

NaviTrack[®] 10 Watt

Pipe and Cable Line Transmitter



⚠ WARNING!

Read this Operator's Manual carefully before using this tool. Failure to understand and follow the contents of this manual may result in electrical shock, fire and/or serious personal injury.

NaviTrack Line Transmitter

Record product serial number below as it appears on the nameplate.

Serial No.

--

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Safety Symbols

In this operator's manual and on the product, safety symbols and signal words are used to communicate important safety information. This section is provided to improve understanding of these signal words and symbols.



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.



DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.



WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.



NOTICE indicates information that relates to the protection of property.



This symbol means read the operator's manual carefully before using the equipment. The operator's manual contains important information on the safe and proper operation of the equipment.



This symbol means always wear safety glasses with side shields or goggles when handling or using this equipment to reduce the risk of eye injury.



This symbol indicates the risk of electrical shock.

General Safety Rules



Read all safety warnings and instructions. Failure to follow the warnings and instructions may result in electric shock, fire, and/or serious injury.

SAVE THESE INSTRUCTIONS!

Work Area Safety

- **Keep your work area clean and well lit.** Cluttered or dark areas invite accidents.
- **Do not operate equipment in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust.** Equipment can create sparks which may ignite the dust or fumes.
- **Keep children and bystanders away while operating equipment.** Distractions can cause you to lose control.

Electrical Safety

- **Avoid body contact with earthed or grounded surfaces such as pipes, radiators, ranges, and refrigerators.** There is an increased risk of electrical shock if your body is earthed or grounded.
- **Do not expose equipment to rain or wet conditions.** Water entering equipment will increase the risk of electrical shock.
- **Do not abuse the cord.** Never use the cord for carrying, pulling, or unplugging the power tool. Keep cord away from heat, oil, sharp edges, and moving parts. Damaged or entangled cords increase the risk of electric shock.
- **If operating equipment in a damp location is unavoidable, use a ground fault circuit interrupter (GFCI)**

protected supply. Use of a GFCI reduces the risk of electric shock.

- **Keep all electrical connections dry and off the ground.** Do not touch equipment or plugs with wet hands to reduce the risk of electrical shock.

Personal Safety

- **Stay alert, watch what you are doing, and use common sense when operating equipment.** Do not use equipment while you are tired or under the influence of drugs, alcohol, or medication. A moment of inattention while operating equipment may result in serious personal injury.
- **Use personal protective equipment.** Always wear eye protection. The appropriate use of protective equipment such as a dust mask, non-skid safety shoes, a hard hat, and hearing protection will reduce personal injuries.
- **Do not overreach.** Keep proper footing and balance at all times. This enables better control of the equipment in unexpected situations.
- **Dress properly.** Do not wear loose clothing or jewelry. Keep your hair, clothing, and gloves away from moving parts. Loose clothes, jewelry, and long hair can be caught in moving parts.

Equipment Use and Care

- **Do not force equipment.** Use the correct equipment for your application. The correct equipment will do the job better and safer at the rate for which it is designed.
- **Do not use equipment if the power switch does not turn it ON and OFF.** Any equipment that cannot be controlled with the power switch is dangerous and must be repaired.

- **Disconnect the plug from the power source and/or the battery pack from the equipment before making adjustments, changing accessories, or storing.** Preventive safety measures reduce the risk of injury.
- **Store idle equipment out of the reach of children and do not allow persons unfamiliar with the equipment or these instructions to operate the equipment.** Equipment can be dangerous in the hands of untrained users.
- **Maintain equipment.** Check for misalignment or binding of moving parts, missing parts, breakage of parts, and any other condition that may affect the equipment's operation. If damaged, have the equipment repaired before use. Many accidents are caused by poorly maintained equipment.
- **Use the equipment and accessories in accordance with these instructions; taking into account the working conditions and the work to be performed.** Use of the equipment for operations different from those intended could result in a hazardous situation.
- **Use only accessories that are recommended by the manufacturer for your equipment.** Accessories that may be suitable for one piece of equipment may become hazardous when used with other equipment.
- **Keep handles dry, clean, and free from oil and grease.** This allows for better control of the equipment.

