

## 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, entanglement and other causes.**

1. Make sure that the Inspection Camera and work area have been properly set up and that the work area is free of bystanders and other distractions.
2. Press and hold the Power Button for two seconds. The imager lights should come ON, then a splash screen will appear. This screen tells you the device is booting up. Once the product is fully powered up, the screen will automatically switch to the live screen.



**Figure 11 – Splash Screen**  
(Note: Version will change with each firmware update.)

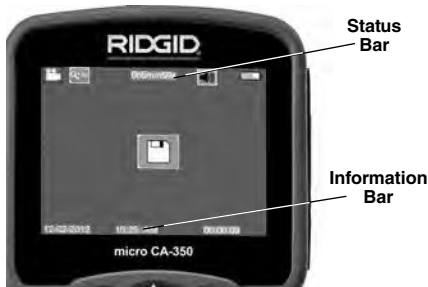


**Figure 13 – Screen Shot of Mode Selection**

## Live Screen

The live screen is where you will do most of your work. A live image of what the camera sees is displayed on the screen. You can zoom, adjust LED brightness and take images or video from this screen.

The screen has a status bar at the top showing the tool mode, zoom, SD™ card icon if inserted, available memory and speaker/mic ON/OFF. The bottom bar shows information about date and time if time stamp is ON.



**Figure 12 – Live Screen**

When the Inspection Camera is turned ON, the default mode is for capturing still images. Pressing the menu button at any time will access the menu. The menu will overlay on the LIVE Screen. Use the right and left arrow >< buttons to switch to the MODE category. Use the up and down arrows ▲▼ to navigate between menu items and press select (⏏) as desired.

3. If the other inspection camera settings (Time Stamp, Language, Date/Time, TV Out, Update Firmware, Speaker/Microphone, Auto Power OFF, Factory Reset) need to be adjusted, *see Menu Section*.
4. Prepare the camera for inspection. The camera cable may need to be pre-formed or bent to properly inspect the area. Do not try to form bends less than 5" (13cm) radius. This can damage cable. If inspecting a dark space, turn the LEDs on before inserting the camera or cable.

Do not use excessive force to insert or withdraw the cable. This may result in damage to the inspection camera or inspection area. Do not use the cable or imager head to modify surroundings, clear pathways or clogged areas, or as anything other than an inspection device. This may result in damage to the Inspection camera or inspection area.

## Image Adjustment

**Adjust LED Brightness :** Pressing the right and left arrow button >< on the button pad (In live screen) will increase or decrease the LED brightness. A brightness indicator bar will be displayed on the screen as you adjust brightness.



Figure 14 – Adjusting LED

**Zoom :** The micro CA-350 Inspection Camera has a 2.0x digital zoom. Simply press the up and down arrows ▲▼ while in the live screen to zoom in or out. A zoom indicator bar will be displayed on the screen as you adjust your zoom.





Figure 15 – Adjusting Zoom


**Image Rotation :** If needed, the image/video seen on the screen can be rotated in 90 degree increments counter clockwise by pressing the rotate image button ↺.

## Image Capture

### Capturing a Still Image

While in the live screen, make sure the still camera icon  is present at the top left portion of the screen. Press the shutter button to capture the image. The save icon  will momentarily appear on the screen. This indicates the still image has been saved to the internal memory or SD™ card.

### Capturing a Video

While in the live screen, make sure the video camera icon  is present at the top left portion of the screen. Press the shutter button to start capturing video. When the device is recording a video, a red outline will flash around

the video mode icon and the recording duration will show at the top of the screen. Press the shutter button again to stop the video. It may take several seconds to save the video if saving to the internal memory.


The micro CA-350 features an integrated microphone and speaker for recording and playback of audio with video. A headset with integrated microphone is included and may be used instead of the integrated speaker and microphone. Plug the headset into the audio port on the right side of the camera.

5. When the inspection is complete, carefully withdraw the camera and cable from the inspection area.



Figure 16 – Video Recording Screen

## Menu

Pressing the Menu button  at any time will access the menu. The menu will overlay on the LIVE Screen. From the menu, the user will be able to change to the various modes or enter the settings menu.


