VU-RITE

VIDEO INSPECTION SYSTEMS

Parts Guide

VU-RITE
VIDEO INSPECTION SYSTEMS

***FULL TWO-YEAR WARRANTY**

Easy, No Hassle Warranty!

VU-Rite makes every effort to assure that our products meet the highest quality and durability standards and because our product is owner serviceable, we require that you contact our technical support to diagnose your warranty repair needs. If the repair cannot be accomplished by the owner, the product or part must be returned to us with the camera's serial number. If our inspection verifies the defect, we will either repair or replace the part/product at our discretion. Shipping costs will be the responsibility of the owner to send parts/product to us. VU-Rite will pay the costs to return parts/product to the owner. * If we determine there is no defect or that the defect resulted from causes not within the scope of our warranty, then owner must bear the cost of the repair and returning the part or product.

This warranty covers only the Sewer Inspection Camera and parts.

*Replacement parts are provided at no cost upon receipt of damaged part. If owner requests replacement part in advance, a credit card is required for shipment.

VU-Rite Sales and Customer Service is located at:

313 W Main Blvd.
Church Hill, TN 37642

Repair Shipments should be sent to: VU-Rite
8112 Cypress Drive North, Fort Meyers, FL 33967

Office hours are Monday - Friday 8:00AM - 4:30PM EST.

We can be reached :

By phone: (423) 256-3063

By email: support@vu-rite.com

Shop Line: (423)256-3065

Fax: (423) 256-3064

US PATENT NUMBER 7,715,701 *other patents pending*

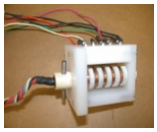
Our removable lens cover allows you to change the lens if it gets damaged or scratched. The lens cover is replaceable and is made of a lightweight composite that creates very little friction in the pipe, especially in cast or rough pipe.

Our lens is made of laminated glass which will maintain the waterproof qualities of the lens even if it is cracked or broken. All you will need to replace is the lens!

The camera head is straight-wired to the pushrod, which ensures continuous picture and signal as well as greater spring flexibility

Our stainless steel spring assembly connects the camera head to the pushrod. It gives the camera end of the pushrod the flexibility it needs to maneuver around bends with ease.

The pushrod is custom designed to the highest standards the industry has ever seen. It is strong, yet flexible, and because of a very low friction jacket, it glides down the pipe with very little drag. We use a molding process to join the camera head to the pushrod.



The “rotary contact” is custom designed and built by Vu-Rite. Electrical contacts are a problem in inspection cameras. They are one of the main causes of flicker or failure in a camera. The revolving pushrod needs a steady flow of signals from the stationary circuitry to maintain a high quality picture. The Vu- Rite “rotary contact” does this.

Our Vu-Rite circuit board maintains strong, steady signals to the camera head components and video output. It has LEDs to determine the status of the signals passing through it and lets you know if the board is operating properly. Only 4 screws and 4 plugs have to be removed to replace it.

We use a standard 12-volt power supply. It plugs into the circuit board and the switch. It can be replaced by removing the 2 bracket screws, the 4 power cord and bracket screws, and unplugging it from the switch and circuit board.

The dimmer for the lights has a welded mounting bracket inside the circuit box that allows replacement with a small wrench by removing the knob and unplugging it from the circuit board.

The switch is a standard marine 12-volt. It fastens to the inside of the circuit box with silicone adhesive and tightens down on the outside with a rubber boot.

Though most of the power in our circuit box is 12-volt, we included a built in GFI for added protection because most cameras operate in a water environment.

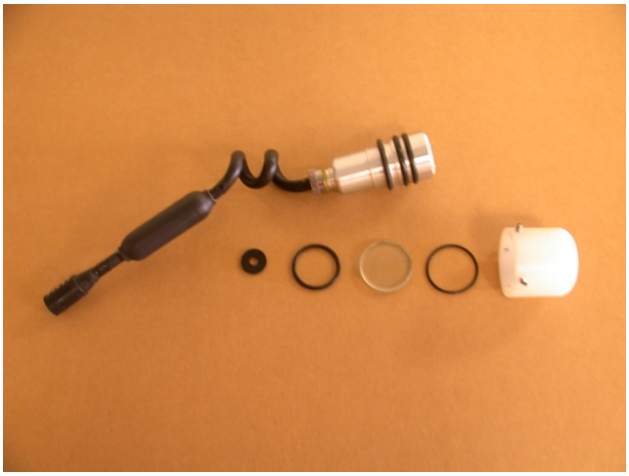
Our video cable connects to a host of video equipment and gives many possibilities for viewing and recording. There is no reason to be limited to what a camera manufacturer thinks you need!

