



# **HATHORN**



## **OPERATOR'S MANUAL FOR H2 CONTROLLER**

**For Safe and Effective Operation:**

Before operation of your system, it is advised that this manual be read carefully.



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## **LIMITED WARRANTY**

This Limited Warranty provides one full year of coverage under our manufacturer's standard new product warranty. Hathorn® Corporation warrants to the original purchaser of our products that the product shall function as designed for a period of one year from the original date of purchase under normal and proper usage. This one year Limited Warranty covers malfunctions resulting from defects in materials or workmanship only. If the product fails to function as designed under normal and proper usage due to defects in materials or workmanship during the period of this Limited Warranty, we will repair, adjust or replace defective parts as Hathorn® Corporation deems appropriate.

This Limited Warranty applies only to Hathorn® Corporation sewer and gas camera systems that are distributed in the United States, Canada and Australia that are purchased from Hathorn® Corporation or a Hathorn® Corporation authorized dealer as identified on our website. The Limited Warranty is not transferable under any circumstances. This Limited Warranty does not apply to Hathorn® Corporation brand products imported and/or sold by unauthorized dealers, distributors or other sellers.

## **NOT COVERED BY WARRANTY**

This one year Limited Warranty does not cover damage or malfunctions stemming from other than normal and proper usage or from products not meeting the requirements of end users. This Limited Warranty also does not cover the following: (a) intentional or accidental misuse or abuse (including, but not limited to, damage to push rod from excessive force), (b) failure to follow operating or maintenance instructions, (c) repairs by any individual or entity other than an authorized Hathorn® Corporation repair center, (d) use of product components, accessories or consumables not manufactured by Hathorn® Corporation (e) product tampering, (f) droppage, (g) battery leakage if equipped, (h) media cards, (i) excessive light damage to the camera element or (j) damage resulting from being used in extreme environments or due to weather events. Wear and tear are not covered.

Hathorn®'s responsibility under this Limited Warranty is limited to the repair, adjustment or replacement of defective parts as determined by Hathorn® Corporation in its sole discretion. Hathorn® Corporation shall not be held liable for any damages, including, but not limited to direct, indirect, special, or consequential damages arising out of, resulting from, or in any way connected to the use of Hathorn® products. Hathorn® assumes no responsibility for other's use or misuse of its products. Hathorn® Corporation assumes no responsibility for warranties either expressed or implied.

## **LIMITATION OF LIABILITY**

By purchasing a Hathorn® Corporation product, you accept the terms of this limited warranty. You also agree that Hathorn® Corporation shall have no liability to you or any end user for any damages resulting from delay or loss of use of the product due to failure of the product within the warranty period, or otherwise, or in service or repair. Hathorn® shall have no liability for general, special, incidental or consequential damages arising out of the use or misuse of Hathorn® products.

You also agree that the application and use of a Hathorn® Corporation product is beyond our control and is the sole responsibility of the user. By receiving and using one of Hathorn®'s products, you hereby acknowledge and agree that: you have selected the correct product for your intended use and will examine the product you are purchasing when it arrives to ensure that it meets your needs, you will properly test the product prior to its actual use, you and/or your organization have proper practices in place for the safe use of this equipment and that end users have been trained on its safe operation.

Hathorn® products are not intrinsically safe, not explosion proof and misuse of the product may cause physical or psychological injury, pain, suffering, illness, disfigurement, temporary or permanent disability, economic or emotional loss or death; and Hathorn® Corporation shall not be held liable for any damages, including but not limited to direct, indirect, special, or consequential damages arising out of, resulting from, or in any way connected to the improper or incorrect use of the product and assumes no responsibility for other's use of the product.

## **SERVICE**

If the product requires service, please contact the Hathorn® service centre or one of our authorized repair centers. Some service locations are listed in this document (Pages 18 & 19). The remainder can be found on our website.

After requesting a Return Merchandise Authorization (RMA), ship the item PREPAID and INSURED to the appropriate service center. Hathorn® is not responsible for damages or loss incurred in connection with mailing and/or transportation of products.

