



# **Xpress**

# **User Manual**

# TABLE OF CONTENTS

**Warranty.....page 3**

**Command Module.....page 6**

**BaseFrame.....page 11**

**Camera.....page 13**

## 1 YEAR WARRANTY

Alliance Technology, LLC warrants to the first purchaser that should any of its products prove to be defective in material or workmanship in normal use, within one (1) year from the date of delivery, Alliance Technology, LLC will, at its exclusive option, repair, replace or exchange the product or any of its parts.

THIS WARRANTY IS SUBJECT TO THE FOLLOWING LIMITATIONS:

1. This warranty does not apply to any product which has been subject to accident, negligence, alteration, abuse, misuse, overload, repair by anyone other than Alliance Technology, LLC or its authorized representatives, or not maintained in accordance with the manufacturer's suggested maintenance schedule.
2. This warranty applies only to components manufactured by Alliance Technology, LLC. The appropriate manufacturer's warranty, if any, shall apply to components not manufactured by the company.
3. This warranty does not apply to flex-link connectors, rod, LED light rings, cable, rollers, o-rings, and skids, or other parts, which are considered consumable. The replacement of these items is part of normal product maintenance.
4. This warranty shall not apply if the products are used or operated in any manner not consistent with their intended purpose.
5. This warranty is limited to repair or replacement of defective products and parts during the warranty period, and shall be the exclusive remedy. Alliance Technology, LLC shall in no event have any other obligation or liability of any nature arising from the breakdown, malfunction, defect or other failure of the product, including, without limitation, any liability for service, maintenance, repairs, personal injury, property damage, loss of profits, loss of use or other consequential damages.
6. Any action for any claimed breach of this warranty shall be brought within one (1) year from the date of delivery of the product.
7. The purchaser must return the defective product, part or component to the Alliance Technology, LLC factory in Saukville, WI 53080 at the purchaser's expense, properly and adequately packaged, with insurance and transportation pre-paid. Alliance Technology, LLC will either repair or replace the defective product, part or component, at its option, and will return it to the purchaser at the customer's expense. In no event shall Alliance Technology, LLC be liable for delay in repair or replacement and return under this warranty. Alliance Technology, LLC will endeavour to effect appropriate repairs in the shortest time practical, with respect to the customer having beneficial use of their equipment.
8. Alliance Technology, LLC neither assumes nor authorizes any person to assume any other liability or make any other warranty in connection with the products.
9. THIS WARRANTY IS EXPRESSLY GIVEN IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED. ALLIANCE TECHNOLOGY, LLC EXPRESSLY DISCLAIMS ANY OTHER WARRANTY, INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

## **SYSTEM MAINTENANCE REQUIREMENTS**

*The following maintenance procedures are recommended for all Insight-Vision Xpress systems. Standard warranty policy dictates that components and accessories subject to wear and tear are not covered under the One (1) year warranty. Therefore we are strongly recommending that all systems be maintained according to the following procedures. Please be advised that Insight-Vision will not allow warranty coverage for these items if these procedures are not followed.*

**Digital Xpress Memory Card Recorder:** Due to the adverse conditions that the DX experiences during use, Insight Vision strongly recommends that the cleaning procedure described below be performed for every 5 or 6 hours of use.

**WARRANTY REPAIRS WILL NOT BE GRANTED FOR DAMAGE CAUSED BY DIRTY DVD PLAYERS AS THIS IS A RESULT OF USE AND NOT MANUFACTURERS DEFECTS.**

**Cleaning Procedure:** Insert a DVD Laser Lens Cleaner disc into the IV1200 Command Module and run the cleaning process once or twice to clean the recorder.

Please note that the DVD disc that was originally experiencing problems may have permanent errors as a result of the dirty recorder. Starting a new disc may be necessary.

These cleaning DVDs are available at Wal-Mart for \$6 - \$7. Phillips, Memorex, and Maxell are some of the brands that Insight Vision recommends.

