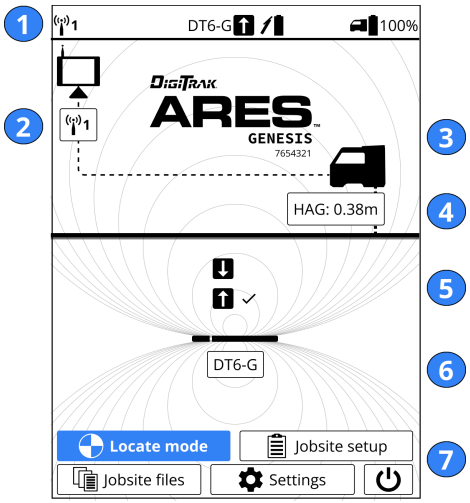
*LOCATE LINE (LL)

An imaginary line directly under the locator.

*FRONT LOCATE POINT (FLP)

An imaginary point ahead of the locator that indicates where the transmitter is heading. The FLP is where you take a predicted depth reading.

ARES GENESIS HOME SCREEN

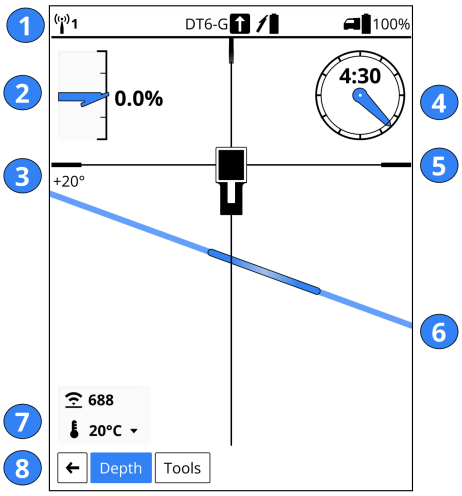


Home screen

1. Status bar - telemetry, transmitter (Tx) settings, transmitter battery and locator battery life
2. Remote display telemetry channel*
3. Locator type and serial number*
4. HAG (Height-Above-Ground) set distance*
5. Transmitter settings (active frequency - Up selected)*
6. Transmitter model*
7. Navigate to other screens and off button (Locate mode selected)

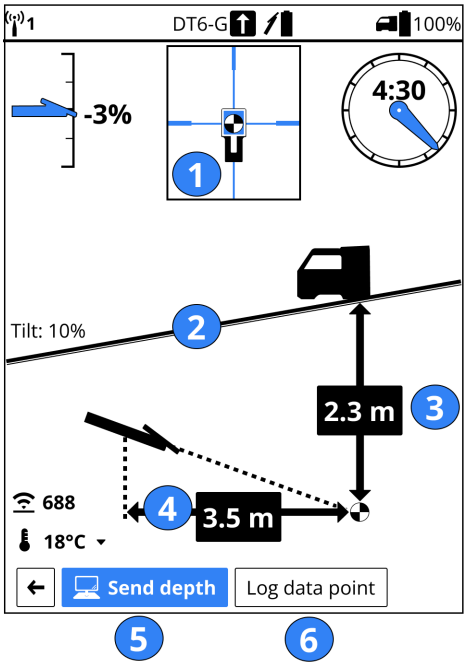
*Select these items to see more detail or make changes.

LOCATE MODE SCREEN



1. Status bar (telemetry, transmitter type and battery life)
2. Pitch (level)
3. Yaw (+20°)
4. Drill housing clock (no offset)
5. Target box, lines, and ball
    1. Target box - black if off-target, blue if ball in the box and centered on both crosshair lines
    2. Crosshair lines - blue, if the ball is centered on a line
    3. Ball - black and white, if centered in box
6. Extended Locate Line over crosshairs or box
7. Signal strength and transmitter temperature
8. Go back, Depth (selected), and Tools buttons

DEPTH SCREEN



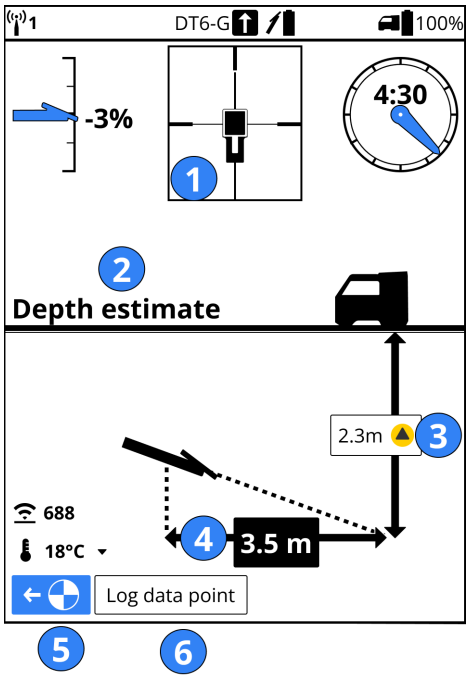
Locate depth screen

1. Ball-in-the-Box is at a locate point (FLP, LL, or RLP)
2. Ground tilt (10%)
3. Transmitter depth at FLP
4. Horizontal distance between transmitter and locator
5. Return to Locate mode screen
6. Send depth data to remote (selected)

If the transmitter is pitched, the FLP, LL, and RLP will have different depth readings.

If you take a depth reading and are NOT on a locate point or the Locate Line (LL), you will get a depth estimate reading but will not be able to send the data to the remote.

DEPTH ESTIMATE SCREEN



Depth estimate screen

1. Ball-in-the-Box is beyond the LL and a located point is not in the box
2. Depth estimate notice
3. Transmitter depth estimate
4. Horizontal distance between transmitter and locator
5. Send depth to the remote display (selected)
6. Log data point. See the DCI DigiGuide app for the *Log While Drilling* manual.

Estimated depth should only be taken on the line between the LL and the FLP and is inaccurate beyond 35' (10.7m) from the LL or if behind the LL or off to the side of the centerline. The locator must be facing down the bore path with the transmitter pointing at the ARES GENESIS battery pack.

You can log a rod from an estimated depth reading, but only the pitch or a blank rod is logged.

> ⚠ The further the drill head is from the locator the less accurate the estimated depth calculation. Not accurate past 35' (10.7m). For safety, do not use estimates alone to determine a position for crossing utilities or obstacles. The depth calculation should therefore only be used as an estimate of the projected path.

Initial Setup

REGISTER EQUIPMENT ON THE MYDCI PORTAL

Registering your DCI equipment at myDCI.digital-control.com allows you to:

- Activate product warranties
- Obtain and assign subscriptions to equipment, such as the LWD App for transferring bore logs to a device
- Enable Trak-It theft tracking options for Ares Genesis locators and RD8 displays.

For more information about the myDCI portal and registering your equipment and purchasing subscriptions, go to the myDCI manual in the DigiGuide App

POWER ON

STEP 1 OF 5

Before You Start

Ares Genesis batteries are locked for shipping to prevent damage. To unlock the battery, plug it into a USB charger. You only have to do this the first time you use the battery.

> A 100-watt USB-C cable is recommended for charging. If the battery is completely discharged, it may take several minutes until the first indicator light appears. You can also view locator battery charge level in the top status bar of most screens.

Press the power button to check the charge level of your locator battery; each of the five lights on a Li-ion battery represents about 20% capacity.



STEP 2 OF 5

Insert battery in the locator.

STEP 3 OF 5

Pull the trigger and hold for 2-3 seconds to power on.