## **RETURN FREIGHT**

**Warranty:** Pre-Paid by customer as above, returned by Hathorn® on our account.

**Non-Warranty:** Freight paid by customer both directions.

## **NON-WARRANTY CHARGES**

Repairs centers will charge direct for non-warranty repairs and may require payment prior to repair.

## **PRODUCT SPECIFICATIONS**

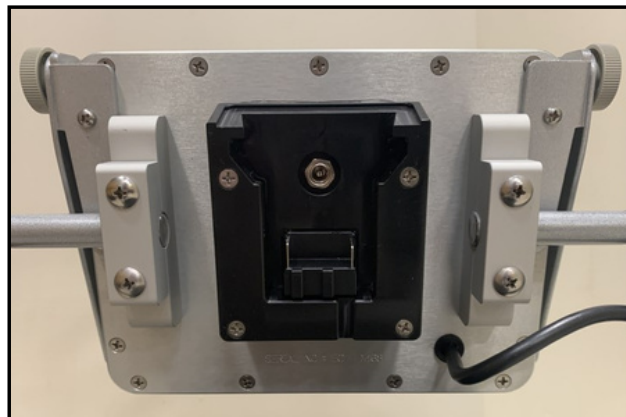
<b>Weight</b>	45lbs
<b>Length x Width x Depth</b>	33" X 19" X 16"
<b>Power</b>	
<b>AC/DC Adapter</b>	12V - 4.1A
<b>Battery</b>	Only Milwaukee® M18 18V or equivalent
<b>Battery Life</b>	~5hrs using 3.0Ah (not recording & sonde off)
<b>Battery Extender</b>	Yes with on-screen battery display
<b>Display</b>	
Type	Impact-resistant LCD
Size	7"
Resolution	1024 x 600 pixels
Brightness	500 cd/m2
<b>Footage Counter</b>	Feet or Meters with reset function
<b>Sonde Frequencies</b>	High power 512Hz
<b>Environmental</b>	
Operating Temperature	-10°C to 50°C [14°F to 122°F]
Storage Temperature	-20°C to 60°C [-4°F to 140°F]

# FEATURE IDENTIFICATION



**Battery Mount  
on Back**

**18V Battery  
Cradle and  
AC/ DC  
Adapter  
Power Input**



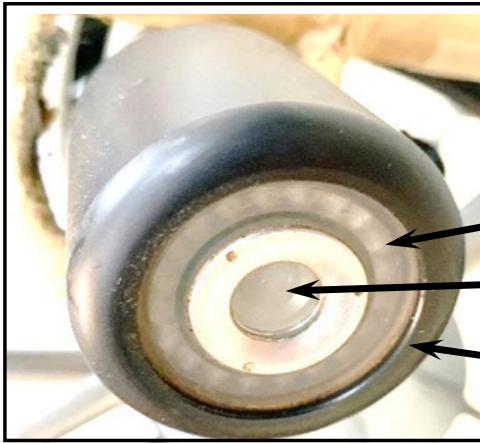
# FEATURE IDENTIFICATION



**Multi-Function button  
on the side:**

- resets footage counter
- turns Sonde on/off

**7" LCD  
Screen**



**LED Lights**

**Sapphire Camera Window**

**Plastic Skid/Sleeve**



## **USER INSTRUCTIONS**

### **Turning Your Monitor On**

Insert the battery to turn on the controller and initiate the display. System will turn on automatically.

**Note: It is good practice to remove batteries from electronic equipment after use. Failure to do so may result in the batteries being drained over extended periods.**

### **Turning the Sonde On /Off**

On the main screen push and hold the Multi-Function button until the footage counter stops flashing to turn the sonde on or off. Sondes are locatable up to ~15ft depth, dependent upon the type of pipe (concrete/steel/cast iron) and the presence of thick concrete, sand or other utilities.

### **Footage Counter Reset**

Press and hold the Multi-Function button until the counter starts flashing. Once the counter is flashing, release the button to reset the counter to zero.

## INSPECTION PROCEDURE

Skids or sleeves should ALWAYS be used to protect the camera head. Depending on the size of the pipe you are inspecting, you may need to use a skid, so the camera is centered or off the floor of the line. Care should be taken so the skids do not snag in the line.