**O-Rings:** O-rings are critical to insure watertight integrity of the camera and connection areas. O-rings are subject to wear and tear and can also suffer failure due to age and other factors. They should be inspected regularly and replaced whenever needed.

When O-rings are working properly, a small amount of water and sometimes fine particles of grit will build up behind them. Any time the camera or sonde connection is taken apart and exposed, there exists the risk of grit wearing down or possibly even tearing the o-ring. It is also possible for water to then enter the slip-ring area once exposed. All connections, once opened or exposed, **MUST** be thoroughly cleaned and dried before re-connecting. We recommend using an old toothbrush or other soft bristled brush to clean the o-ring areas and remove the grit or fine debris. Then, dry the area around the o-ring and pogo pins and slip area completely before re-connecting.

Camera Head: The camera head area, especially around the front light window, is an area that is subject to wear and tear. Insight-Vision has provided a small and large protective skid that MUST be used at all times. These skids are designed to aid in the centering of the camera head and have the added benefit of helping to protect the camera head from extreme wear. Failure to use the provided skids will result in direct wear to the front light ring area of the camera, resulting in the eventual cracking of the light ring protective cover and allowing water to ingress into the camera head. This is not a warranty repair.

Push Rod: The design of the horizontal push reel/coiler and the counter mechanism allow for the push rod and camera head to be stored inside the coiler. The proper storage technique is store the camera head inside the basket.

*At Insight-Vision our goal continues to be focused on providing one of the highest quality, best designed and user-friendly systems offered on the market. We also realize that all we do will amount to nothing without satisfied customers. We ask that you continue to work with us to help evolve our product into one of the absolute best portable systems available. We are always open to constructive ideas that will help us move forward with any or all of our products.*

*We also ask that you do your part in this relationship by striving to properly maintain and take care of your camera system just as you would an automobile or any other tool. It is a proven fact that any item that is properly maintained will last much longer and provide a much greater opportunity for a good return on investment.*

*Sincerely,*

*The Management at Insight-Vision*

## Xpress Command Module

The Xpress Command Module allows real time viewing of a camera image on an LCD flat panel screen. The advanced features of the Xpress Command Module provide recording and playback of camera images, audio commentary, and text writer capabilities using optional external components.

### SYSTEM CAPABILITIES:

A distance counter is standard for the Push Inspection System. The Xpress Command Module features an on-screen display for deployed cable length in feet and meters with the optional distance counter. The operator control provides control of the display location as well as zero reset.

CAMERA illumination controls are featured prominently on the operator control for easy operator access.

An integral MICROPHONE for audio commentary on external recording devices is conveniently integrated into the operator controller.

An integral SPEAKER with 5 volume settings for audio playback from external recording devices is featured on the operator control.

Connections for an optional text writer are included on the front of the Command Module.

External video and audio output jacks are included for connection to optional display or recording devices.

External video and audio input jacks for viewing from external devices are also included on the Command Module.

Power options include a DC POWER input from 13.8-15VDCVDC vehicle accessory socket (cigarette lighter socket) or 110/220VAC 50/60Hz power supply. This main power input will charge the internal batteries as well as run the system. A fully charged battery may run the system up to 4 hours