Lens and Lens Cover Removal/Replacement

Step 1) Using a 5/64 Allen wrench, loosen the 4 setscrews around the lens cover.

Step 2) With a twisting motion release the lens cover from the camera housing. Be careful – there are O-rings and a lens that may fall out, so make sure you are in a clean area.

Step 3) From this position the lens and lens cover can be replaced. Separate the lens from the lens cover and replace with new lens. Make sure the beveled side of the lens is up and against the camera lens seal. Place shutter seal in center of light ring followed by light ring seal on outer rim. When all are in place, grease the O-rings on the outer surface of camera housing and simply twist the lens cover back on.



** We have made modifications to our original camera design. The camera head no longer unplugs from the pushrod as you see in the picture above, however, the lens and lens cover removal and replacement is the same process if you have purchased the standard mainline camera instead of our mini camera. If you purchased our mini camera; **YOU MUST** call for support rather than attempt to remove the head or cover of the stainless camera head.

Spring Removal

Step 1) Remove pushrod from cage and lay it stretched out.

Step 2) Using a 3/32 Allen wrench, loosen the 4 set screws on back of the spring.

Step 3) Locate the open slot on the aluminum pushrod lock and loosen it by carefully turning a flathead screwdriver to release the tension. Now slide the lock down the pushrod away from the spring.

Step 4) Using a 5/64 Allen wrench loosen the 4 setscrews on the front of the spring releasing it from the camera head.

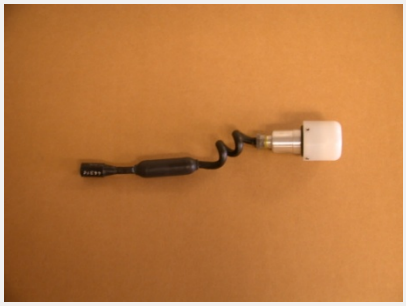
Step 5) Move the spring down the pushrod until removed.

Step 6) Take the new spring and reverse the process.

Step 7) Pull the spring up to the camera head tightly and tighten down the 4 set screws.

Step 8) Keeping the open slot position opposite the set screws, slide the lock into the spring and tighten down the 4 setscrews.

Step 9) Turn on the camera checking lights and video. When all are working properly, the installation is complete.



Pushrod Removal

Step 1) Very carefully pull out pushrod and coil together using zip ties. This may require two people. (The camera head and spring will remain connected to the pushrod)

Step 2) When you get to the last 2 feet of pushrod you will need a Phillips screwdriver to remove the pushrod clamp.

Step 3) Now simply unplug the 2 connectors releasing the pushrod from the cage.

Step 4) Finish coiling the pushrod together safely and you are done.

Reinstallation of Pushrod

Step 1) To install pushrod simply reverse the process above. Do make sure to feed the new pushrod through the pushrod guide first when reinserting the pushrod into the cage.

Face Plate Removal

Step 1) Remove the 4 screws on faceplate.

Step 2) Use a sharp object to release seal around faceplate.

Step 3) Gently remove face plate. This may require the use of a stiff putty knife.

To Replace Face plate

Step 1) Clean excess silicone from edges of face plate and box.

Step 2) Re-apply silicone to inside grooves of face plate.

Step 3) Press face plate firmly into position. Apply silicone to the 4 screws and replace.

Rotary Contact Removal

Step 1) Remove face plate (follow face plate removal instructions).

Step 2) After face plate removal, you will see the rotary contact. There are 4 screws that hold it in place. With a Phillips screwdriver only (do **not** use a screw gun as this may result in stripped screws or worse) remove the 4 screws and slowly remove the rotary contact.

Step 3) On the top of the contact there are 7 wires connected with 5 screws. Remove the 5 screws.

Step 4) On the back of contact there are another 5 wires as well. Very carefully cut the wires where the heat shrink holds them together.

Installing a Rotary Contact

Step 1) One you have removed the old rotary contact, strip the 5 wires coming from camera at half of an inch back.

Step 2) Re-connect the 7 wires that screw into the top of the contact. Starting from pin side of contact, the wires go in order of orange, white, green, red and 3 black wires that connect together

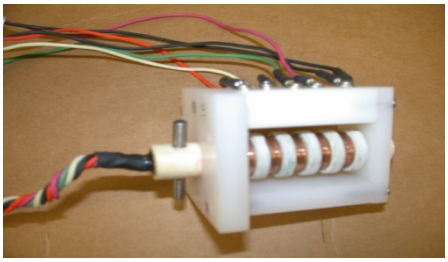
Step 3) Connect the 5 wires on the back of the contact to wires coming from camera using the wire nuts provided. Make sure to connect orange to orange, white to white, green to green, red to red and black to black.