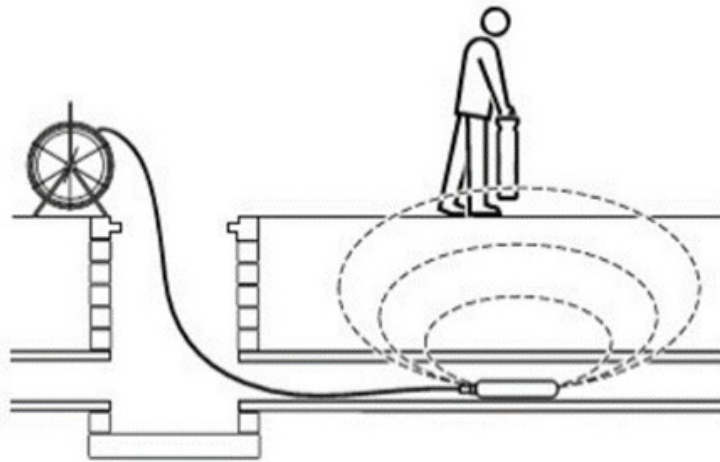
Under normal operating situations, the camera is used with a smaller protective sleeve in lines under 4” in diameter or a larger grooved skid in 4” lines or larger.

1. Slowly push the camera into the pipe and maneuver the camera into position to feed down the pipe, making sure the flex neck does not kink or double back on itself.
2. Push the camera slowly and carefully during the inspection, taking note of the conditions of the pipe for possible hazards that may entangle or damage the camera on entry or retrieval.
3. When negotiating a corner, care should be taken not to butt the nose of the camera against the sidewall with any force. It would be better to let the camera “work” its way around the corner. If resistance is encountered when turning the corner and there are no visible signs of blockage, turning the push rod or pulling the camera back and forth sometimes helps.
4. Should resistance become extreme, or the camera get entangled or stuck, slowly push it back and forth to free it. Sometimes, turning the push rod may also help. If the camera is visible, you may be able to free it with your hand or by some other means.
5. Upon completion of the inspection and retrieval of the camera, it may be necessary to ‘manipulate’ the camera around the initial bend (clean out) in the pipe with a pole or other device if required.
6. NEVER use the camera to unclog a drain or clear debris in the pipe. Doing so can cause damage to the camera head or lens.
7. NEVER force the camera down a pipe as this may cause a kinked cable which will require expensive repairs.
8. NEVER use a pressure washer to clean any part of the system. High pressure water can cause degradation of the electronic parts, causing damage.
9. NEVER unspool all of the rod from a reel. Always leave a few turns of rod on the reel to aid with respooling.

## LOCATING THE SONDE SIGNAL (512HZ)

Insert the sonde into the drain and locate it while it is still just in view at the drain or duct entrance. Hold the locator vertically - directly over the sonde with the antenna in line with the sonde. Adjust the locator sensitivity so the bar graph reads between 60% and 80%. Push the sonde along the pipe to the desired area.

1. Approach the peak of the signal, working perpendicular to the pipe.  
Move the locator backwards and forwards and stop when the bar graph indicates a Peak.
2. Push the camera 4-6 ft. further, pinpoint, and mark the position. Repeat this pinpointing procedure at similar intervals along the line of the drain or duct until the survey is completed.
3. Most locators will automatically display the depth of a located sonde, provided the locator is correctly oriented and positioned above the sonde.



## **MAINTENANCE**

**Inspection Camera** - After every use, the camera should be cleaned and checked for possible damage. External scuffing of the camera case is normal and should be of no concern. The camera view port is made of sapphire and should be cleaned with a soft, damp cloth. Grease, dirt or scratches will affect the quality of the video and if the lens is badly scratched it should be replaced.

**LED Light Replacement** - The camera heads use LED lighting and cannot be replaced by the operator. These lights use very little power and unless physically damaged or extreme voltage is applied to them, should last indefinitely. If replacement is necessary, the camera should be returned to the factory.

**Reel and Cable Assembly Maintenance** - The reel and cable assembly should be kept clean from dirt, slime, grit, etc. When winding the cable back onto the reel after an inspection, it is good practice to use a cloth to wipe off any debris.