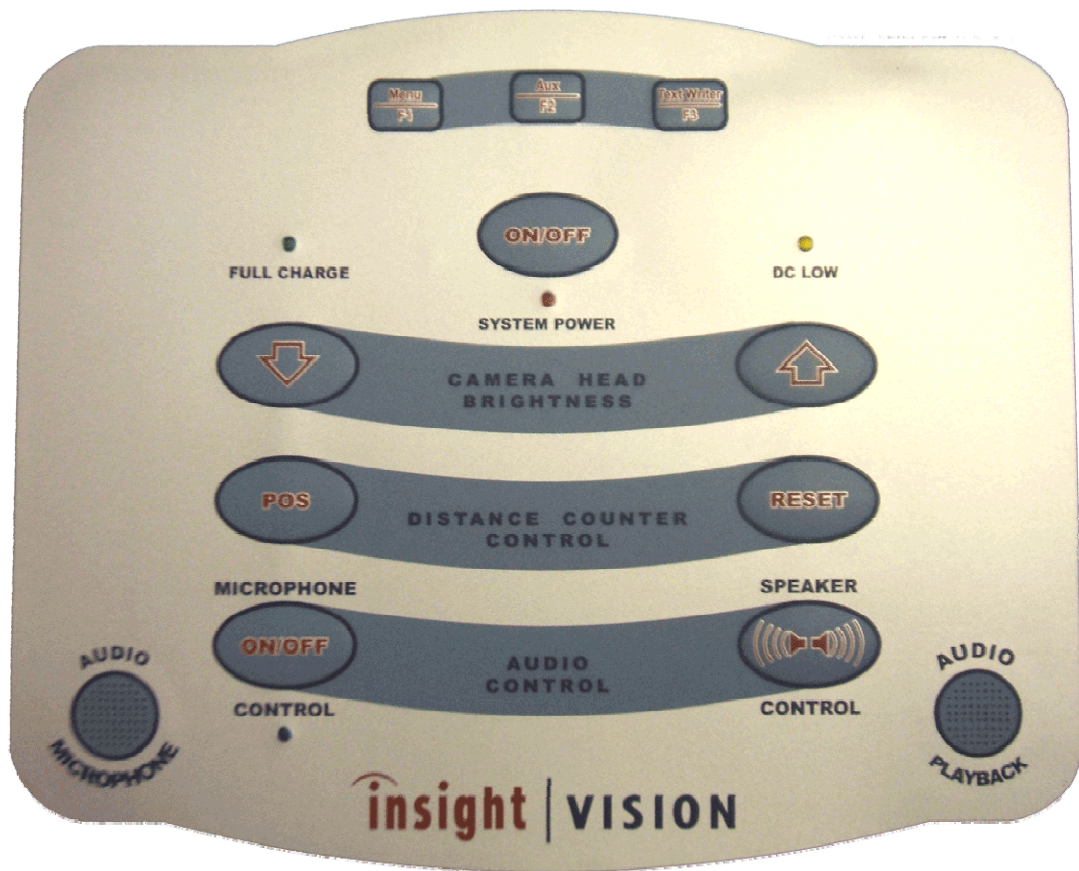
Aux DC input NOT for charging the system. Only used for running the system.

Camera test port located in front for easy troubleshooting of camera, sonde, and cable.



## SYSTEM OPERATION

Open the LCD Flat Panel Lid on the Xpress Command Module and position the screen for best viewing angle. The Lid is used to protect the operator control area when not in use. The Operator Control Buttons are prominently featured and are easily accessible on the large water resistant keypad.



To turn the unit on, press the POWER button. The unit is on when the RED LED light is illuminated. Video will be displayed on the LCD Flat Panel screen.

### System Configuration:

System configuration information is saved automatically from one session to the next. However, the system can be reconfigured at any time. If the system is reconfigured, the distance counter is zeroed. Since system configuration also affects the size of the voltage steps made in controlling camera brightness, camera head brightness keypad buttons will not function unless the system is first configured

If the unit does not turn on, please verify that the internal battery has been charged or connect the unit to a 13.8-15VDC or 110/220VAC power source.

If the unit does not turn on after charging the unit or connecting the unit to a 13.8-15VDC or 110/220VAC power source, please contact an Authorized InsightVision Service Center.

Verify that the Xpress Command Module is receiving adequate power by verifying the YELLOW LED is not illuminated or flashing. If the YELLOW LED lights up at any time, the system is indicating a low power condition of either the built-in internal batteries or an external power source (i.e. low battery on a vehicle).

YELLOW LED is illuminated or flashing *without an external power source connected*.

