

# NaviTrack<sup>®</sup> Inductive Clamp



## **! 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.

# Inductive Clamp

# NaviTrack<sup>®</sup> Inductive Clamp



**RIDGID**<sup>®</sup>

## NaviTrack<sup>®</sup> Inductive Clamp

Record Serial Number below and retain product serial number which is located on 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** DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.

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

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

**NOTICE** 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 injury.



This symbol indicates the risk of electrical shock.

## General Safety Rules

### **WARNING**

Read and understand all instructions. Failure to follow all instructions listed below may result in electric shock, fire, and/or serious injury.

#### **SAVE THESE INSTRUCTIONS!**

### Work Area

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

### Electrical Safety

- **Avoid body contact with grounded surfaces such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is grounded.
- **Do not expose locating tools to rain or wet conditions.** Water entering a locator tool will increase the risk of electric shock.
- **Do not abuse the cord. Never use the cord to carry the tool or pull the plug from an outlet. Keep**

**cord away from heat, oil, sharp edges or moving parts. Replace damaged cords immediately.** Damaged cords increase the risk of electric shock.

### Personal Safety

- **Stay alert, watch what you are doing and use common sense when operating a locating tool. Do not use a tool while you are tired or under the influence of drugs, alcohol or medication.** A moment of inattention while operating power tools may result in serious personal injury.
- **Do not overreach. Keep proper footing and balance at all times.** Proper footing and balance enables better control of the tool in unexpected situations.
- **Use safety equipment. Always wear eye protection.** Safety equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.

### Tool Use and Care

- **Use the correct tool for your application.** The correct tool will do the job better and safer at the rate for which it was designed.
- **Do not use the locating tool if the switch does not turn it ON and OFF.** Any tool that cannot be controlled with the switch is dangerous and must be repaired.
- **Disconnect the plug from the power source before making any adjustments, changing accessor-**

ies, or storing locating tools. Such preventive safety measures reduce the risk of injury.

- **Store idle tools out of the reach of children and other untrained persons.** Tools are dangerous in the hands of untrained users.
- **Maintain tools with care.** Properly maintained tools are less likely to bind and are easier to control.
- **Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the tool's operation. If damaged, have the tool serviced before using.** Many accidents are caused by poorly maintained tools.
- **Use only accessories that are recommended by the manufacturer for your model.** Accessories that may be suitable for one tool, may become hazardous when used on another tool.

## Service

- **Tool service must be performed only by qualified repair personnel.** Service or maintenance performed by unqualified personnel could result in a risk of injury.
- **When servicing a tool, use only identical replacement parts. Follow instructions in the Maintenance section of this manual.** Use of unauthorized parts or failure to follow Maintenance Instructions may create a risk of electrical shock or injury.

## Specific Safety Information

### **⚠ WARNING**

**This section contains important safety information that is specific to this tool.**

**Read this operator's manual carefully before using the NaviTrack Inductive Clamp. Failure to understand and follow the contents of this manual may result in electrical shock, fire, and/or severe personal injury.**

### **SAVE THESE INSTRUCTIONS!**

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

Contact the Ridge Tool Company, Technical Service Department at (800) 519-3456 or TechServices@ridgid.com if you have any questions.

- **Use only on insulated conductors.** When using on cables energized with electrical power, there is a risk of electrical shock.
- **Do not use where a danger of high voltage contact**

**is present.** The Clamp is not designed to provide high voltage isolation and protection.

- **Use equipment only as directed.** Do not use the inductive clamp and related equipment unless proper training has been completed and the operator's manual or instructions read.
- **Do not immerse the clamp in water. Avoid exposure to rain or wet conditions.** Using the clamp while wet increases the risk of electrical shock.
- **As electromagnetic field lines can be distorted and interfered with it is important to verify the location of underground objects before digging.**

Several utilities may be underground in the same area. Be sure to follow local guidelines and one call service procedures.

Exposing the utility is the only way to verify its existence, location, and depth.

- **Avoid traffic.** Pay close attention to moving vehicles when using on or near roadways. Wear visible clothing or reflector vests.

NOTE! Ridge Tool Company, its affiliates and suppliers, will not be liable for any injury or any direct, indirect, incidental, or consequential damages sustained or incurred by reason of the use of the inductive clamp.