STEP 4 OF 5

Click to confirm you've read the manual.

STEP 5 OF 5

The regional code for the locator and the transmitter must match. If they don't, contact your DigiTrak dealer.

On the transmitter, look for the globe icon on the etching, which has a letter or number.



To find the region code for the locator, on the **Home** screen, select **Settings**, scroll down to the bottom of the list and select **About this locator**, and then select **System information**.

The **Region** code is the letter after the dash.

UPDATE THE ARES GENESIS LOCATOR SOFTWARE OVER WI-FI

STEP 1 OF 5

Before You Start



You can download software updates with new features and upgrades for your Ares Genesis locator over Wi-Fi, including stable mobile hotspots. The locator automatically disconnects from Wi-Fi after the update is complete.

For more information about connecting to Wi-Fi on your locator, see the article Connect to Wi-Fi.

Do not turn off the locator or switch screens until the update is complete. Time to update will vary depending on connection speed and may take several minutes. Make sure the locator battery is at least half full, so that the update is not interrupted.

Some software updates are optional. However, some features and functionality will not be available without the current software. If a software update is available, a message is displayed on the equipment page on the myDCI portal. You can also check for updates in Settings.

STEP 2 OF 5

From the **Home** screen, scroll down and select **Settings**.

STEP 3 OF 5

On the **Settings** page, under **System**, select **Software updates**.

STEP 4 OF 5

Select the network to use and then enter the password using the D-pad and trigger. The locator will remember the password the next time you connect.

> If a Wi-Fi network is hidden and doesn't broadcast its SSID, you can still connect to these networks if you know: 1) the network name or SSID 2) the type of encryption used by the network 3) the network password.

STEP 5 OF 5

After connecting, the locator checks for updates.

- *If the locator software is up-to-date*, the current version is displayed, with a message. Select Close to return to the Settings menu.
- *If the locator software needs an update*, select Download and Install, and then select Begin update. When the update is complete, the locator will restart.
- *If the update fails*, contact DCI Customer Service.

PERSONALIZE THE ARES GENESIS

STEP 1 OF 4

Before You Start



You can personalize the ARES GENESIS locator.

- Change how the screens are displayed (dark or light and brightness)
- Select how dates and time are displayed
- Turn sounds on or off
- Change the locator language (View the **list ***)
- Select how depth and distances are displayed (feet or metric)
- Select how pitch, temperature, and pressure units are displayed

STEP 2 OF 4

From the Home screen, go to Settings.

STEP 3 OF 4

On the Settings screen, scroll down to the options you want to change.

STEP 4 OF 4

The changes are immediate.

GLOSSARY DEFINITIONS

*DIGITRAK ARES LOCATOR LANGUAGES SUPPORTED

English (US)

Español (Spanish)

Русский (Russian)

Polski (Polish)

Čeština (Czech)

Deutsch (German)

Italian (Italiano)

Français (French)

Nederlands (Dutch)

Dansk (Danish)

Português (Portugal-Portugal)

Português brasileiro (Portugal-Brazil)

SET HEIGHT ABOVE GROUND ON AN ARES GENESIS

STEP 1 OF 5

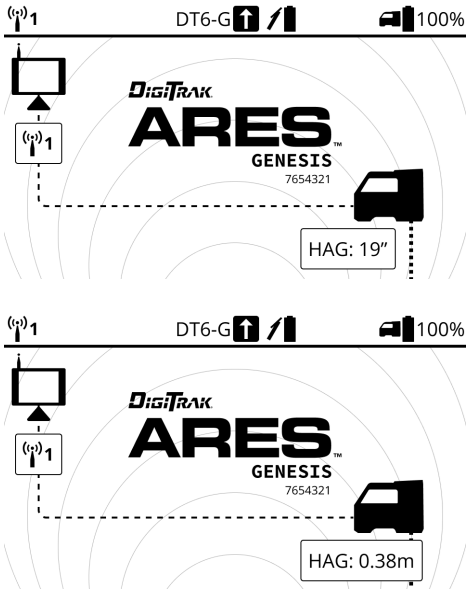
Before You Start

Use Height Above Ground (HAG) to set a height measurement on the locator so you don't have to put it on the ground for a depth reading.

Raising the locator above the ground also provides separation from underground interference that might otherwise reduce the transmitter's range or cause variable readings. It also improves telemetry back to the remote display.

If HAG is turned on, you can see the height set on any of these screens.

1. Home screen
2. Locate screen
3. Locate tools screen
4. Depth screens



STEP 2 OF 5

Measure the distance between the ground and the bottom of the locator using a tape measure.

- *To measure for hand-held HAG,* hold the locator at your side as if you were holding a suitcase.
- *To measure on a stand*, extend the legs to the desired length and lock them securely, and seat the locator firmly into the saddle, and the saddle onto the stand.

STEP 3 OF 5

From the Home screen, select Jobsite setup.

STEP 4 OF 5

Select HAG.

STEP 5 OF 5

On the HAG screen, use the up and down arrows to enter the height, and then select Save.

Jobsite Setup

ABOUT THE DT6-G 6-INCH TRANSMITTER

STEP 1 OF 3

Before You Start



The DT6-G transmitter automatically pairs to the locator and is preset with two sets of frequencies and power levels.

The Up frequency uses low power and frequency 38 for everyday use with higher battery life and active interference.



The Down frequencies use high power and a hybrid set of frequencies 20 for data strength and 4 for depth. Use the Down for rebar and areas with passive interference.



STEP 2 OF 3

Power on your transmitter by inserting the battery and screwing on the cap.

How you load the batteries sets the transmitter to the Up or Down frequencies. Load the battery from the bottom for Up frequencies or from the top for Down frequencies.

STEP 3 OF 3

Power on the locator by holding the trigger for 2-3 seconds. The locator automatically recognizes the DT6-G transmitter and the pre-programmed Up and Down frequencies.

You cannot delete the transmitter, and if you switch to another DT6-G transmitter, it will be recognized automatically as well.

Click Calibration to continue.

CALIBRATE AN ARES GENESIS LOCATOR

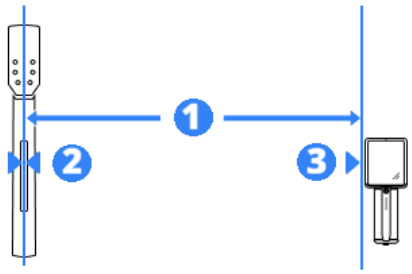
STEP 1 OF 6

Before You Start

The ARES GENESIS locator prompts you to calibrate the distance the first time the locator is turned on, or you can recalibrate or verify the above-ground range at any time.

Calibration is required any time you change the drill head, batteries, or transmitters.

For accurate calibration, the locator and housing should be flat on the ground on the same level in a low-noise, metal-free environment. If this is not possible, take the designated measurement between the two in a straight line.



1. Distance measured
2. Center line of the transmitter parallel to the locator
3. Inner edge of the locator
   (look for calibration marks)

The ARES GENESIS locator will not allow depth readings until the transmitter has been calibrated and will display multiple warnings.

STEP 2 OF 6

After connecting to the transmitter, select **Calibration** to continue the transmitter setup.

STEP 3 OF 6

Follow the directions on the calibration screen, and then select **Run calibration**.

> If calibration fails, follow the recommendations on the screen and then select "Recalibrate".