A flashing YELLOW LED indicates the internal battery is low and will need to be plugged in or recharged within ½ hour.

As soon as it is convenient, connect the unit to a 13.8-15VDC or 110/220VAC power source. When connected to an external supply, the batteries will recharge and the GREEN LED will flash indicating the batteries are charging. **BATTERIES ARE FULLY CHARGED WHEN GREEN LED IS ILLUMINATED AND NO LONGER FLASHING.**

An illuminated YELLOW LED indicates the internal battery is extremely low and will shut down within 30 seconds.

Immediately connect the unit to a 13.8-15VDC or 110/220VAC power source. When connected to an external supply, the batteries will recharge and the GREEN LED will flash indicating the batteries are charging. **BATTERIES ARE FULLY CHARGED WHEN GREEN LED IS ILLUMINATED AND NO LONGER FLASHING**

YELLOW LED is illuminated or flashing *with an external power source connected*.

A flashing YELLOW LED indicates the external power source is low. The advanced Xpress Command Module may continue operating indefinitely in this state as long as the power level does not decrease further.

An illuminated YELLOW LED indicates the external power source is low and the Xpress Command Module will shut down within 30 seconds.

Immediately disconnect the Command Module for the external power source.  
Reconnect the unit to an adequate 13.8-15VDC or 110/220VAC power source.

The yellow DC low LED is utilized as a short circuit indicator. When system power levels are nominal, a slow flash is used to indicate that a short has been detected. If the system is in low power mode and the DC low LED is already flashing quickly, a short circuit condition is indicated by blanking approximately every fifth blink. The combination situation will thus evoke the pattern: blink, blink, blink, blink, off, blink....This cycle will repeat approximately every two and a half seconds

DC low (yellow)

Off - power levels normal

Slow Blink – short circuit detection

Fast Blink – low power

Interrupted fast blink – low power and short circuit detection

On (steady) – shutdown condition (shutdown will occur in 30 seconds)

When connected to an external supply, 13.8-15VDC or 110/220VAC power source, the batteries will recharge and the GREEN LED will flash indicating the batteries are charging. **BATTERIES ARE FULLY CHARGED WHEN GREEN LED IS ILLUMINATED AND NO LONGER FLASHING.** We recommend leaving the 800 Command Module plugged in overnight for a full charge.

The green flashing or steady light will only be visible when the unit is on. However, the unit does charge if plugged in with the unit off.

The unit will charge when plugged in while operating the unit.

Verify the camera image is displayed on the LCD screen.

If the camera image is not displayed on the screen, please verify all connections are made and are tight or turn to the “USER TROUBLESHOOTING GUIDE” in this manual.

Verify the distance counter is at “0000.0f”. If necessary, press the RESET button to zero out the counter. Press the POS button to position counter in desired screen location.

Verify the operation of the camera led light intensity controls by pressing the UP and DOWN arrows.

Due to the advanced auto-iris feature, we recommend setting the light intensity controls to maximum.

If the LED's are not illuminated or are otherwise malfunctioning, please reference the "USER TROUBLESHOOTING GUIDE" in this manual.

Remove the camera from basket and insert into the pipe to be inspected.

**ALWAYS STORE CAMERA IN THE BASKET**

Install skids whenever possible for camera protection.

Skids will help in the operation of the camera as well as increase the durability of the system.

Verify the distance counter increases as the cable is advanced.