## Description, Specifications And Standard Equipment

### Description

The NaviTrack Inductive Clamp allows users to apply a signal to a cable or pipe that is 4" or less in diameter when it is not possible to connect transmitter leads directly to the target conductor. When its jaws are closed around a cable or pipe, the clamp couples the transmitted signal onto the conductor by induction. Once the signal is applied to a conductor, it can be traced using a compatible receiver, such as the NaviTrack Scout, NaviTrack II, SeekTech SR-20 or SR-60.

Any Line Transmitter (e.g., Brick, Navitrack, ST-33Q, ST-510, ST-305) or comparable line transmitter which has a 10 watt or less maximum output power if frequency is under 45kHz, and a 1 watt maximum if above 45kHz can be used as a power source. The line transmitter must be jack-plug compatible. The clamp may be used with line transmitter frequencies of 8kHz to 262kHz.

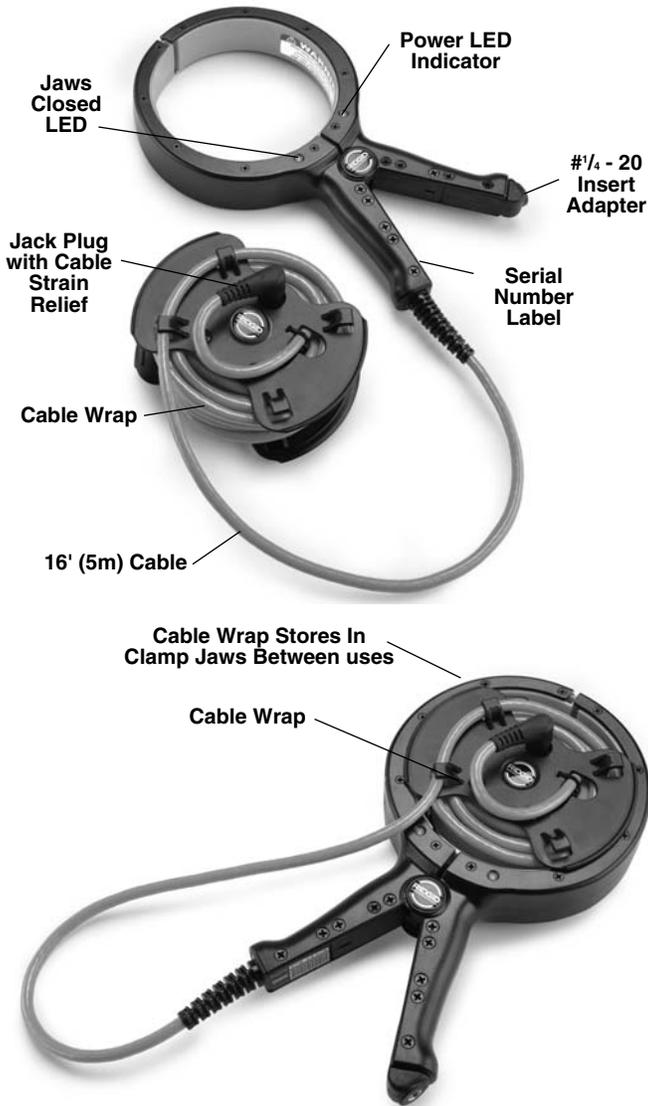


Figure 1 – Inductive Clamp Components/Storage

**Specifications**

Weight .....1.75 lbs. with cable (.8 kg)  
 Dimensions:  
 Length .....10.5" (26.67 cm)  
 Width .....5.85" (14.85 cm)  
 Height.....1.48" (3.75 cm)  
 Inside Diameter .....4.75" (12.07 cm)  
 Cable Length .....16'5" (5.02 m)

**Standard Equipment**

- Inductive Clamp
- Attached Cable w/ jack plug
- Operator's Manual

**Machine Inspection**

**⚠ WARNING**



**Before each use, inspect your inductive clamp and correct any problems to reduce the risk of serious injury from electric shock and other causes and prevent clamp damage.**