STEP 4 OF 6

The locator will recalibrate and then guide you through an **Above-ground-range** (AGR) check.

> To calibrate, recalibrate, or verify calibrations at any other time, on the "Home" screen, select "Jobsite setup", and then "Calibration".

STEP 5 OF 6

Select **Check**. The arrow on the button indicates the uncalibrated frequencies. The locator will change to the uncalibrated frequencies.

STEP 6 OF 6

Change the active frequencies on the transmitter.

The arrow in the status bar indicates if the locator is looking for the Up or Down frequencies. You can use the **Tilt method *** (above ground) or the **10-2-7 *** method (below ground) to change the transmitter's active frequencies. See the Reference chapter for instructions.

GLOSSARY DEFINITIONS

> *TILT METHOD TO CHANGE ACTIVE FREQUENCIES ON A TRANSMITTER
>
> 1. Verify the current active frequencies - Up or Down - on the Status bar.
> 2. Keep the transmitter in the same rotation for this entire procedure.
> 3. Hold the transmitter horizontally for 5 seconds.
> 4. Tilt the front of the transmitter up to 65 degrees (almost vertical) for 18 seconds.
> 5. Tilt the transmitter back down to horizontal for another 18 seconds.
> 6. Verify on the locator that the active frequency has changed.

> *10-2-7 ROLL SEQUENCE
>
> Following the rotation sequence changes the transmitter frequency. After marking the rod to track rotation, make the following rotations and hold for the specified time.
> 1. Rotate clockwise 1 full rotation, wait 20 seconds.
> 2. Rotate to 10:00, wait 15 seconds.
> 3. Rotate to 2:00, wait 15 seconds.
> 4. Rotate to 4:00, wait 15 seconds.
>
> The sequence can be executed either manually or assisted by Aurora® Display's XR® App or the RD8 Roll Sequence.

CHANGE TRANSMITTER ACTIVE FREQUENCY

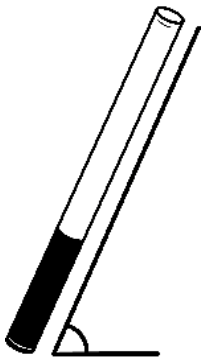
STEP 1 OF 3

To change the active band of *transmitte*r, hold the transmitter at the same (±2) general clock position (CP) for this whole procedure.

Hold transmitter powered on at level (0±10°) for at least five seconds.

STEP 2 OF 3

Tilt transmitter up at approximately +65° (almost vertical) for 10-18 seconds.



STEP 3 OF 3

Return to level for 10-18 seconds.

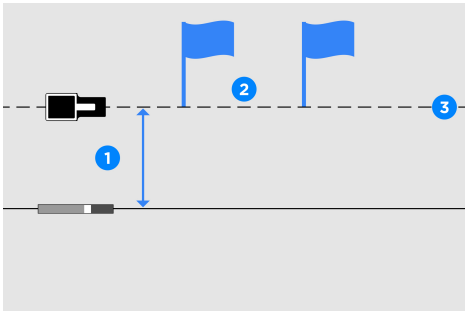
When the transmitter changes active frequencies, data disappears from the locator.

> You can also use the Power-on Method described in "Change Transmitter Band, Power-On Method" in the Advanced Topics chapter.

VERIFY TRANSMITTER RANGE, PITCH, AND ROLL

For areas with strong background interference (noise), you can verify that the selected frequency bands will reach the depth needed by walking the intended bore path with both the locator and transmitter at the same distance apart as the depth of the bore.

This procedure takes two people, one holding the locator and walking the intended bore path and the other holding the transmitter. At the start of the bore path, have the two people stand the same distance apart as the bore depth. They will walk the bore path, keeping parallel to each other. The locator operator monitors the Locate mode screen for a strong, steady signal. Occasionally, the transmitter operator should adjust the pitch and roll of the transmitter so the locator operator can verify the speed and accuracy of the locator's readings. Note any locations where the data displayed becomes erratic or disappears.



1. Maximum bore depth
2. Area of high interference
3. Intended bore path

Suggestions for dealing with interference

If pitch/roll data becomes erratic or is lost, move the locator away from the interference source while staying in range of the transmitter. You can use HAG, change the power level, or try off-track locating.

SET AND ENABLE ROLL OFFSET

STEP 1 OF 4

Before You Start



Use the Roll Offset menu when the 12 o'clock position of the transmitter cannot be indexed to that of the drill head. Roll offset lets you program the locator to display the roll of the drill head rather than that of the transmitter.

On the Locate Mode screen, the roll indicator will change to a circle, and "RO" appears at the bottom left of the roll indicator.

To change the roll offset, disable it first.

From the Home screen, select Jobsite setup.

STEP 2 OF 4

On the Locate mode tools screen, select Roll Offset.

STEP 3 OF 4

Ensure the drill head is at its 12 o'clock position and that the transmitter is on. Note the roll value showing on the screen.

STEP 4 OF 4

With the Set roll offset option highlighted as shown, select Set and enable to set the roll offset. Select Close to return to the Jobsite menu. Roll offset (enabled) shows the offset in degrees.

For example, 30 ° means the clock is 30 ° clockwise from the roll offset value.

During Drilling

BASIC LOCATING STEPS

STEP 1 OF 6

Before You Start



For accurate data, the ARES GENESIS locator must be pointed towards the bore exit. A reminder appears every time the locator is turned on. While locating towards the bore exit, if the locator goes more than 15 degrees out of line with the transmitter, the screen displays a "Point towards bore exit" warning.

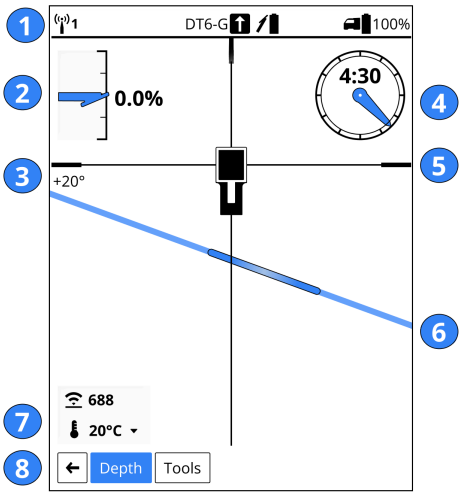
An ARES GENESIS locator locates the transmitter by detecting three specific "locate points" in the transmitter's magnetic field and displaying them as a ball or a blue locate line on the screen.

- **Front Locate Point (FLP) *** shows where the transmitter housing is heading.
- **Rear Locate Point (RLP) *** in combination with the FLP allows you to determine where to find the Locate Line.
- **Locate Line (LL) *** shows the position of the transmitter beneath the locator when the locator is on the crosshair connecting the front and rear locate points.

By identifying these three points, you can locate the underground transmitter and determine its direction, depth, and pitch.

DCI invented the *Ball-in-the-Box* user interface to make it quick and intuitive to find a locate point, speeding up drilling jobs: just move the locator so the ball moves into the box on the screen.

In a straight bore, using only the FLP and projected depths can greatly increase the speed of locating.