Service

Ensure a qualified repair person services your equipment using only identical replacement parts to maintain the safety of the tool. Remove the batteries and refer servicing to qualified service personnel under any of the following conditions:

- If liquid has been spilled or objects have fallen into product.
- If the product does not operate normally when following the operating instructions.
- If the product has been dropped or damaged.
- When the product exhibits a distinct change in performance.

Specific Safety Information

WARNING

This section contains important safety information that is specific to the NaviTrack Line Transmitter. Read these precautions carefully before using the NaviTrack Line Transmitter to reduce the risk of electrical shock, fire, or other serious personal injury.

SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE!

Keep this manual with the equipment for use by the operator.

NaviTrack Line Transmitter Safety

- **An improperly grounded electrical outlet can cause electrical shock and/or severely damage equipment.** Always check work area for a properly grounded electrical outlet. Presence of a three-prong or GFCI outlet does not ensure that the outlet is properly grounded. If in doubt, have the outlet inspected by a licensed electrician.
- **Do not operate this equipment if operator or NaviTrack Line Transmitter is standing in water.** Operating the NaviTrack Line Transmitter while in water increases the risk of electrical shock.
- **Do not use where a danger of high voltage contact is present.** Do not attach leads to high voltage lines. The equipment is not designed to provide high voltage protection and isolation. Use high voltage precautions when disconnecting the leads.
- **Always attach leads before turning ON the NaviTrack Line Transmitter and always turn OFF the NaviTrack Line Transmitter before disconnecting leads to reduce the risk of electrical shock.**
- **Follow local guidelines and call before digging.** Locating equipment uses electromagnetic fields that can be distorted and interfered with. More than one utility may be present in a given area. Follow local guidelines and service procedures. Confirm location of utilities before digging.
- **Read and understand this operator's manual, and the instructions for any other equipment in use and all warnings before operating the NaviTrack Line Transmitter.** Failure to follow all instructions and warnings may result in property damage and/or serious personal injury.

The information supplied with this product cannot cover all possible conditions and situations that may occur, and should be used in conjunction with appropriate training, sound judgment, and good work practices. These factors cannot be built into the product, but must be supplied by the operator.

The EC Declaration of Conformity (890-011-320.10) will accompany this manual as a separate booklet when required.

Description, Specifications, and Standard Equipment

Description

The NaviTrack Line Transmitter is part of the NaviTrack cable and pipe locating system. It can be used to energize a pipe or line so that the magnetic fields emitted by the underground line can be traced. Use the NaviTrack Line Transmitter in conjunction with a RIDGID-SeekTech locator or a NaviTrack locator to find buried conductors such as pipes, cables, and wires.

The NaviTrack Line Transmitter can apply an active tracing signal to target a conductor using the following three modes:

- **Direct Connect** — The leads on the NaviTrack Line Transmitter connect directly to the target conductor and a suitable ground.
- **Inductive Clamp** — The optional inductive clamp encircles the target conductor which eliminates metal-to-metal contact.
- **Inductive** — The NaviTrack Line Transmitter is placed above and in-line with a conductor. The internal antenna induces a signal to locate the target conductor.

Specifications

Table 1 NaviTrack Line Transmitter Specifications	
Weight without batteries	4.75 lb [2.15 kg]
Dimensions:	
Depth	7.0 in [17.7 cm]
Width	15.0 in [38.1 cm]
Height	6.5 in [16.5 cm]
Cable coil length	3 ft — 25 ft [1.0 m — 7.6 m]
External power adapter output power	1 W — 10 W
Batteries	8 D-cell batteries
Power settings	4 mA, 15 mA, 50 mA 150 mA, 600 mA
Operating Environment:	
Temperature	-40°F — 140°F [-40°C — 60°C]
Storage temperature	-40°F — 140°F [-40°C — 60°C]
Humidity	5% — 95% RH
Altitude	6,562 ft [2,000 m]

Standard Equipment

- NaviTrack Line Transmitter
- Operator's Manual
- Direct connect leads and clips
- 8 Alkaline D-cell batteries

NOTE: The NaviTrack Line Transmitter complies with Part 15 of FCC rules in accordance with the following: Operation must not cause harmful interference and this device must accept any interference received, including interference that may cause undesired operation.