1. Make sure that the inductive clamp is unplugged and inspect the cord and plug for damage. If the plug has been modified, or if the cord is damaged, to avoid electrical shock, do not use the inductive clamp until the cord has been replaced by a qualified repair person.
2. Clean any oil, grease or dirt from all equipment handles and controls. This helps prevent the machine or control from slipping from your grip and aids inspection.
3. Inspect the Inductive clamp for any broken, worn, missing, mis-aligned or binding parts or any other condition which may prevent safe and normal operation. Make sure that handles move smoothly between positions. If any problems are found, do not use inductive clamp until repaired.
4. Check that the warning label is present, firmly attached and readable. Do not operate without the warning label. (See Figure 2)



Figure 2 –Warning Label

5. Inspect any other equipment being used per its instructions to make sure it is in good usable condition.

## Set-Up and Operation

### ⚠ WARNING

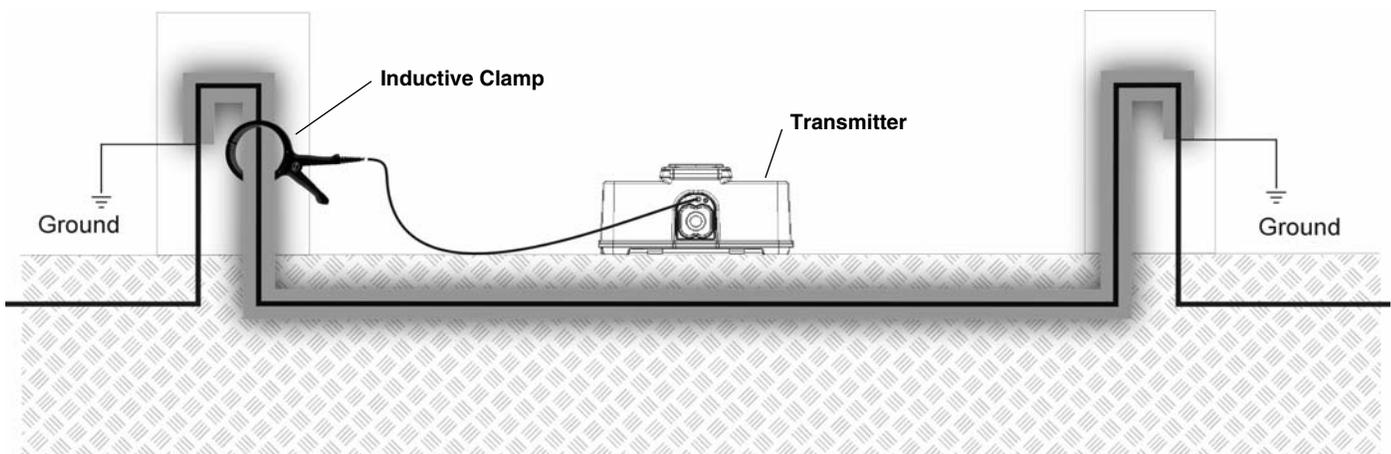


**Always wear eye protection to protect your eyes against dirt and other foreign objects.**

**Set up and operate the inductive clamp and work area according to these procedures to reduce the risk of injury from electric shock, and other causes, and prevent inductive clamp damage.**

1. Check work area for:
  - 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 inductive clamp is not explosion proof and can cause sparks.
  - Clear, level, stable dry place for equipment and operator. Do not use the equipment while standing in water.
2. Inspect the line to have a signal applied to it.

The clamp should only be used on insulated conductors. When using the clamp, the target conductor should be grounded at each end. Otherwise, the signal may not be strong enough to locate. When applying the clamp between two grounded points, the signal will only be on the section between grounds (See Figure 3).



**Figure 3 – Using the NaviTrack Inductive Clamp**

The jaws of the clamp must be completely closed around the conductor to apply a signal. For optimal signal strength, place clamp around the conductor between two grounded points.

The clamp is not designed to provide high voltage isolation and protection. Do not use where a danger of high voltage contact is present.

3. Determine the correct equipment for the application. The Inductive clamp is most commonly used on:
  - Telephone cables
  - Power cables
  - CATV cables
  - Pipes.
  - Equipment for other applications can be found by consulting the Ridge Tool Catalog, on line at [www.RIDGID.com](http://www.RIDGID.com) or by calling Ridge Tool Technical Services at 800-519-3456.
4. Make sure equipment has been properly inspected.
5. Be sure the conductor to be traced is grounded at both ends.