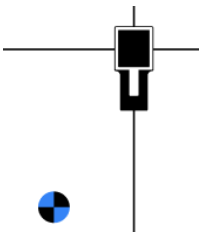


1. Status bar (telemetry, transmitter type and battery life)
2. Pitch (level)
3. Yaw (+20°)
4. Drill housing clock (no offset)
5. Target box, lines, and ball
    1. Target box - black if off-target, blue if ball in the box and centered on both crosshair lines
    2. Crosshair lines - blue, if the ball is centered on a line
    3. Ball - black and white, if centered in box
6. Extended Locate Line over crosshairs or box
7. Signal strength and transmitter temperature
8. Go back, **Depth** (selected), and **Tools** buttons

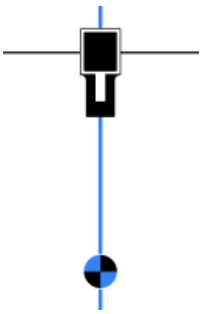
STEP 2 OF 6

To find the heading of the drill, first find the **FLP *** by centering the ball in the target box. The FLP is in front of the drill head.

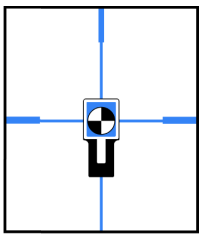
- The ball is the location of the closest locate point.



- The crosshair lines change color to blue when the ball is centered on them.



- The box and the lines change color to blue when the ball is in the target box and centered on both the crosshair lines. You have found a locate point.



STEP 3 OF 6

At the **FLP *** , select Depth, take a predicted depth, and set the reference depth. The **Locate Line (LL) *** may not appear if this step is skipped. Use the back arrow to return to the Locate mode screen.

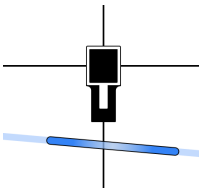
STEP 4 OF 6

Repeat the steps above to place the ball in the target and find the Rear Locate Point (**RLP) *** to determine the direction the drill head is traveling. The RLP is behind the FLP. Mark the ground at the RLP.

STEP 5 OF 6

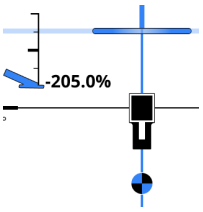
Step forward from the RLP towards the FLP until the Locate Line (LL), appears. Verify the locator is positioned on the crosshair line connecting the marks you made at the **FLP *** and **RLP *** and facing the bore exit.

The blue bar guides you to the LL by aligning the blue bar with the vertical crosshairs. When the LL is on a crosshair line, the crosshair line turns blue and is in the box.



If the LP flips from one end of the locator to the other end without the LL line, it is because the reference depth is too shallow. Move back to the FLP and take a depth. Adding HAG to the locator can also improve readings.

When the transmitter pitch is more than +/-1.5% (maximum pitch of +/-205%), both the ball and an extended blue bar appear to help you find the locate point.



- If the ball is behind the locator and the blue bar, the pitch is down.
- If the ball is ahead of the locator and the blue bar, the pitch is up.

STEP 6 OF 6

To view a depth reading, select Depth from the Locate mode screen. The type of depth reading displayed depends on your position along the bore path relative to the locate points.

Depth Estimate - Take a depth reading at the FLP.

Depth at LL - Take a depth reading at the **LL *** while standing between the **FLP *** and **RLP *** . When you are confident of the reading, you can:

- Select Send Depth to send the reading to the connected remote.

OR

- Select Log point to add to the bore log and send to the remote at the same time.

Depth Estimate - You can take an estimated depth reading if you are in line with the drill head and not more than 35' (10.7m) past the LL. Stay on the crosshair lines connecting the LL and FLP. You can log an estimated depth, but only the pitch or a blank rod will be captured. The estimated depth is not logged.

On the Depth screen, you can select Log point to add to the bore log.

To improve unstable depth/data readings, intermittent data or a "jittery" LL or LP, enable **Max mode *** from the Tools menu. You can log a data point while in Max mode. This may be the best way to log unstable data.

Select the back arrow to return to locating.

While you are in the Depth screen, do not move beyond the FLP. The locator may display a false LL. To correct this, return to the original locate point and exit the Depth screen. After recording and sending a Depth reading, it is a best practice to exit the depth screen and go back to the Locate mode screen. This will prevent a false LL.

GLOSSARY DEFINITIONS

*FRONT LOCATE POINT (FLP)

An imaginary point ahead of the locator that indicates where the transmitter is heading. The FLP is where you take a predicted depth reading.

*REAR LOCATE POINT (RLP)

An imaginary line behind the locator, when combined with the Front Locate Point (FLP) ahead of the locator, and the Locate Line (LL) directly below the locator, allows the locator to calculate the position, depth, pitch, and direction of the transmitter.

*LOCATE LINE (LL)

An imaginary line directly under the locator.

*MAX MODE

Max Mode can stabilize roll/pitch data and depth readings when drilling at the transmitter's range limit due to extreme depth or interference, which will vary by jobsite. See the Max Mode topic for use and important safety information.

TAKE A DEPTH READING IN MAX MODE

STEP 1 OF 4

Before You Start



Use Max mode when pitch/roll data is unstable to stabilize depth or locate the signal when drilling at the limit of the transmitter's capabilities. You can use Max mode during normal locating and log a point. This may be the best way to capture unstable data.

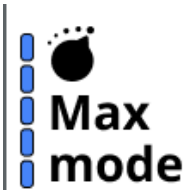
If the transmitter is at an extreme pitch and the locator does not have pitch data, the LL could display several meters from the transmitter, and you may not be able to find the calculated Locate Line. See the article, "Steep and Deep," for more information.

STEP 2 OF 4

On the **Locate mode** screen, select **Tools**.

STEP 3 OF 4

On the **Tools** menu, select **Max mode**. The Max mode icon displays on the **Locate mode** screen.



The number of blue bars indicates the reliability of the data. Data can take up to 30 seconds to appear. If the bar is grey, there is no data. If Max mode fails, go back to Locate mode and try Max mode in a new position.

> ⚠ The transmitter must remain motionless with no rotation or push/pull while in Max mode. If you need to move to a new location with less interference, exit Max mode and try it again at the new position. You cannot move the locator while using Max mode.

STEP 4 OF 4

To turn off Max mode and return to the Locate mode screen, select the back arrow.

To log the Max mode-corrected data, select **Log data point** and log as usual. If there is no data, you can log a blank rod.

10-2-7 ROLL SEQUENCE - CHANGE ACTIVE FREQUENCY ON TRANSMITTER

STEP 1 OF 6

Before You Start



Switching frequencies on the transmitter may provide better data, better depth, and/or better locate results as interference conditions change. After changing the active frequency on the transmitter downhole using this procedure, you also need to change the locator's active frequencies to match the transmitter's active band to regain signal.

Disable Roll Offset (if enabled). See the Set and enable Roll offset article for instructions.

If you do not have a live clock, you can also use the RRS3 roll sequence to change the transmitter's active frequencies.

STEP 2 OF 6

Roll the drill head clockwise to approximately 10 ± 1 clock position. Wait 10-20 seconds



STEP 3 OF 6

Roll the drill head clockwise to approximately 2 ± 1 clock position. Wait 10-20 seconds



STEP 4 OF 6

Roll the drill head clockwise to approximately 7 ± 1 clock position. Wait 10-20 seconds



STEP 5 OF 6

The transmitter changes bands and the data is not displayed on the Locate mode screen.

STEP 6 OF 6

On the locator, change the active frequencies, and then re-enable Roll Offset, if needed.

RRS3 ROLL SEQUENCE - CHANGE ACTIVE FREQUENCY ON TRANSMITTER

STEP 1 OF 6

Before You Start



Use this roll method to change Active bands below ground if you do not have a live clock position.