## Xpress Large Base Frame Reel

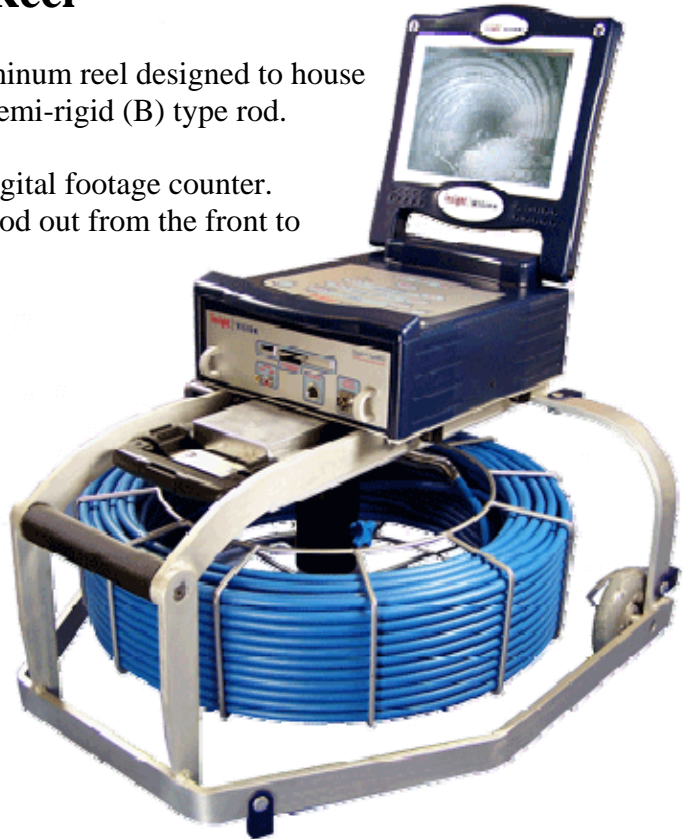
The large base frame is a ruggedized aluminum reel designed to house 200' or 300' of the rigid (A) type rod or semi-rigid (B) type rod.

This base frame comes with an integral digital footage counter. The design of this frame brings the push rod out from the front to allow for easy operation.

When camera is not in use please store in basket.

This frame has been designed with a pull out luggage style handle and wheels for easy transport. All anti-slide supports are made with a non-marring material safe for all floor surfaces.

The top part of the base frame includes a mounting bracket for any of the Xpress command modules.



### Stiff Rod (A)

The letter A following the rod length indicator designates the Insight Vision rigid push rod. Example: 200A = 200' of stiff rod.

This push rod is .475" in diameter and has been specifically designed for longer pushing distances in 2"-12" pipe.

Attempts should not be made to push this rod type through 2" 90 degree bends as rod breakage may occur. This rod type is only available in 200' and 300' lengths on the large horizontal base frame.

### Semi-rigid Rod (B)

The letter B following the rod length indicator designates the Insight Vision semi-rigid push rod. Example: 150B = 150' of semi-rigid rod.

This push rod is .365" in diameter and has been specifically designed for pushing normal distances in 2" through 4" pipe and achieving multiple 90-degree bends. This rod type is available in the standard 100', 150' length. 200' lengths are by special order only.

### **Debris Bag**

This optional item comes in two sizes, one for each size of base frame reels.

It is intended to minimize drippings while working indoors.

It is easily removable for cleaning.

## ClearView Camera

This is a color camera with LED's for illumination of the pipe being inspected.

The camera module has an integrated auto iris feature, which will automatically adjust for varied light levels.

The Sonde is not built into the camera.

This camera is intended for operation in pipes 2-12" I.D.

This camera will function with any of our Xpress command modules as well as our Silver Bullet or Universal Jetcam systems.

Diameter is 1.30"

### Sonde/Spring Assembly



The removable sonde is located inside the spring assembly

It continually transmits a signal at 512Hz and can be located with any locator capable of picking up a 512Hz signal.

### Skid Set

The skids are intended to protect the camera from damage due to debris in the pipe being inspected.

The standard skids come in two sizes.

The small skid is for use in 3-4" diameter pipes.

The large skid is for use in 4-6" diameter pipes.

**Installation and removal of skids.**

The skid is a two-piece device that must be unscrewed for installation.

Slide the rear half over the pushrod and slid forward to the rear of the camera.

Slide the front half over the camera to meet the rear half.

Screw the two pieces together to hold the skid in place.

Removal is the reverse of the installation steps.

