

RIDGID

SeeSnake[®] micro[™]
Inspection Camera

Operator's Manual

SeeSnake[®] micro[™]

Inspection Camera



▲ 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.

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Table of Contents

General Safety Information

Work Area Safety	2
Personal Safety	2
Battery Precaution	2
SeeSnake® micro™ Inspection Camera Use and Care	2
Service	3

Specific Safety Information

FCC Statement	3
SeeSnake® micro™ Inspection Camera Safety	4

Description, Specifications and Standard Equipment

Description	4
Specifications	4
Standard Equipment	5
Assembly	5

Tool and Work Area Set-Up

Operating Instructions

Using The Imager	6
------------------------	---

Transportation & Storage

Maintenance Instruction

Service and Repair

Troubleshooting

Lifetime Warranty

Back Cover

SeeSnake® micro™
Inspection Camera

SeeSnake® micro™

Inspection Camera



RIDGID

General Safety Information

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

SAVE THESE INSTRUCTIONS!

Work Area Safety

- **Keep your work area clean and well lit.** Cluttered benches and dark areas may cause accidents.
- **Do not operate electrical devices or visual inspection tool in explosive atmospheres, such as in the presence of flammable liquids, gases, or heavy dust.** Electrical devices or visual inspection tools create sparks which may ignite the dust or fumes.
- **Do not use the visual inspection tool around corrosive chemicals.** Exposure to corrosive, oily environments can ruin the plastic covering on the imager head and ruin the picture quality.
- **Keep bystanders, children, and visitors away while operating visual inspection tool.** Do not let visitors contact the unit.

Personal Safety

- **Stay alert, watch what you are doing and use common sense.** Do not use visual inspection tool while tired or under the influence of drugs, alcohol, or medications. A moment of inattention while operating 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. Dust mask, non-skid safety shoes, hard hat, or hearing protection must be used for appropriate conditions.
- **Use proper accessories.** Do not place this product on any unstable cart or surface. The product may fall causing serious injury to a person or serious damage to the product.
- **Prevent object and liquid entry.** Never

spill liquid of any kind on the video display unit. Liquid increases the risk of electrical shock and damage to the product.

- **Do not use this device for personal or medical use/inspection in any way.**
- **The unit is not shock-resistant.** Do not use it as a hammer or drop it.

Battery Precautions

- **Remove the batteries when cleaning the unit.**
- **Remove the batteries before storing the unit for a long time.**
- **When necessary, REPLACE ALL FOUR BATTERIES in this unit with new ones.**
- **Use only the size and type of battery specified.**
- **Be sure to install the battery with the correct polarity as indicated in the battery compartment.**
- **This visual inspection tool is not designed to be used with rechargeable batteries.**
- **Properly dispose of the battery. Exposure to high temperatures can cause the battery to explode, so do not dispose of in a fire.** Place tape over the terminals to prevent direct contact with other objects. Some countries have regulations concerning battery disposal. Please follow all applicable regulations.

SeeSnake® micro™ Inspection Camera Use and Care

- **Use visual inspection tool only as directed.** Do not operate the SeeSnake micro Inspection Camera unless the owner's manual has been read and proper training has been completed.
- **Do not immerse the handheld display unit in water. Store in a dry place.** Such measures reduce the risk of electric shock and damage. The imager head and the cable are water resistant when the unit is fully assembled, but the video display unit is not.
- **Do not use the camera if condensation forms inside the lens.** Let the water evaporate before using again.
- **Do not use tool if ON/OFF switch is not**

properly working. Any tool that cannot be controlled with the switch is dangerous and must be repaired.

- **Store idle equipment out of the reach of children and other untrained persons.** Equipment is dangerous in the hands of untrained users.
- **Maintain the visual inspection tool with care.** Properly maintained tools are less likely to cause injury.
- **If unit is dropped check for breakage of parts, and any other conditions 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 tool.** Accessories that may be suitable for one tool may become hazardous when used on another tool.
- **Dry your hands before turning the unit ON or OFF and before replacing batteries.**
- **Protect against excessive heat.** The product should be situated away from heat sources such as radiators, heat registers, stoves or other products (including amplifiers) that produce heat. Do not use the unit near moving machinery or areas where the temperature will exceed 113°F.

Service

- **Tool service must be performed only by qualified repair personnel.** Service or maintenance performed by unqualified repair personnel could result in 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.
- **Do not attempt to take any pieces of this unit apart unless directed to by this manual.**
- **Follow instructions for changing accessories.** Accidents are caused by poorly maintained equipment.
- **Provide proper cleaning.** Do not use acetone to clean the unit. Instead, use alcohol.

Gently clean the LCD with a dry cloth. Remove batteries before cleaning.

- **Conduct a safety check.** Upon completion of any service or repair of this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.
- **Stop using the unit if it starts smoking or emitting noxious fumes.**
- **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 product does not operate normally by following the operating instructions;
 - If the product has been dropped or damaged in any way;
 - When the product exhibits a distinct change in performance.