STEP 2 OF 6

1. Remain at any clock position (CP) for at least 40 seconds to clear all timers.
2. Make a reference mark on the drill string.

STEP 3 OF 6

Complete one full clockwise rotation (±2 CP) of the reference mark within 0.5–30 sec., then wait 10–20 seconds.

STEP 4 OF 6

Repeat step 3 two more times, for a total of three rotations (RRS3).

STEP 5 OF 6

After the third rotation, leave the drill string at rest for a total of 60 seconds, after which the transmitter changes frequency.

STEP 6 OF 6

On the locator, change the active band and return to the Locate mode screen and verify the transmitter data is displayed.

> ⚠ If any rotation is not completed within the prescribed time, or if any rotation continues for more than one full revolution, the transmitter frequency change is canceled.

CHANGE THE ACTIVE FREQUENCY ON THE LOCATOR

STEP 1 OF 3

Before You Start

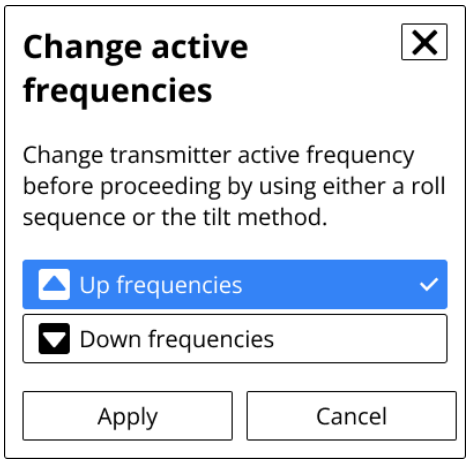


Switching bands on the transmitter may provide better data, better depth, and/or better locate results as interference conditions change. After changing the active band on the transmitter downhole using a 10-2-7 roll sequence, you also need to change the locator's active band to match the transmitter's active band to regain signal.

STEP 2 OF 3

On the Locate mode screen, select **Tools**.

On the **Frequencies** screen, select **Change active frequencies** to toggle between bands. The active band has a checkmark.



STEP 3 OF 3

You can confirm the locator is receiving data on the **Locate mode** screen.

To go to the **Locate mode** screen, click the **Jobsite setup** back button, and then **Home** screen back button, and then the **Locate mode** button.

Post Drilling

LOCATOR AND BATTERY CARE

STEP 1 OF 4

To power off the locator, on the Home screen, select the power icon.



STEP 2 OF 4

Remove the battery and inspect its contacts and those inside the battery compartment for corrosion and debris. Clean and charge as needed.

STEP 3 OF 4

Wipe the locator clean. Use only an abrasive-free cleaner and soft cloth to clean the screen.

Do not pressure wash.

STEP 4 OF 4

Store the battery and locator in the original system carry case safe from impact, moisture, and excessive temperatures.

Do not store the battery in the battery charger or locator.

Storage and transportation temperature must remain within -20° to 149°F (-20° to 65°C).

TRANSMITTER AND BATTERY CARE

STEP 1 OF 6

Remove the transmitter from the drill head.

STEP 2 OF 6

Wipe the transmitter clean so dirt doesn't enter the battery compartment or accumulate on the battery cap threads.

STEP 3 OF 6

Remove the transmitter batteries to power it off.

> The transmitter records active run-time for warranty purposes. Sleep mode is not counted.

STEP 4 OF 6

Inspect the battery compartment, springs, cap, O-ring, battery adapter, and threads for debris. Clear any debris and replace the battery cap.

> Use conductive lubricant on the threads if the battery cap is difficult to turn.

STEP 5 OF 6

Store batteries so they do not contact metallic objects or terminals of other batteries.

STEP 6 OF 6

Store the transmitter in the original system carry case where it will be safe from impact and excessive temperatures.

Storage and transportation temperature must remain within -40° to 149° F (-40° to 65 °C).

Advanced Topics

GET INFORMATION ON YOUR ARES GENESIS LOCATOR

STEP 1 OF 3

Go to **Settings**, scroll up or down and under **System**, select **About this locator.**

STEP 2 OF 3

On the **Help** screen, select **System information**.

STEP 3 OF 3

System information includes:

- Serial #
- Region
- Part number
- First day of use
- Run time
- Current system time
  - Edit current time - Takes you to the **Date and time** screen.
- Bootloader
- Image
- DigiRadio
- DSP
- Application
- 3rd party licenses (Select to view)

MANAGE THE LOCATOR'S WI-FI CONNECTIONS

STEP 1 OF 5

Before You Start



A stable Wi-Fi connection is required to check for software updates. Known networks are the Wi-Fi networks that your device has previously connected to and saved to use in the future, including passwords. You can "forget" networks you no longer want to use and remove them from the list.

If the password has changed, you may need to re-enter it or forget the saved network and reconnect and re-enter the password.

STEP 2 OF 5

Go to **Settings**, scroll down and under **Networks**, select **Wi-Fi**

STEP 3 OF 5

Under **Known Networks**, select the network to forget and remove from the list.

STEP 4 OF 5

Select **Forget this network,** and then select **Forget**.

STEP 5 OF 5

Close the **Wi-Fi** screen to return to the **Settings** screen.

VIEW TRANSMITTER INFORMATION ON A ARES GENESIS

STEP 1 OF 4

You can view the transmitter's information on the status bar on all of the main locator screens.

1. Active transmitter's model
2. Active band and frequency
3. Power mode
4. Battery charge level



> It a manual frequency change was made using a roll sequence underground, the status bar may not display the current band.

STEP 2 OF 4

From the **Home** screen, click **Jobsite Setup**, and then **Transmitters**.

STEP 3 OF 4

In the transmitter list, select the **Details** icon beside the transmitter you want information about.



STEP 4 OF 4

On the **Transmitter details** menu, select the information you want to view for the active transmitter.

CHANGE BAND, POWER-ON METHOD

STEP 1 OF 2

Remove the batteries from the transmitter and observe the data disappear from the locator.

STEP 2 OF 2

To change to the *Down band*, hold the transmitter vertical with the index cap end pointing straight down. Insert the batteries and reinstall the battery cap to power on the transmitter. Keep the transmitter vertical for 4-5 seconds.



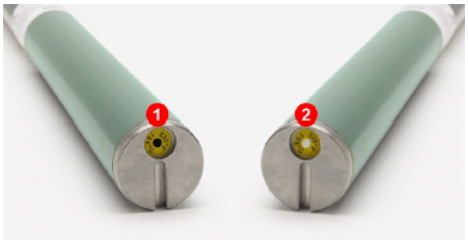
To change to the *Up frequencies*, hold the transmitter vertical with the index cap end pointing straight up. Insert the batteries and reinstall the battery cap to power on the transmitter. Keep the transmitter vertical for 4-5 seconds.



The band being used on the transmitter must match the band on the locator. If no data is displayed on the Locate mode screen, select "Tools", "Change active frequencies", and then select the band. Select "Apply" to continue. Data will appear on the locator..

TRANSMITTER OVERHEAT INDICATOR (TEMP DOT)

DigiTrak transmitters (Tx), with the exception of DucTrak, have temperature overheat indicators (temp dot) on the front end cap.



The temp dot has a red disk with a temperature-sensitive 3.15 mm white dot in the center. If the center temp dot is black, the transmitter has been exposed to excessive heat over 180°F (82°C) and should no longer be used and the warranty is voided.