Components



Figure 1 – Top View

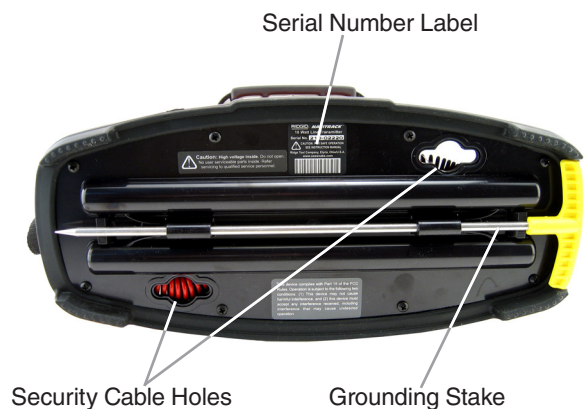


Figure 2 – Bottom View



Figure 3 – Back View

Icon Legend

Table 2 NaviTrack Line Transmitter Icons	
Icon	Definition
	High Voltage Present
	Variable Current Power - (See section on Variable Current Power in this Operator's Manual for more information)
	Battery Status - Hold Power Key down for two seconds to check battery status
	Inductive Mode - Press frequency key for two seconds to turn ON
	Power ON and OFF
	Caution
	Inductive Clamp
	External Power 12 – 15 VDC

Pre-Operation Inspection

⚠ WARNING



Before each use, inspect the NaviTrack Line Transmitter and correct any problems to reduce the risk of serious injury from electrical shock or other causes and prevent machine damage.

1. Confirm that the power is OFF, that leads and any external power and cords are disconnected, and that the battery is removed. Inspect the cords, cables, and connectors for damage or modification.
2. Clean any dirt, oil, or other contamination from the NaviTrack Line Transmitter to aid in inspection and to prevent the unit from slipping from your grip during transport or use.
3. Inspect the NaviTrack Line Transmitter for any broken, worn, missing, misaligned or binding parts, or any other condition which might prevent safe, normal operation.
4. Inspect any other equipment being used per its instructions to make sure it is in good, usable condition.
5. If any problems are found, do not use the equipment until the problems are corrected.

Work Area and Equipment Set Up

⚠ WARNING



Set up the NaviTrack Line Transmitter and work area in accordance with these procedures to reduce the risk of injury from electrical shock, fire, and other causes and to prevent damage to the NaviTrack Line Transmitter.

1. Check work area for the following:
 - Adequate lighting.
 - Flammable liquids, vapors, or dust that may ignite. If present, do not work in area until sources have been identified and corrected. The NaviTrack Line Transmitter is not explosion proof. Electrical connections can cause sparks.
 - Clear, level, stable, dry place for operator.
 - Clear path to electrical outlet that does not contain any potential sources of damage for the power cord when using external power.

- Determine the correct equipment for the application. The NaviTrack Line Transmitter is made to locate conductors underground.
- Inspect the line to have a signal applied to it. The line must be metal to allow the NaviTrack Line Transmitter to locate it. If using the transmitter on insulated conductors, ground the target conductor at each end to ensure that the signal will be strong enough to locate. The NaviTrack Line Transmitter is not designed to provide high voltage insulation or protection. Do not use where a danger of high voltage contact is present.
- Determine the presence of chemicals. If chemicals are present, it is important to understand the specific safety measures required to work around the chemicals. Contact the chemical manufacturer for required information.
- Make sure all equipment has been properly inspected.
- Evaluate the work area and determine if any barriers are needed to keep bystanders away. Bystanders can distract the operator during use. If working near traffic, erect cones or other barriers to alert drivers.

High Voltage Warning

⚠ WARNING

The NaviTrack Line Transmitter is designed to withstand up to 240 VAC 50/60 Hz between the two leads. This protection is not intended to be used continuously. If the NaviTrack Line Transmitter indicates the presence of high voltage, use high voltage precautions to disconnect the NaviTrack Line Transmitter. To reduce the risk of electrical shock, do not touch the transmitter, cords, or connections during this time. Do not deliberately connect to the live power lines.