There are different setting categories to choose from (Figure 17) while in the settings menu. Use the right and left arrow buttons ▶◀ to switch from one category to the next. Use the up and down arrows ▲▼ to navigate the menu items. The selected category will be highlighted with a bright red outline. Once the desired setting is reached, press select to change to the new selection. The changes are automatically saved when they are changed.

While in menu mode, you can press the Return button ↵ to return to the previous screen or to the live screen.





Figure 17 – Settings Screen

**Playback Mode**

1. Pressing the Select button  in the live screen will enter playback mode. Select either Image or Video to playback the desired file. The playback mode is the interface into saved files. It will default to the last file recorded.
2. While reviewing the image the user will be able to cycle through all saved images, delete an image and display file information.
3. While reviewing a video, a user will be able to navigate through videos, pause, restart and delete. A user will only be able to playback images and video from internal memory when SD™ Card is not inserted.



**Deleting Files**

Press Menu button  while in playback mode to delete the image or video. The delete confirmation dialog allows the user to delete unwanted files. The active icon is outlined in red. Navigation is done with the arrow buttons .

**Time Stamp **

Enable or Disable the display of the Date and Time.


**Language **

Select the “Language” icon in the menu and press Select. Select different languages with up/down arrow buttons , then press Select  to save the language setting.

**Date/Time **

Select Set Date or Set Time to set the current date or time. Select Format Date or Time to change how the date/time is displayed.



**TV-Out **

Select the “NTSC” or “PAL” to enable the TV-Out for the video format required. Screen will go black and image will be transmitted to external screen. To get live image on unit, hit Power button  to disable function.


**Update Firmware **

Select Update Firmware to install the latest version of software on the unit. Software will have to be loaded onto a SD™ Card and inserted into the unit. Updates can be found at RIDGID.com.



**Speaker **

Select the Speaker icon in the menu and press Select . Select ON or OFF with up/down button  to keep the speaker ON or OFF during video playback.

**Auto Power Off **

Select the Auto Power Off icon and press select . Select disable to turn OFF the automatic shut down function. Select the 5 Minutes, 15 Minutes or 60 Minutes to turn OFF the tool upon 5/15/60 minutes of non-operation. Automatic shut down setting will not be activated when recording or playing video.

**Factory Reset **

Select the Reset icon and press Select . Confirm the reset function by selecting Yes and press Select  again. This will reset the tool to the factory set up.

**About **

Select the About function to display the firmware revision of the micro CA-350 as well as the software copyright information.

**Transferring Images to a Computer**

With the unit powered ON, connect the micro CA-350 to a computer using the USB cable. The USB connected screen is displayed on the micro CA-350. The internal memory and SD™ card (if applicable) will appear as separate drives on the computer and are now accessible as a standard USB storage device. The copy and delete options are available from computer operation.

## Connecting to TV

The micro CA-350 Inspection Camera can be connected to a television or other monitor for remote viewing or recording through the included RCA cable.

Open the right side port cover (*Figure 3*). Insert the RCA cable into the TV-Out jack. Insert the other end of the cable into the Video-In jack on the television or monitor. **Check to make sure the video format (NTSC or PAL) output is set properly.** The television or monitor may need to be set to the proper input to allow viewing. Select the appropriate TV-Out format using the menu.

## Use with SeeSnake® Inspection Equipment

The micro CA-350 Inspection Camera can also be used with various SeeSnake Inspection Equipment and is specifically designed to be used with the microReel, microDrain™ and the nanoReel Inspection Systems. When used with these types of equipment, it retains all of the functionality described in this manual. The micro CA-350 Inspection Camera can also be used with other SeeSnake Inspection Equipment for viewing and recording only.

For use with SeeSnake Inspection Equipment, the imager head and any cable extensions must be removed. For the microReel, microDrain™, nanoReel and similar equipment, see the operator's manual for information on proper connection and use. For other SeeSnake Inspection Equipment (typically a reel and monitor), an adapter must be used to connect the micro CA-350 Inspection Camera to a Video-Out port on the SeeSnake Inspection Equipment. When connected in this manner, the micro CA-350 Inspection Camera will display the camera view and can be used for recording.