The DCI Warranty does not cover any transmitter that has been overheated or had the temp dot removed.

TX TEMPERATURE WARNING TONES TABLE - COMPLIANCE

Icon	Temperature	Warning Tones
	below 61°F	None.
	61°F-97°F	Double-beep sequence (beep-beep) for every 7°F increase in temperature
	104°F-111°F	Two double-beep sequences (beep-beep, beep-beep) for every 7°F increase in temperature. Action is required to cool the transmitter.
	113°F-118°F	Three double-beep sequences (beep-beep, beep-beep, beep-beep) for every 7°F increase in temperature. Cooling is critical to avoid irreversible damage.
 Flashing	140°F or above	Three double-beep sequences (beep-beep, beep-beep, beep-beep) for every 5 seconds on the remote display and every 20 seconds on the locator. This warning signifies dangerous drilling conditions; irreversible damage may have already been done to the transmitter.
	180°F	6-in transmitters - None. Transmitter overheat indicator (temp dot) turns black.
	220°F	19-in and 15-inch transmitters - None. Transmitter overheat indicator (temp dot) turns black.

CHANGE TRANSMITTER ACTIVE FREQUENCY

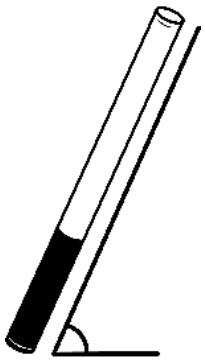
STEP 1 OF 3

To change the active band of *transmitte*r, hold the transmitter at the same (±2) general clock position (CP) for this whole procedure.

Hold transmitter powered on at level (0±10°) for at least five seconds.

STEP 2 OF 3

Tilt transmitter up at approximately +65° (almost vertical) for 10-18 seconds.



STEP 3 OF 3

Return to level for 10-18 seconds.

When the transmitter changes active frequencies, data disappears from the locator.

> You can also use the Power-on Method described in "Change Transmitter Band, Power-On Method" in the Advanced Topics chapter.

Reference

DIGITRAK ARES GENESIS LOCATOR SPECIFICATIONS



Product ID: DR-ARES-G

Model number: AEO2

Receiving frequencies: 0.33 to 45.0 kHz

Accuracy [1]**:** ±5% of depth reading in a noiseless environment

Telemetry channels [2]**:** 4

Telemetry range [3]**:** Up to 3000 ft (900 m)

L/R steering range: Range of transmitter

Power source: Lithium-ion battery pack

Battery life: 8–12 hrs

Functions: Menu-driven

Controls: Four-way D-pad and trigger

Graphic display: Full-color LCD

Audio output: Beeper

Voltage, current: 14.4 VDC nominal, 390 mA max

Operating temperature: 32° F to 113° F (0° C to 45° C)

Dimensions: 15 x 5.5 x 12.7 in (38.1 x 13.97 x 32.26 cm)

Weight (with battery): 8 lb 14 oz (4.02 kg)

Compatible transmitters: DT6-G

Compatible remote displays: FCD (manufactured after May 2026)

Warranty period: One year from date of purchase

(1) Over specified depth range for each transmitter model.

(2) Local telemetry frequencies and power levels available at digital-control.com.

(3) Telemetry range is dependent upon the remote display and optional external receiving antenna.

COMPLIANCE

This equipment complies with the following: Part 15 of the Rules of the FCC; Innovation, Science and Economic Development Canada's license exempt RSS(s); ACMA Radio Communications Standard (2021) as found in ACMA Radio Communications Equipment General Rules (2021). Operation is subject to the following two conditions: (1) this equipment may not cause harmful interference, and 2) this equipment must accept any interference received, including interference that may cause undesired operation.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : 1. L'appareil ne doit pas produire de brouillage; 2. L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement

> ⚠ DCI is responsible for FCC compliance in the United States. Changes or modifications to any DCI equipment not expressly approved and carried out by DCI will void the user's Limited Warranty and the FCC's authorization to operate the equipment.

Digital Control Incorporated

19625 62nd Ave S, Suite B103, Kent WA 98032;

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To find a regional office, tap **Contact** on the DigiGuide menu bar or on the last page of the PDF version of the DigiGuide.

DigiTrak locators are classified as Class 2 radio equipment per the Radio Equipment Directive 2014/53/EU and may not be legal to operate or may require a user license to operate in some countries. For a list of restrictions, see the article, "Product CE Declarations of Conformity" can be found at www.digital-control.com or upon request to productcompliance@digital-control.com.

Patents - https://www.digital-control.com/patents/

Trademarks - https://www.digital-control.com/trademarks/

DT6-G ARES GENESIS 6-INCH TX SPECIFICATION



Description: ARES Genesis wideband 6-inch transmitter

Product ID: DT6-G

Model number: BTM

Label color: violet/blue tube

Features

- Wideband
- Short-range depth/data
- Pitch to 205%
- V2 multipower
- SnooZe mode (optional)
- Made in USA

Compatible locators: ARES Genesis

Transmitting frequencies: 9 Bands 1000+ frequencies 4.5 – 45 kHz

Length/diameter: 5.9 in / 0.71 in (15 cm / 1.8 cm)

Clock resolution: 24 with ARES Genesis

Depth/Max Mode data (2)(3):

Down frequencies (high power level)

- Depth range: 44.3 ft (13.5 m)
- Data range: 68.9 ft (21.0 m)

Up frequencies (low power level)

- Depth range: 33.4 ft (10.5 m)
- Data range: 68.9 ft (16.5 m)

Battery types:

- Lithium DCI Supercell
- NiMH AA
- Alkaline AA

Battery life: AA alkaline/Li 1.5v: up to 17hrs/28hrs

Pitch resolutions (3)

- Standard Pitch ±0.1 % at level
- FSSP Pitch 0.1% from +99% to -99%

Temperature readout/resolution: -4 to 220°F @ 7°F resolution (-20 to 104°C @ 4°C res)

Voltage/current: 1.0 -3.0v/400mA Max

Weight (without battery): 0.2lb (90gr)

Operating environment

- Temperature: -20° to 149°F (-20° to 65°C)
- Altitude: Up to 6,562 ft (2,000 m)
- Warranty canceled if above 180°F (82°C)

Warranty period: 90 Days

(1) The data range is based on using the Max mode.

(2) Range figures based on SAE Standard J2520. Actual ranges and battery life will vary based on interference, transmitter housing, frequency, and other factors.

(3) Standard Pitch resolution

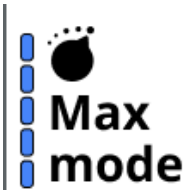
- 0 - 3% (0-1.7°) ±grade is 0.1% resolution;
- 3 - 9% (1.7-5.1°) is 0.2%;
- 9 - 30% (5.1-16.7°) is 0.5%;
- 30 - 50% (16.7-26.6°) is 2.0%;
- 50 - 90% (26.6-24.0°) is 5.0%

ARES GENESIS ICONS AND SYMBOLS

Indicates the presence of interference (**attenuation** *****). If the icon is red or surrounded by a red box, this is excessive attenuation, which can make depth readings inaccurate.



Indicates that Max Mode is enabled to stabilize roll/pitch data and depth readings when drilling at the transmitter's range limit due to extreme depth or interference, which will vary by jobsite.



Options - Select to access more settings and details.