Step 4) Once all wires are connected together carefully push the wires into the axle lining up the rotary contact pin to the slot in the axle at the same time aligning the notch on contact just above power supply

Step 5) After everything is lined up, reinsert the 4 screws into the contact to hold it into place. Again, please use only a Phillips screwdriver (no power tools).

Step 6) Make sure to test the unit before faceplate installment.

Step 7) Follow instructions for face plate installment.



Circuit Board Removal

Step 1) Remove face plate (refer to faceplate removal instructions).

Step 2) Disconnect the 4 wire connections to the circuit board – all 4 are friction locks, so be very careful when pulling free.

Step 3) Remove the 4 screws that are at each corner of the circuit board. Make sure to use a Phillips screwdriver only (no power tools please).

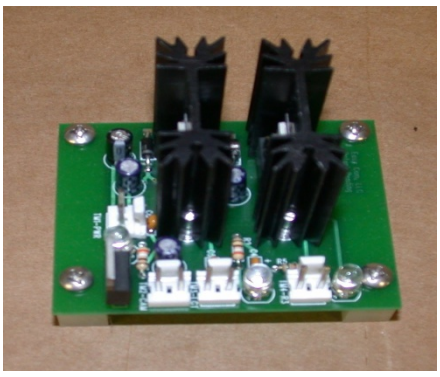
Step 4) Simply remove the circuit board.

Circuit Board Replacement

Step 1) Place new circuit board in place.

Step 2) Take the 4 screws and gently screw into place using a Phillips screwdriver only.

Step 3) Reconnect the 4 friction lock wires to the circuit board. Start with blue at the bottom, then green/white, red/black, and black with white spotted wire to top of circuit board.



Power Supply Removal

Step 1) Remove face plate (follow face plate removal instructions)

Step 2) You will see the power supply – it is either solid black or beige. There is a black wire and a white wire going directly to the power supply from the binder plug, as well as a green wire, which is the ground wire.

Step 3) Using a Phillips screwdriver, disconnect the 3 wires. Cut loose the heat shrink to disconnect the black wire.

Step 4) After all wires are disconnected, use a Phillips screwdriver to remove the screw holding the bracket.

Step 5) Once the power supply is free you will see where it connects to the circuit board and binder plug in the bottom
of the box. Gently remove the friction lock by pulling it and disconnecting the 3 wires from the power switch.
Using a small screwdriver, loosen the setscrew in the bottom plug and remove the red wire.

Power Supply Replacement

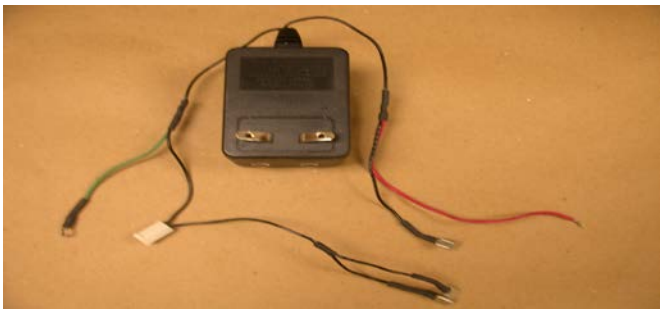
Step 1) Place new power supply where the old one was. Reconnect the black and white wires using a Phillips screwdriver. The white wire goes to the right and black to the left. Make sure to reapply the heat shrink to the black wire making sure to cover the wire and the screw.

Step 2) Take a little silicone and fill the screw hole where the green wires go. Take the bracket that holds the power supply in place and feed the screw in first through the eyelet of both green wires and then through the bracket hole. Screw into place. Now screw the other side of the bracket into place.

Step 3) Reconnect the friction lock to the circuit board and the 3 wires to the power switch.

Step 4) Reinsert red wire into bender plug and tighten setscrew.

Step 5) Test the unit by turning on and replace face plate.



Dimmer Switch Removal

Step 1) Remove face plate (refer to face plate removal instructions)

Step 2) Remove the outer dimmer knob by using a 6/32 allen wrench. Remove the chrome grommet and rubber grommet.

Step 3) Remove the blue wire going to the circuit board very carefully. You will have to pull the friction lock gently to release.

Step 4) With a 7/16 wrench remove the nut that is holding the dimmer to the welded bracket. Pull the dimmer back and slide out the nut.