The voltage on an energized line can cause excess current to be forced through the NaviTrack Line Transmitter. When the NaviTrack Line Transmitter encounters voltage greater than 90 V, the high voltage warning LED will flash red (See *Item 1, Figure 4*) If the high voltage LED begins flashing, follow high voltage safety procedures to disconnect the transmitter.

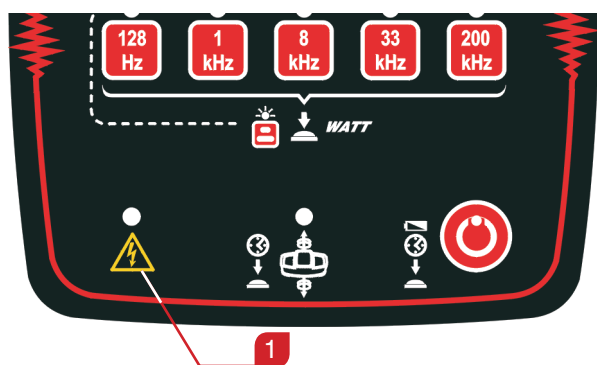


Figure 4 – High Voltage LED

Powering the NaviTrack Line Transmitter

⚠ WARNING

Disconnect external leads from any energized utility before opening the battery compartment. To prevent overheating and leakage, do not mix battery types or used and new batteries. Always remove the batteries before shipping the NaviTrack Line Transmitter.

Battery Power

Install batteries in the NaviTrack Line Transmitter in accordance with the following:

- Turn the knob on the battery holder counterclockwise (See *Figure 5*).
- When the battery holder carriage springs out slightly, pull straight back on the knob to slide out.
- Insert eight D-cell batteries as shown on the inside decal.
- Fit the carriage into the case and turn the knob clockwise while lightly pushing in to close.





Figure 5 – Inserting Battery Carriage

Eight new alkaline D-cell batteries will power the NaviTrack Line Transmitter for approximately 12.5 hours. Battery operation time will vary with battery rating and use. See Table 3 for estimated operating times with an assumed nominal load of 150 ohms.

Current	Estimated Operating Time
400 mA	1.8 hours
200 mA	3.6 hours
100 mA	7.25 hours
50 mA	14 hours
25 mA	28 hours

Battery Level Indicator

To check the battery level, turn ON the NaviTrack Line Transmitter, hold down the Power Key  until all the LEDs light up, and then release the Power Key . The number of LEDs flashing, from left to right, will indicate the battery level. Refer to the bar graph above the LEDs.

Auto Shutdown

At low power, by default, the NaviTrack Line Transmitter will automatically shutdown if a key has not been pressed for 4 hours. At high power, by default, the NaviTrack Line Transmitter will automatically shutdown if a key has not been pressed for 1 hour.

Rapidly press the Power Key twice to toggle the auto shutdown feature ON or OFF. The frequency LED lights will run up, left to right, when Auto Shutdown feature is ON. The frequency LED lights will run down, right to left, when the Auto Shutdown feature is OFF.

Alternate Power Supply

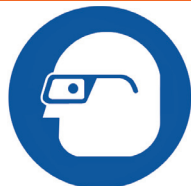
The NaviTrack Line Transmitter can be powered with an external 10 – 28 VDC power source with a supply no less than 35 W. If using an adapter, read and follow the instructions as specified by the manufacturer. To prevent electrical shock and damage, ensure the external power source is fully isolated from the ground and power mains. Do not use a non-isolated power supply with the NaviTrack Line Transmitter.

Ensure the adapter cord has a clear, dry path and does not contain any potential source of damage. Use dry hands to plug in the cords.

NOTICE Do not power the NaviTrack Line Transmitter with a vehicle 12 VDC cigarette lighter connection to prevent damage to the NaviTrack Line Transmitter and to avoid contact with potentially lethal voltage.

Operating Instructions

⚠ WARNING



Always wear eye protection to protect your eyes against dirt and other foreign objects. Follow operating instructions to reduce the risk of injury from electrical shock and other causes.

Direct Connect Mode

Direct Connect Mode is most commonly used when the target utility is readily accessible. Do not use Direct Connect Mode on energized conductors.