### **WARNING**

**NEVER USE A POWER WASHER TO CLEAN YOUR INSPECTION EQUIPMENT. PRESSURIZED WATER MAY GET INTO UNSEALED AREAS SUCH AS THE USB BLOCK, KEYBOARD, REEL HUB ASSEMBLY AND SLIP RING HOUSING CAUSING DAMAGE.**

**WATER DAMAGE TO ELECTRONIC EQUIPMENT IS NOT COVERED BY YOUR WARRANTY.**

## **REPAIR FACILITIES - USA**

Repairs, warranty or otherwise, returned to must be submitted with a “Return Maintenance Authorization.” For “RMAs” please contact:

### **Hathorn USA**

**Address:** 739 North Wilson Road, Columbus, OH, 43204

**Phone:** 1-855-863-9226 **FAX:** 1-905-604-3400

**Email:** [usaservice@hathorncorp.com](mailto:usaservice@hathorncorp.com)

**Website:** [www.hathorncorp.com](http://www.hathorncorp.com)

### **Kaiser Premier USA – Mobile Repairs South West**

**Address:** 6108 Wild Fox Court, Elk Grove, CA 95757

**Phone:** 1-916-995-2743

**Email:** [eric.montgomery@kaiserpremier.com](mailto:eric.montgomery@kaiserpremier.com)

**Website:** [www.kaiserpremier.com](http://www.kaiserpremier.com)

### **Utility Equipment Technology Ltd**

**Address:** 382 Stevens Rd., Rockwall, TX 75032

**Phone:** 1-972-771-8958 **FAX:** 1-972-772-8195

**Email:** [utilityequipment@gmail.com](mailto:utilityequipment@gmail.com)

**Website:** [utilityequipmenttechnology.com](http://utilityequipmenttechnology.com)

### **Minicam**

**Address:** 12600 Newburgh Rd, Livonia, MI 48150

**Phone:** 1-855-863-9226 **FAX:** 1-905-604-3400

**Email:** [info@minicaminc.com](mailto:info@minicaminc.com)

**Website:** [www.minicaminc.com](http://www.minicaminc.com)

**Note: For other repair center locations please visit [www.hathorncorp.com/find-a-repair-center](http://www.hathorncorp.com/find-a-repair-center).**

## **REPAIR FACILITIES - CANADA**

Repairs, warranty or otherwise, returned to must be submitted with a “Return Maintenance Authorization.” For “RMAs” please contact:

### **Hathorn Canada - Ontario, Manitoba & Eastern Canada**

**Address:** 255 Shields Court, Unit C, Markham, ON L3R 8V2

**Phone:** 1-905-604-7040 **FAX:** 1-905-604-3400

**Email:** [service@hathorncorp.com](mailto:service@hathorncorp.com)

**Website:** [www.hathorncorp.com](http://www.hathorncorp.com)

### **Pipescope Solutions**

**Address:** 1439 Youville Drive, Ottawa, ON K1C 4M8

**Phone:** 1-647-991-6735

**Email:** [pipescopeolutions@gmail.com](mailto:pipescopeolutions@gmail.com)

### **Access Spec Telecommunications - Quebec**

**Address:** 328 Rue St Paul, Repentigny, QC J5Z 4H9

**Phone:** 1-450-581-7009

**Email:** [service@accessspec.com](mailto:service@accessspec.com)

**Website:** [www.accessspec.com](http://www.accessspec.com)

### **The Drain Camera Shop – British Columbia**

**Address:** Unit 148 11782 River Road, Richmond, BC V6X 1Z7

**Phone:** 1-250-514-5976

**Email:** [info@thedraincamerashop.com](mailto:info@thedraincamerashop.com)

**Website:** [www.thedraincamerashop.com](http://www.thedraincamerashop.com)

### **FixedRight – Alberta and Saskatchewan**

**Address:** 8812-185 St. NW, Edmonton, ALB T5T 1W5

**Phone:** 1-780-690-9080

**Email:** [roger@fixedright.ca](mailto:roger@fixedright.ca)

**Website:** [www.fixedright.ca](http://www.fixedright.ca)

Note: For other repair center locations please visit [www.hathorncorp.com/find-a-repair-center](http://www.hathorncorp.com/find-a-repair-center).





***HATHORN***

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