Dimmer Switch Replacement

Step 1) Feed the long end of dimmer into the bracket that holds it into place. At the same time slide the nut over the end of dimmer between box and bracket in order to tighten down dimmer to bracket.

Step 2) Connect the blue wire back into circuit board by gently pressing friction lock into connector.

Step 3) Take the rubber grommet and apply silicone grease to it. Slide onto chrome grommet and tighten down.

Step 4) Take the dimmer knob and turn the white line toward bright and then tighten down with 6/32 allen wrench.

Step 5) Test unit and replace face plate.

Power Switch Removal

Step 1) Remove face plate (follow face plate instructions).

Step 2) Unscrew the waterproof seal that covers the switch.

Step 3) Disconnect the 5 wires connected to the switch.

Step 4) Once everything is disengaged from the switch, remove the rubber switch boot and pull the switch out from the inside of the housing.

Power Switch Replacement

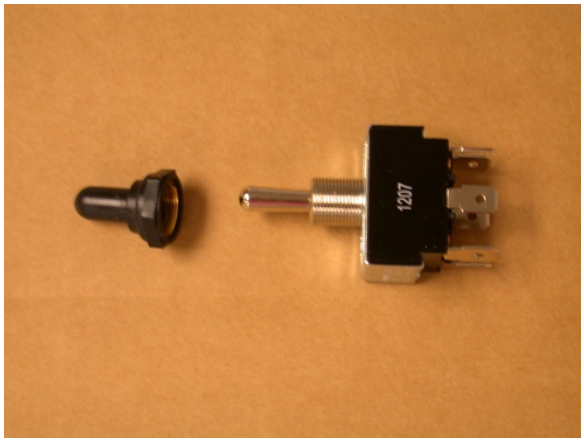
Step 1) Remove all old silicone. Be careful not to get any on the other components.

Step 2) Apply fresh silicone around the threaded part of the switch. Carefully push the switch through the hole in the box making sure the slotted side is down.

****Note that the number stamped on the side of the switch goes to the back of the box****

Step 3) Reconnect the 5 wires

Step 4) Test the unit. If all is okay, replace the faceplate.



Power Cord Removal

Step 1) Locate the plug on the bottom of the box.

Step 2) Turn the power cord connector counterclockwise to loosen.

Step 3) Remove the power cord.

Power Cord Replacement

Step 1) Insert the connection end of the power cord into the plug in the bottom of the box.

Step 2) Turn the connector clockwise until tight.

Video Jack Replacement

Step 1) Remove faceplate (refer to faceplate removal instructions).

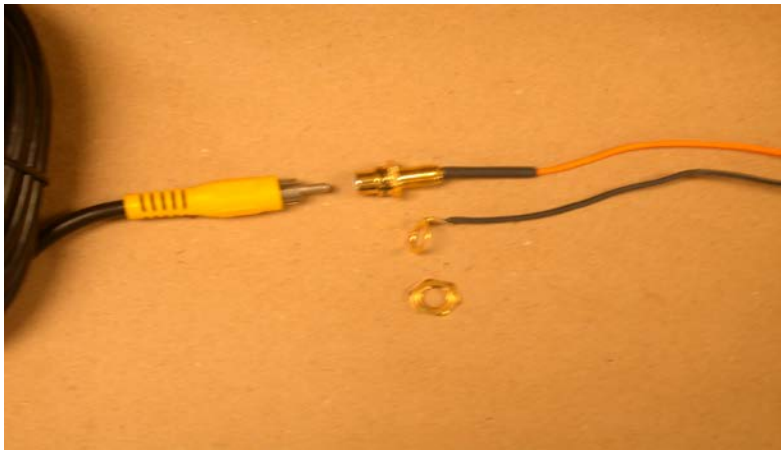
Step 2) Once the faceplate removed you will see the orange and black wire that is attached to the video jack. The orange and black wires are attached to the rotary contact. Cut about halfway between the video jack and rotary contact to leave enough wire to reattach the new video jack.

Step 3) Remove the old video jack by loosening the nut that fastens the video jack to the box. Then remove the ring from the video jack that has the black wire attached.

Step 4) Reinsert the new video jack in the same direction that the old video cord came out. Place a small amount of silicone around the jack before inserting it into the box. Place the ring with the attached black wire onto the jack, and then the nut. Tighten into position.

Step 5) Once everything is back into place, strip the orange and black wires coming from the rotary contact about ½ inch – enough wire to use the wire nuts to reattach both orange and black wires together.

Step 6) Test the system to make sure everything has been attached properly. Once testing is complete, follow the steps to reinstall faceplate.



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