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
 On the Web: www.ridgid.com

Specific Safety Information

▲ WARNING

Read this operator's manual carefully before using the SeeSnake micro Inspection Camera. Failure to understand and follow the contents of this manual may result in electrical shock, fire and/or severe personal injury.

Call the Ridge Tool Company, Technical Service Department at (800) 519-3456 if you have any questions.

FCC Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.

- 2. This device must accept any interference received, including interference that may cause undesired operation.

NOTE! This equipment has been tested and found to comply with the limits for Class B digital devices, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Consult the dealer or an experienced radio/TV technician for help.

Use of shielded cable is required to comply with Class B limits in Subpart B of Part 15 of the FCC rules.

Do not make any changes or modifications to the equipment unless otherwise specified in the manual. If such changes or modifications should be made, you could be required to stop operation of the equipment.

SeeSnake® micro™ Inspection Camera Safety

- **Do not place SeeSnake micro Inspection Camera into anything or anywhere that may contain a live electrical charge.**
- **FOR WALLS:** For inspecting inside walls, be sure to shut off the circuit breaker to the whole house before using the SeeSnake micro Inspection Camera behind any of the walls.
- **FOR PIPES:** If you suspect a metal pipe could contain an electrical charge, have a qualified electrician check the pipe before using the SeeSnake micro Inspection Camera. Ground circuits, in some cases, can be returned to cast iron pipes and cause them to be charged.

- **FOR AUTOMOBILES:** Be sure the automobile is not running during inspection. Metal and liquid under the hood may be hot. Do not get oil or gas on the imager head. Exposure to petroleum-based substances will eventually degrade the imager head covering.
- **GENERAL USE:** Do not use anywhere the unit may come into exposure with hazardous chemicals, electrical charges or moving parts. Such situations may result in serious injury or death.

SAVE THESE INSTRUCTIONS!

Description, Specifications and Standard Equipment

Description

The SeeSnake micro Inspection Camera displays live color video from an imaging sensor and lighting source connected to a flexible cable. It can be used to look into tight spots and beam back real-time video to a color LCD. Accessories (mirror, hook and magnet) are included to attach to the imager head to provide application flexibility.

Specifications

Recommended Use ...Indoor

Viewable Distance1" to 12"
(2.5 cm – 30 cm)

Power Supply4 Alkaline AA
1.5-volt batteries

Estimated Battery Life ..3 hours of
continuous use

Weight1.2 lbs (0.5 kg)

Dimensions:

Length7" (17.8 cm)

Width3.63" (9.2 cm)

Height6.25" (15.9 cm)

Display:

Resolution160 x 234

Screen Type2.4" LCD

Operating Environment:

Temperature32°F to 113°F (0°C to 45°C)

Humidity5% to 95% non-condensing (display unit)

Storage Temperature ...-4°F to 158°F
(-20°C to 70°C)

Water Resistance.....Image head and extensions to 10' (3.05 m) water depth (When assembled.)

Maximum Distance....Optional cable extensions can be assembled to make cable up to 30' (9.74 m) long

Standard Equipment

The SeeSnake micro Inspection Camera comes with the following items:

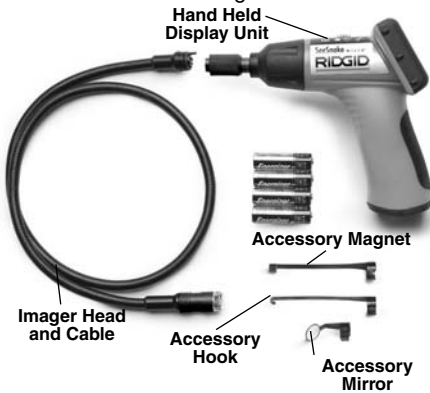


Figure 1 – System Components

Assembly

To Install Batteries (4 AA):

NOTE! Be sure to read Battery Precautions section on Page 2.

1. Turn the hand-held viewer upside down to expose the battery compartment cover and screw (Figure 2).

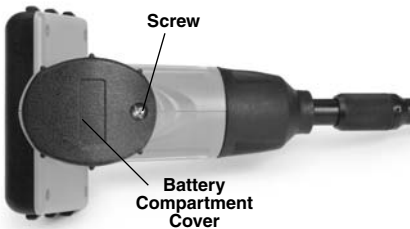


Figure 2

2. Using a Phillips head screwdriver, remove screw and cover.
3. Remove battery compartment and insert four (4) new AA batteries into the proper slots in the battery compartment (Figure 3). Proper battery orientation is indicated on the battery compartment.

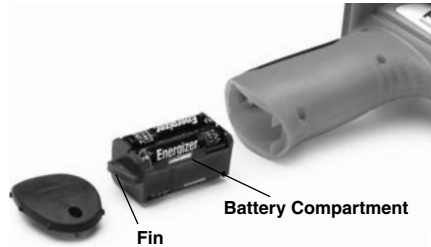


Figure 3

4. Replace battery compartment, making sure the fin is oriented as shown with its taller portion toward the LCD screen.
5. Replace battery cover (Figure 2) and screw.