Use the NaviTrack Line Transmitter in Direct Connect Mode by performing the following steps:

1. Ensure that the target conductor is not live. The NaviTrack Line Transmitter is not designed to connect to live conductors.
2. Choose connection locations for the ground stake and the target conductor. Each cable lead will extend up to 25 ft [7.6 m]. The farther the leads are extended, the farther the receiver should be used from the transmitter to avoid confusing the signal coupled onto the target conductor with the signal from the cable leads. If performing a locate close to the transmitter, keep the leads as short as possible and store excess lead cable in the side pockets of the transmitter.
3. Remove the ground stake from the bottom of the NaviTrack Line Transmitter and insert it into the earth. To enable a good ground, insert the ground stake as far as possible into the earth. If desired, wet the earth around the ground stake to improve grounding and to lower the resistance of the ground.
4. With the NaviTrack Line Transmitter powered OFF, attach the lead clip to the ground stake (See Figure 6). Alternatively, attach the cable lead to other things like a shovel blade or a larger rod sunk into the earth. Using other grounding equipment may also improve grounding by increasing the area in contact with the earth.



Figure 6 – Cable Lead attached to a Ground Stake

5. Connect the other cable lead to the target conductor (See Figure 7, Figure 8 and Figure 9). Non-conductive pipes, such as those made of clay or plastic, cannot carry a tracing current without a trace wire. Plastic pipes typically have a trace wire installed with the pipe for tracing purposes. Clip the cable lead to the trace wire to enable tracing.

NOTE: Scrape away any dirt, paint, corrosion, or other coatings on the target conductor to ensure good contact with the cable lead, to lower the resistance of the circuit, and to produce a stronger tracing signal.



Figure 7 – Connecting the Cable Lead to the Target Conductor




Figure 8 – Alternative connection method




Figure 9 – Using the magnet embedded in the Cable Lead to connect to the target

NOTE: Always connect the lead to the ground stake before connecting another lead to the target line to direct any current within the target conductor away from the user.

6. After attaching both leads, press the Power Key  to turn ON the NaviTrack Line Transmitter. After powering ON, the NaviTrack Line Transmitter will emit ascending beeps and then pause to measure the current flowing through the target conductor. Faster beeps will indicate a higher detected current.
7. Select one of the following frequencies:
 - 128 Hz low
 - 1 kHz low
 - 8 kHz medium
 - 33 kHz medium
 - 262 kHz (93 kHz Europe) high
 - 200 kHz alternate high frequency. To set the 200 kHz frequency, press the 262 kHz high frequency button for ten seconds. The LED will blink rapidly three times when set. The 262 kHz LED will blink every 5 seconds to indicate that the NaviTrack Line Transmitter is operating on the alternate 200 kHz frequency.
8. Check the circuit. More current will give a stronger signal. Signal strength measured by the receiver is directly proportional to the amount of current on the line. More current means a stronger signal will be received by the receiver.

NOTE: To prolong battery life and to reduce the chance of the signal “bleeding over” onto adjacent lines, use the least amount of current needed to get a clear reading on the receiver.

9. Turn on the receiver and follow the instructions specified in the operator’s manual. Ensure the frequency on the receiver matches the NaviTrack Line Transmitter. If the receiver signal increases when the receiver is held near the NaviTrack Line Transmitter, it is correctly picking up the transmitted frequency.
10. After completing the locate, press the Power Key  to turn OFF the NaviTrack Line Transmitter. To reduce the risk of electrical shock, turn OFF the unit before disconnecting the leads and remove the lead from the target conductor before disconnecting the lead from the ground stake.

NOTE: When the NaviTrack Line Transmitter is ON and in Direct Connect Mode do not come in contact with the scraper tip and only hold leads by their plastic sheathing.

Checking the Receiver

To ensure that the NaviTrack Line Transmitter and the receiver are set to the same frequency, hold the receiver near the NaviTrack Line Transmitter cables and confirm that the signal is being received (See Figure 10).



Figure 10 – Checking the Receiver

Inductive Clamp Mode

The Inductive Clamp allows you to induce a traceable current onto a pipe or cable where the Direct Connect leads cannot clip.



NOTE: The Inductive Clamp is not recommended for use with frequencies less than 8 kHz.