When connecting to SeeSnake Inspection Equipment (microReel, microDrain™, or nanoReel), align the interconnect module connected to your reel with the cable connector on the micro CA-350 Inspection Camera, and slide it straight in, seating it squarely. (*See Figure 18*)



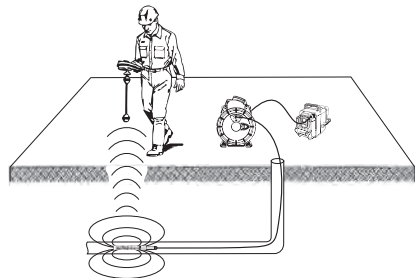
**Figure 18 – Camera Connector Plug Installed**

**NOTICE** Do not twist the connector plug to prevent damage.

## Locating the Sonde

If used with a sonde (In-Line Transmitter), the sonde can be controlled two ways. If the reel is equipped with a sonde key, that can be used to turn the sonde ON and OFF. Otherwise, the sonde is turned ON by decreasing LED brightness to zero. Once the Sonde has been located, the LEDs can be returned to their normal brightness level to continue the inspection.

A RIDGID locator such as the SR-20, SR-60, Scout®, or NaviTrack® II set to 512 Hz can be used to locate features in the drain being inspected.



**Figure 19 – Locating the Reel Sonde**

To locate the Sonde, turn the locator ON and set it to Sonde mode. Scan in the direction of the Sonde's probable location until the locator detects the Sonde. Once you have detected the Sonde, use the locator indications to zero in on its location precisely. For detailed instructions on Sonde locating, consult the Operator's Manual for the locator model you are using.

## Maintenance

### **⚠ WARNING**

#### Remove battery before cleaning.

- Always clean the imager head and cable after use with mild soap or mild detergent.
- Gently clean the display screen with a clean dry cloth. Avoid rubbing too hard.
- Use only alcohol swabs to clean the cable connections.
- Wipe the hand held display unit down with a clean, dry cloth.

### Reset Function

If the unit stops functioning and does not operate, press the Reset Button (*under the left side port cover – Figure 4*). The unit may recover to normal operation when restarted.

## Optional Equipment

### **⚠ WARNING**

**To reduce the risk of serious injury, only use equipment specifically designed and recommended for use with the RIDGID micro CA-350 Inspection Camera such as those listed below. Other equipment suitable for use with other tools may be hazardous when used with the micro CA-350 Inspection Camera.**

Catalog No.	Description
37108	3' (90 cm) Cable Extension
37113	6' (180 cm) Cable Extension
37103	Imager Head and Cable - 17 mm
37098	1 m length 6mm diameter imager
37093	4 m length 6mm diameter imager
37123	17 mm Accessory Pack (Hook, Magnet, Mirror)
36758	AC Adapter
40623	Headset Accessory with Microphone

## RBC-121 Chargers and Cords

Catalog No.		Region	Plug Type
55193	Charger	USA, Canada and Mexico	A
55198	Charger	Europe	C
55203	Charger	China	A
55208	Charger	Australia & Latin America	I
55213	Charger	Japan	A
55218	Charger	United Kingdom	G
44798	Charger Cord	North America	A
44808	Charger Cord	Europe	C
44803	Charger Cord	China	A
44813	Charger Cord	Australia & LA	I
44818	Charger Cord	Japan	A
44828	Charger Cord	United Kingdom	G

### Batteries

Catalog No.	Model	Capacity
55183	RB-1225	12V 2.5Ah

All listed batteries will work with any catalog number RBC-121 Battery Charger.

For a complete listing of RIDGID equipment available for this tool, see the Ridge Tool Catalog online at [RIDGID.com](http://RIDGID.com) or call Ridge Tool Technical Services (800) 519-3456.

## Storage

The RIDGID micro CA-350 Inspection Camera must be stored in a dry secure area between -4°F (-20°C) and 140°F (60°C) and humidity between 15% and 85% RH.

Store the tool in a locked area, out of the reach of children and people unfamiliar with the micro CA-350 Inspection Camera.

Remove the battery before storage or shipping.

## Service and Repair

### **⚠ WARNING**

**Improper service or repair can make the RIDGID micro CA-350 Inspection Camera unsafe to operate.**

Service and repair of the micro CA-350 Inspection Camera 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 RIDGID.com to find your local RIDGID contact point.
- Contact Ridge Tool Technical Service Department at rttechservices@emerson.com, or in the U.S. and Canada call (800) 519-3456.

## Disposal

Parts of the RIDGID micro CA-350 Inspection Camera contain valuable materials and 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 2012/19/EU 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.