Locator battery charge level. The icon changes to yellow when the battery is lower than 39% and red when lower than 20%.



Indicates the transmitter band is assigned an ultra-low band (0.3, 0.5, or 0.7) for use in areas of high passive interference, such as rebar.



Transmitter battery charge level. The

icon changes to yellow when the battery is lower than 39% and red when lower than 20%.	
Telemetry active. The locator is sending a signal to a remote over telemetry channel 1.	
Telemetry channel off - no signal is being sent to the remote display.	
Telemetry paused - no signal is being sent to the remote display.	
Wi-Fi connected at 100%	
Wi-Fi attempting to connect	
Wi-Fi error	

GLOSSARY DEFINITIONS

*ATTENUATION

The locator automatically attenuates the transmitter signal when locating at shallow depths to reduce excessive signal strength. Attenuation is in effect whenever an "A" appears on the Falcon Locate screen or the attenuation warning icon on the ARES locate mode screen. Attenuation can also indicate the presence of excessive interference, which can make depth readings inaccurate.

Attenuation is normal when the locator is close to the transmitter; attenuation during calibration is a warning to relocate to and calibrate in an area with less interference. The locator will not calibrate when the signal strength is flashing, which indicates the presence of extreme interference.

6-FOOT (1.8 M) ROD DEPTH CHANGE BASED ON PITCH

Depth Increase in Inches (cm)

% slope	Depth increase inches (cm)	% slope	Depth increase inches (cm)
1	0.6 (1.5)	14	8.4 (21.3)
2	1.2 (3.0)	15	9.0 (22.9)
3	1.8 (4.6)	16	9.6 (24.4)
4	2.4 (6.1)	17	10.2 (25.9)
5	3.0 (7.6)	18	10.8 (27.4)
6	3.6 (9.1)	19	11.4 (29.0)
7	4.2 (10.7)	20	12.0 (30.5)
8	4.8 (12.2)	21	12.6 (32.0)
9	5.4 (13.7)	22	13.2 (33.5)
10	6.0 (15.2)	23	13.8 (35.1)
11	6.6 (16.8)	24	14.4 (36.6)
12	7.2 (18.3)	25	15.0 (38.1)
13	7.8 (19.8)	26	15.6 (39.6)

% slope	Depth increase inches (cm)	% slope	Depth increase inches (cm)
27	16.2 (41.1)	41	24.6 (62.5)
28	16.8 (42.7)	42	25.2 (64.0)
29	17.4 (44.2)	43	25.8 (65.5)
30	18.0 (45.7)	44	26.4 (67.1)
31	18.6 (47.2)	45	27.0 (68.6)
32	19.2 (48.8)	46	27.6 (70.1)
33	19.8 (50.3)	47	28.2 (71.6)
34	20.4 (51.8)	50	30.0 (76.2)
35	21.0 (53.3)	55	33.0 (83.8)
36	21.6 (54.9)	60	36.0 (91.4)
37	22.2 (56.4)	70	42.0 (106.7)
38	22.8 (57.9)	80	48.0 (121.9)
39	23.4 (59.4)	90	54.0 (137.2)
40	24.0 (61.0)	100	60.0 (152.4)

Slopes between 50% and 100% are provided for reference only and do not represent typical drilling conditions. All numbers are based on math only and do not take into account extremely soft or extremely hard soil conditions, which may cause depth values to vary.

10 FT (3 M) ROD DEPTH CHANGE BASED ON PITCH

Depth Increase in Inches (cm)

% slope	Depth increase inches (cm)	% slope	Depth increase inches (cm)
1	1 (2)	16	19 (48)
2	2 (5)	17	20 (51)
3	4 (10)	18	21 (53)
4	5 (13)	19	22 (56)
5	6 (15)	20	24 (61)
6	7 (18)	21	25 (64)
7	8 (20)	22	26 (66)
8	10 (25)	23	27 (69)
9	11(28)	24	28 (71)
10	12 (30)	25	29 (74)
11	13 (33)	26	30 (76)
12	14 (36)	27	31 (79)
13	15 (38)	28	32 (81)
14	17 (43)	29	33 (84)
15	18 (46)	30	34 (86)

% slope	Depth increase inches (cm)	% slope	Depth increase inches (cm)
31	36 (91)	43	47 (119)
32	37 (94)	44	48 (122)
33	38 (97)	45	49 (124)
34	39 (99)	46	50 (127)
35	40 (102)	47	51 (130)
36	41 (104)	50	54 (137)
37	42 (107)	55	58 (147)
38	43 (109)	60	62 (157)
39	44 (112)	70	69 (175)
40	45 (114)	80	75 (191)
41	46 (117)	90	80 (203)
42	46 (117)	100	85 (216)

Slopes between 50% and 100% are provided for reference only and do not represent typical drilling conditions. All numbers are based on math only and do not take into account extremely soft or extremely hard soil conditions, which may cause depth values to vary.

15 FT (4.6 M) ROD DEPTH CHANGE BASED ON PITCH

Depth Increase in Inches (cm)

% slope	Depth increase inches (cm)	% slope	Depth increase inches (cm)
1	2 (5)	16	28 (71)
2	4 (10)	17	30 (76)
3	5 (13)	18	32 (81)
4	7 (18)	19	34 (86)
5	9 (23)	20	35 (89)
6	11 (28)	21	37 (94)
7	13 (33)	22	39 (99)
8	14 (36)	23	40 (102)
9	16 (41)	24	42 (107)
10	18 (46)	25	44 (112)
11	20 (51)	26	45 (114)
12	21 (53)	27	47 (119)
13	23 (58)	28	49 (124)
14	25 (64)	29	50 (127)
15	27 (69)	30	52 (132)

% slope	Depth increase inches (cm)	% slope	Depth increase inches (cm)
31	53 (135)	43	71 (180)
32	55 (140)	44	72 (183)
33	56 (142)	45	74 (188)
34	58 (147)	46	75 (191)
35	59 (150)	47	77 (196)
36	61 (155)	50	80 (203)
37	62 (157)	55	87 (221)
38	64 (163)	60	93 (236)
39	65 (165)	70	103 (262)
40	67 (170)	80	112 (284)
41	68 (173)	90	120 (305)
42	70 (178)	100	127 (323)

Slopes between 50% and 100% are provided for reference only and do not represent typical drilling conditions. All numbers are based on math only and do not take into account extremely soft or extremely hard soil conditions, which may cause depth values to vary.

COMPLIANCE STATEMENT

FCC Compliance Statement

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device might not cause harmful interference, and (2) this device must accept any interference received, including interference that might cause undesired operation.

DCI is responsible for FCC compliance in the United States. Changes or modifications to any DCI equipment not expressly approved and carried out by DCI will void the user's Limited Warranty and the FCC's authorization to operate the equipment.

The RTP Transmitter contains the following:
Laird Bluetooth 5.1 Data Module, Model BL653
FCC 1D SQGBL653 1 ISED 1D 3147A-BL653
For manufacture's module certifications, visit https://www.ezurio.com/

ISED Canada Compliance Statement

This device complies with Innovation, Science and Economic Development Canada's license-exempt RSS. Operation is subject to the following two conditions:

1. This device may not cause interference.
2. This device must accept any interference, including interference that may cause undesired operation of the device.