Figure 11 – Inductive Clamp

Use the NaviTrack Line Transmitter with an inductive clamp by performing the following steps:

1. Confirm that the target conductor is not live. The NaviTrack Line Transmitter is not designed to be connected to live conductors.
2. Make sure the NaviTrack Line Transmitter is turned OFF. Do not turn ON the NaviTrack Line Transmitter until the inductive clamp has been attached.
3. Insert the inductive clamp plug into the port on the NaviTrack Line Transmitter located in the back of the unit. After plugging in the inductive clamp, the NaviTrack Line Transmitter will disable the coil cords.

4. Place the jaws of the inductive clamp around the target conductor. Ensure the jaws of the inductive clamp close completely.
5. Press the Power Key  to turn ON the NaviTrack Line Transmitter and select a frequency for locating. Check the circuit and adjust the current. Ensure the receiver and the NaviTrack Line Transmitter are set to the same frequency.
6. After completing the locate, press the Power Key  to turn OFF the NaviTrack Line Transmitter before disconnecting the inductive clamp.

NOTE: It is not necessary to separately ground the transmitter when using the Inductive Clamp. However, the line onto which the current is induced must be grounded in both directions for a signal to be induced away from the transmitter.

Inductive Mode

The NaviTrack Line Transmitter can be used with a direct connection to a pipe or a cable. In Inductive Mode the NaviTrack Line Transmitter generates a field which induces a current onto a conductor.

Disconnect the lead clips from any external conductors before switching the NaviTrack Line Transmitter to Inductive Mode.

To use the NaviTrack Line Transmitter in Inductive Mode, perform the following steps:

1. Place the NaviTrack Line Transmitter so the orientation mark located on top of the NaviTrack Line Transmitter aligns with the target conductor.
2. Place the NaviTrack Line Transmitter over the line to be traced (See Figure 12).




Figure 12 – Inductive Mode Alignment

- If required, rotate the NaviTrack Line Transmitter on the conductor's axis to help reduce the chance of air coupling (See Figure 13).



Figure 13 – Rotating the NaviTrack Line Transmitter on the Conductor's Axis

- Press the Power Key  to turn ON the NaviTrack Line Transmitter.
- Select a frequency. After selecting a frequency, press and hold the same frequency button a second time for two seconds. The Induction LED and the selected frequency LED will turn ON to show that the NaviTrack Line Transmitter is transmitting inductively on the specified frequency (See Item 1, Figure 14). The NaviTrack Line Transmitter will emit group tones instead of single tones in Inductive Mode.

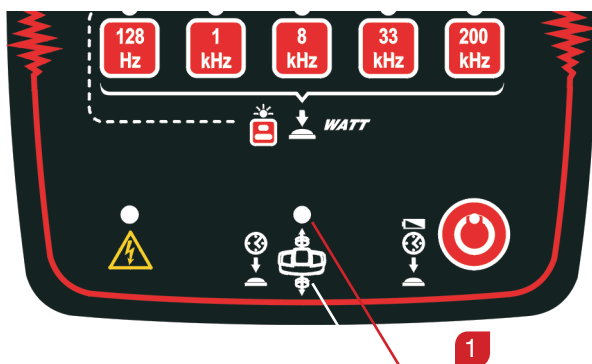


Figure 14 – Induction LED

NOTE: Frequencies lower than 8 kHz couple poorly inductively. When using Inductive Mode, use higher frequencies to obtain a better signal at the receiver.

Sounds in Inductive Mode

The NaviTrack Line Transmitter emits two beeps when shifting into Inductive Mode. When operating in Inductive Mode, the NaviTrack Line Transmitter emits a series of intermittent four-tone beeps.

Air-Coupling

In Inductive Mode, the NaviTrack Line Transmitter will generate a field through the air around it; including the ground underneath. If within air-coupling range of the NaviTrack Line Transmitter, the receiver will measure this field instead of the target conductor. Air-coupling may distort readings and misconstrue the location of the target conductor.

Air-coupling can occur over a wide range; greater than 70 ft [20 m] if the induced utility is deep and poorly grounded. Very weak induction and deep utilities will result in greater air-coupling distances. Always confirm the detection of utilities and the readings of depth measurements.