To use the display unit (Figure 1), it must be connected to the imager head cable.

To connect the cable to the display unit, make sure the keyed ends (Figure 4) are properly aligned. Once they are aligned, finger tighten the knurled knob to hold the connection in place.

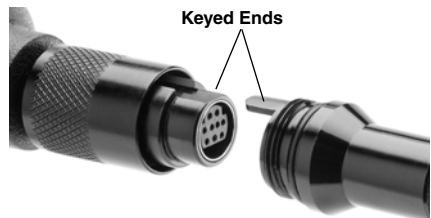


Figure 4

To Install an Accessory:

The three included accessories, (mirror, hook and magnet) (Figure 1) all attach to the imager head the same way.

To connect, hold the imager head as shown in Figure 5. Slip the semicircle end of the accessory, over the flats of the imager head as shown in Figure 5. Then rotate the accessory a 1/4 turn so the long arm of the accessory is extending out as shown in Figure 6.



Figure 5



Figure 6

Tool and Work Area Set-Up

▲ WARNING

To prevent serious injury, proper set-up of the tool and work area is required. The following procedures should be followed:

1. Review General Safety Information section of this manual (Page 2).
2. Check work area for:
 - Adequate lighting
 - Flammable liquids, vapors or dust that may ignite.
3. Follow tool set-up according to specific tool operator's manual.

Operating Instructions

CAUTION Do not use excessive force to insert or bend the cable.

CAUTION Do not use the cable or imager head to modify surroundings, clear pathways or clogged areas, or as anything other than an inspection device.

CAUTION The hand-held display unit is not water resistant. The imager head and its covering are water resistant, but are not acid-proof or fireproof. Petroleum-based products will ruin the imager head's protective plastic covering over time. Avoid submersing the imager head into corrosive, oily places.

Using The Imager

To turn the unit on, hold the viewer with the LCD screen facing you (Figure 7). Roll the ON/OFF switch away from you to turn on the

screen. The switch then acts as a dimmer for the twin LEDs (Figure 8) that surround the camera on the imager head and provide lighting.

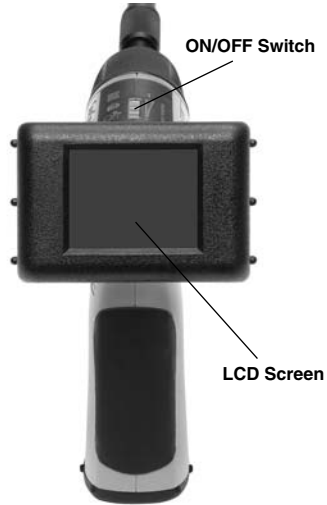


Figure 7



Figure 8

Typical Applications

The SeeSnake micro Inspection Camera is designed as a remote inspection device. Typical applications might include HVAC inspection (Figure 9), automotive inspection (Figure 10), cable routing, automotive/boat/aircraft inspection, etc.



Figure 9



Figure 10

When in use, the snake should easily maneuver itself into position going forward.

TIP! The cable can be bent into a certain shape. This may help you maneuver the cable into tight areas.

NOTE! The SeeSnake micro Inspection Camera was not designed to take the place of a drain cleaner or electrical/plumbing fish sticks or tapes. In limited instances, the SeeSnake micro Inspection Camera's accessories can be used to retrieve small items like dropped rings or screws.

Transportation & Storage

1. Avoid exposing the unit to continuous vibration or extreme hot and cold temperatures.
2. Always store the SeeSnake micro Inspection Camera indoors in the case it came with.

3. Always remove the batteries if the unit will not be used for an extended period of time.

Maintenance Instructions

CAUTION Make sure the batteries have been removed from the unit before performing maintenance.

The SeeSnake micro Inspection Camera has been designed to require little maintenance. However, in order to maintain its performance, you must always follow these guidelines:

1. Always handle the device with care. It is not shock-resistant and should not be banged or dropped. Treat it as you would any other sensitive optical device.
2. Always clean the imager head after use with soap and mild detergent.
3. Use only alcohol swabs to clean the connections.
4. Avoid rubbing too hard on the LCD. After use, wipe the display clean gently with a dry cloth.
5. Do not disassemble this device beyond what is shown in the manual. Doing so will void your warranty.

Service and Repair

▲ CAUTION

Tool should be taken to a RIDGID Independent Authorized Service Center or returned to the factory. All repairs made by Ridge service facilities are warranted against defects in material and workmanship.

Troubleshooting

SYMPTOM	POSSIBLE REASON	SOLUTION
Display turns ON, but does not show image.	Loose cable connections.	Check cable connections, clean if required. Re-attach.
	Imager head covered by debris.	Visually inspect imager head to make certain it is not covered by debris.
LEDs on imager head are dim at max brightness, display switches between black and white, color display turns itself OFF after a brief period.	Batteries low on power.	Replace batteries.
Unit will not turn ON.	Dead batteries.	Replace batteries.