CAN ICES-3 (A)/NMB-3(A)

DigiTrak Locators are classified as Class 2 radio equipment per the Radio Equipment Directive 2014/53/EU and may not be legal to operate or may require a user license to operate in some countries. For a list of restrictions, please send a request to productcompliance@digital-control.com.

Déclaration de conformité FCC

Cet appareil est conforme à la partie 15 des règles FCC. Son fonctionnement est soumis aux deux conditions suivantes : (1) cet appareil ne doit pas causer d'interférences nuisibles, et (2) cet appareil doit accepter toute interférence reçue, y compris les interférences pouvant entraîner un fonctionnement indésirable.

DCI est responsable de la conformité FCC aux États-Unis. Toute modification apportée à un équipement DCI qui n'a pas été expressément approuvée et effectuée par DCI annulera la garantie limitée de l'utilisateur et l'autorisation de la FCC d'utiliser l'équipement.

L'émetteur RTP contient les éléments suivants :
Module de données Bluetooth 5.1 Laird, modèle BL653
FCC 1D SQGBL653 1 ISED 1D 3147A-BL653
Pour obtenir les certifications des modules du fabricant, consultez le site https://www.ezurio.com/.

Déclaration de conformité ISED Canada

Cet appareil est conforme aux RSS exemptés de licence d'Innovation, Sciences et Développement économique Canada. Son fonctionnement est soumis aux deux conditions suivantes :

1. Cet appareil ne doit pas causer d'interférences.
2. Cet appareil doit accepter toute interférence, y compris les interférences pouvant entraîner un fonctionnement indésirable de l'appareil.

CAN ICES-3 (A)/NMB-3(A)

Les localisateurs DigiTrak sont classés comme des équipements radio de classe 2 conformément à la directive 2014/53/UE relative aux équipements radio et leur utilisation peut être illégale ou nécessiter une licence d'utilisation dans certains pays. Pour obtenir la liste des restrictions, veuillez envoyer une demande à productcompliance@digital-control.com.

L'émetteur RTP contient les éléments suivants :
Module de données Bluetooth 5.1 Laird, modèle BL653
FCC 1D SQGBL653 1 ISED 1D 3147A-BL653
Pour obtenir les certifications des modules du fabricant, consultez le site https://www.ezurio.com/.

Déclaration de conformité ISED Canada

Cet appareil est conforme aux RSS exemptés de licence d'Innovation, Sciences et Développement économique Canada. Son fonctionnement est soumis aux deux conditions suivantes :

1. Cet appareil ne doit pas causer d'interférences.
2. Cet appareil doit accepter toute interférence, y compris les interférences pouvant entraîner un fonctionnement indésirable de l'appareil.

CAN ICES-3 (A)/NMB-3(A)

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DigiTrak Locators are classified as Class 2 radio equipment per the Radio Equipment Directive 2014/53/EU and may not be legal to operate or may require a user license to operate in some countries. For a list of restrictions, please send a request to productcompliance@digital-control.com.

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This device meets the requirements outlined in Radiocommunications (Short Range Devices) Standard 2014.

Cet appareil est conforme aux exigences énoncées dans la norme 2014 sur les radiocommunications (appareils à courte portée).

This portable device has been shown to be compliant for localized specific absorption rate (SAR) for uncontrolled environment/general exposure limits specified in ANSI/IEEE Std. C95.1-1992 (FCC 47 CFR § 2.1093) and IC Safety Code 6 (RSS-102).

TELEMETRY USE RESTRICTIONS

Country	Allowed Frequency (MHz)	Limitations	Region (legacy)	Region (new)
Austria	458.6, 458.65, 458.7, and 458.75	Yes*	UK	GB
Belgium	458.6, 458.65, 458.7, and 458.75	Yes*	UK	GB
Bulgaria	458.6, 458.65, 458.7, and 458.75	Yes*	UK	GB
Croatia	458.6, 458.65, 458.7, and 458.75		UK	GB
Cyprus	458.6, 458.65, 458.7, and 458.75		UK	GB
Czech Republic	449.8, 449.85, 449.9, 449.95		UK	GB
Denmark	458.6, 458.65, 458.7, and 458.75		UK	GB
Estonia	449.8, 449.85, 449.9, and 449.95	Yes*	ES	ES
Finland	458.6, 458.65,458.7, and 458.75		UK	GB
France	458.6, 458.65, 458.7, and 458.75		UK	GB
Germany	458.6, 458.65, 458.7, and 458.75		UK	GB
Greece	458.6, 458.65, 458.7, and 458.75		UK	GB
Hungary	433.65 and 433.70	Yes*	SW or SU	CH
Iceland	458.6, 458.65, 458.7, and 458.75		UK	GB

Country	Allowed Frequency (MHz)	Limitations	Region (legacy)	Region (new)
Ireland	458.6, 458.65, 458.7, and 458.75		UK	GB
Italy	458.6, 458.65, 458.7, and 458.75	Yes*	UK	GB
Latvia	449.8, 449.85, 449.9, 449.95	Yes*	UK	GB
Liechtenstein	433.65 and 433.70		SW or SU	CH
Lithuania	449.8, 449.85, 449.9, 449.95	Yes*	UK	GB
Luxembourg	458.6, 458.65, 458.7, and 458.75	Yes*	UK	GB
Malta	458.6, 458.65, 458.7, and 458.75	Yes*	UK	GB
Netherlands	451.03 and 451.09	Yes*	NL	NL
Norway	458.6, 458.65, 458.7, and 458.75		UK	GB
Poland	458.6, 458.65, 458.7, and 458.75		UK	GB
Portugal	458.1125, 458.125, 458.1375, 458.15			PT
Romania	433.65 and 433.70		UK	CH
Slovak Republic	458.6, 458.65, 458.7, and 458.75		UK	GB
Slovenia	449.8, 449.85, 449.9, 449.95	Yes*	UK	GB
Spain	449.8, 449.85, 449.9, and 449.95		ES	ES
Sweden	458.6, 458.65, 458.7, and 458.75		UK	GB
Switzerland	433.65 and 433.70		SW or SU	CH

*Individual user license required–check with your local authority. Unless otherwise noted, the maximum radiated power output is limited to 100m WERP. Please contact DCI at productcompliance@digital-control.com, if

additional technical information or translation is required.

The FAR5 contains a BLE Radio with the following specifications: Frequency Bands: 2402-2480 MHz Transmit Power: 0.00135 W EIRP

The AEO2 contains Wi-Fi/BT and Cellular/GPS radios which operate on the following bands:

CE BANDS

GSM900: 880.2 – 914.8 MHz GSM1800: 1710.2 – 1784.8MHz

LTE Band 1: 1920 – 1980 MHz

LTE Band 3: 1710 – 1785 MHz

LTE Band 5: 824 – 849 MHz

LTE Band 7: 2500 – 2570 MHz

LTE Band 8: 880 – 915 MHz

LTE Band 20: 832 – 862 MHz

LTE Band 28: 703 – 748 MHz

LTE Band 38: 2570 – 2620 MHz

LTE Band 40: 2300 – 2400 MHz

LTE Band 41: 2496 – 2690 MHz

COMPLIANCE RATING

COMPLIANCE RATINGS

This equipment complies with the following: Part 15 of the Rules of the FCC; Industry Canada license-exempt RSS standards; ACMA Radio Communications (Short Range Devices) Standard (2014). Operation is subject to the following two conditions: (1) this equipment may not cause harmful interference, and 2) this equipment must accept any interference received, including interference that may cause undesired operation.

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