Air-coupling does not depend on the output power of the transmitter and cannot be reduced by turning down the power. Air-coupling only depends on the ratio of the field from the transmitter compared to the induced field in the target utility.

Note that air-coupling can vary continuously. Be aware of the difference between the transmitter's field and the induced field of the utility being traced. While both will have the same frequency, the transmitter's field is limited to the region around the transmitter itself. Be sure to look overhead for power lines that could also confuse the locate.

Testing for Air-Coupling

To test for air-coupling, tilt the receiver at a 45 degree angle towards the NaviTrack Line Transmitter and ensure the lower antenna of the locator touches the ground. Afterwards, tilt the receiver 45 degrees away from the NaviTrack Line Transmitter and observe the depth reading. If the depth reading changes significantly, air-coupling may be occurring.

Alternatively, test for air-coupling by standing 20 ft [6 m] away from the NaviTrack Line Transmitter. With the lower antenna on the ground, take note of the indicated depth measurement on the locator. Raise the locator vertically 18 in [45 cm] and observe the change in the depth indication. If the locator only reads the conductor, the depth should increase accordingly. If the locator is air-coupling, the depth indication will not change by 18 in [45 cm], but will change disproportionately.

Variable Power Current

The power output can be adjusted to apply more current to a line. Higher currents are easier to trace since they create more signal for the receiver to track, but they also use more battery power.

Adjust the power current of the chosen frequency within five increments from low to high. After choosing a frequency, press the same frequency button a second time. The LED of the frequency button selected will blink. While blinking, select one of the frequency buttons to choose a new power level. The beeps emitted from the NaviTrack Line Transmitter will increase or decrease as the power is increased or decreased.

The following current levels of the power settings are available with the NaviTrack Line Transmitter. In Direct Connect Mode, the NaviTrack Line Transmitter will increase the current as close to the following levels as possible. If the NaviTrack Line Transmitter cannot produce the current selected, it will adjust down to the next level.

- 4 mA
- 15 mA
- 50 mA
- 150 mA
- 600 mA

An unblinking LED indicates the frequency selected. A blinking LED indicates the power level. If the frequency selected corresponds to the same level of output, the same LED will blink and then return to its unblinking state.

Selecting another frequency while the LED is not blinking will change the frequency. To change the power current level, select another level while the LED is blinking. The new power current level will flash five times and the corresponding LED will turn ON steadily without blinking.

Check the power output by pressing the current frequency button rapidly. The LED over the new power current selected will flash rapidly.

NOTE: If the NaviTrack Line Transmitter reports low or no current by emitting a low beep rate, the signal may be too low to be detected by the receiver locator and inadequate for tracing.

Helpful Hints

- As a general guideline, using lower frequencies with the least amount of current and a clear signal will produce best locating results. Start with a low frequency if tracing long distances or when receiving too much bleed-over onto other utilities.
- The NaviTrack Line Transmitter will generate frequencies as low as 128 Hz in Direct Connect Mode.
- In general, 8 kHz offers a good starting point when using the NaviTrack Line Transmitter in Direct Connect Mode. When using Inductive Mode, 33 kHz will likely be the best starting frequency.
- The NaviTrack Line Transmitter will generate frequencies as high as 262 kHz (95 kHz in Europe). High frequency signals are especially valuable when tracing a line with interruption (such as a gasket or damaged insulation). Unlike low frequency signals, high frequency signals can “jump” some barriers and continue without appreciable dissipation.
- When using Inductive Clamp Mode, use higher frequencies since the signal must overcome additional resistance.

Cleaning

⚠ WARNING

Disconnect all cords and cables and remove batteries prior to cleaning the NaviTrack Line Transmitter to reduce the risk of electrical shock.

Do not use liquid or abrasive cleaners on the NaviTrack Line Transmitter. Do not use solvents to clean any part of the NaviTrack Line Transmitter. Clean the NaviTrack Line Transmitter with damp cloth. Do not allow any liquid to enter the NaviTrack Line Transmitter.

Accessories

⚠ WARNING

The following accessories have been designed for use with the NaviTrack Line Transmitter. Other accessories may become hazardous when used with the NaviTrack Line Transmitter. To reduce the risk of serious injury, only use accessories specifically designed and recommended for use with the NaviTrack Line Transmitter.