**NOTE:** No ground stake for the transmitter is required with an inductive clamp.

6. With the transmitter powered off, insert the plug into the jack on the back of the line transmitter. Make sure the plug is fully inserted. If using with the RIDGID SeekTech ST-33Q be sure the clamp has the following label to meet the ST-33Q output requirements. The label can be found on the inside of the clamp handle. **ST-33Q**

Do not handle the transmitter while you are connected directly to ground to reduce the risk of electrical shock.

7. Clamp the jaws around the target conductor, making sure the jaws are fully closed.

Always place the clamp and connect it to the transmitter first before turning the transmitter ON to reduce risk of shock.



Figure 4 – Example: Attaching The Inductive Clamp

- Turn the transmitter ON and select the desired frequency. The NaviTrack clamp can be used with frequencies from 8kHz to 262 kHz. (European transmitters are limited to ~93 kHz.) The inductive clamp operates best at frequencies in the region of 33kHz. 8 kHz can be used on good conductors if less bleed over is desired.

Check clamp LED's (See Figure 1). If both LED's are not lit, the clamp is not transmitting. Make sure the plug is fully seated and the jaws are fully closed.

- Move the receiver over the suspected conductor's path to test for signal. (If no signal can be detected see "Trouble Shooting" section).
- After completing locate turn transmitter OFF before touching and disconnecting clamp or leads to reduce risk of electrical shock.

## Cleaning

### **⚠ WARNING**

**Make sure inductive clamp is unplugged from transmitter before cleaning.**

- The plastic housing may be cleaned with mild cleaner applied to a cloth. Never submerge the clamp in liquid.
- Clean the metal core where the jaws clamp together so no debris or dirt gets between the jaws.

## Accessories

### **⚠ WARNING**

**Only the following tool accessories have been designed to function with the inductive clamp. Other accessories suitable for use with other tools may become hazardous when used on the inductive clamp. To prevent serious injury, use only the accessories specifically designed and recommended for use with the inductive clamp, such as those listed below.**

- **Transmitters:** NaviTrack Brick Transmitter, NaviTrack Line Transmitter, ST-305, ST-510, ST-33Q
- **Receivers:** NaviTrack Scout, NaviTrack II, SR-20, SR-60

## Storage

**NOTICE** Store the inductive clamp in a dry, secured, locked area that is out of reach of children and people unfamiliar with the NaviTrack Inductive Clamp.

See Figure 1 for proper cable storage.



Figure 5 – Most RIDGID Locator Cases Have Storage Area For The Clamp

## Service And Repair

### **⚠ WARNING**

**Improper service or repair can make machine unsafe to operate.**

Service and repair on this inductive clamp must be performed by a RIDGID Authorized Press Tool Service Center.

For any repairs or maintenance, contact the Ridge Tool Company, Technical Service Department at (800) 519-

3456 or [www.RIDGID.com](http://www.RIDGID.com) for nearest authorized service outlet.

If you have any questions regarding the service or repair of this machine, call or write to:

Ridge Tool Company  
Technical Service Department  
400 Clark Street  
Elyria, Ohio 44035-6001  
Tel: (800) 519-3456  
E-mail: [TechServices@ridgid.com](mailto:TechServices@ridgid.com)

For name and address of your nearest Independent Authorized Press Tool Service Center, contact the Ridge Tool Company at (800) 519-3456 or [www.RIDGID.com](http://www.RIDGID.com).

## **Machine Disposal**

Parts of this unit are valuable materials and can be recycled. There are companies that specialize in recycling that may be found locally.

Dispose of in compliance with any and all applicable regulations. Contact your local waste management authority for more information.

## Troubleshooting

SYMPTOM	POSSIBLE REASONS	SOLUTION
Neither LED indicator is lit.	Clamp plug not fully inserted. Transmitter not ON. Cable damaged.	Fully insert plug. Turn transmitter ON. Inspect cable and have repaired or replaced.
Only Power LED is lit.	Jaws not fully closed. Metal core ends are dirty.	Fully close jaws. Metal core ends must touch. Clean core ends per instructions in Cleaning Section.
Both LED's lit, but receiver detects weak signal or no signal.	Target conductor not grounded on both sides of clamp. Transmitter and receiver not set to the same frequency. Conductor not continuous.	Ground conductor on both ends. Confirm adequate grounding. Set transmitter and receiver settings to match. Fix break in conductor.