- Inductive clamp
- RIDGID-SeekTech or NaviTrack Locator

Transport and Storage

Keep the equipment indoors or well-covered in wet weather. Store the NaviTrack Line Transmitter in a locked area, out of the reach of children and people unfamiliar with its operation. This equipment can cause serious injury in the hands of untrained users. Do not expose to heavy shocks or impacts during transport.

Remove batteries before shipping and before storing for extended periods.

Store electrical devices in a dry place to reduce risk of electrical shock. Store the unit away from heat sources such as radiators, heat registers, stoves, and other products (including amplifiers) that produce heat.

Service and Repair

⚠ WARNING

Improper service or repair can make the NaviTrack Line Transmitter unsafe to operate.

Service and repair of the NaviTrack Line Transmitter must be performed by a RIDGID Independent Authorized Service Center.

For information on your nearest RIDGID Independent Service Center or any service or repair questions:

- Contact your local RIDGID distributor.
- Visit www.RIDGID.com or www.RIDGID.eu to find your local Ridge Tool contact point.
- Contact Ridge Tool Technical Service Department at rtctechservices@emerson.com or, in the U.S. and Canada, call 800-519-3456.

Disposal

Parts of the unit contain valuable materials that can be recycled. There are companies that specialize in recycling that may be found locally. Dispose of the components in compliance with all applicable regulations. Contact your local waste management authority for more information.



For EC countries: Do not dispose of electrical equipment with household waste!

According to the European Guideline 2002/96/EC for Waste Electrical and Electronic Equipment and its implementation into national legislation, electrical equipment that is no longer usable must be collected separately and disposed of in an environmentally-correct manner.

**Table 4
Troubleshooting**

Problem	Solution
NaviTrack Line Transmitter will not turn ON	Check orientation of batteries.
	Check that batteries are charged.
	Check that the battery contacts are clean and unbent.
Receiver will not pick up the NaviTrack Line Transmitter's signal	Increase power output
	Check that the transmitter is in the correct mode. See the descriptions for Direct Connect Mode, Inductive Clamp Mode, and Inductive Mode.
	Check that the receiver and the NaviTrack Line Transmitter are set to the same frequency (for example, some receivers will use 93,622.9 Hz or 93,696 Hz instead of 93 kHz).
	Ensure the leads to the line and to the ground are attached securely.
	Too much resistance may be impeding current flow. Improve ground conditions by deepening the stake, moistening the ground, or relocating the stake. Improve the circuit by relocating the transmitter line.

NOTES

Ridge Tool Company

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U.S.A.

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1-800-474-3443



Ridge Tool Europe

Research Park Haasrode
3001 Leuven
Belgium

www.RIDGID.eu
+ 32 (0)16 380 280

What is covered

RIDGID® tools are warranted to be free of defects in workmanship and material.

How long coverage lasts

This warranty lasts for the lifetime of the RIDGID® tool. Warranty coverage ends when the product becomes unusable for reasons other than defects in workmanship or material.

How you can get service

To obtain the benefit of this warranty, deliver via prepaid transportation the complete product to RIDGE TOOL COMPANY, Elyria, Ohio, or any authorized RIDGID® INDEPENDENT SERVICE CENTER. Pipe wrenches and other hand tools should be returned to the place of purchase.

What we will do to correct problems

Warranted products will be repaired or replaced, at RIDGE TOOL'S option, and returned at no charge; or, if after three attempts to repair or replace during the warranty period the product is still defective, you can elect to receive a full refund of your purchase price.

What is not covered

Failures due to misuse, abuse or normal wear and tear are not covered by this warranty. RIDGE TOOL shall not be responsible for any incidental or consequential damages.

How local law relates to the warranty

Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific rights, and you may also have other rights, which vary, from state to state, province to province, or country to country.

No other express warranty applies

This FULL LIFETIME WARRANTY is the sole and exclusive warranty for RIDGID® products. No employee, agent, dealer, or other person is authorized to alter this warranty or make any other warranty on behalf of the RIDGE TOOL COMPANY.

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