

**Recordex**  
USA

INSTRUCTION MANUAL

# iMMCam AFL-80

INTERACTIVE MULTIMEDIA DIGITAL DOCUMENT CAMERA



ENGLISH

Thank you for choosing a Recordex iMMCam AFL camera for your presentation needs. Our IMM line of products are developed specifically to enhance the interactive multimedia experience of any presentation.

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### **FCC Notice (Class A)**

This device complies with Subpart J of Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesirable operation.

**Warning** - This is a class A Product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

### **CE Class A (EMC) Notice**

This product is intended for use in a commercial, industrial or educational setting and environment. It is not intended for residential home use.

**Warning** - This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures to correct the interference.

### **RECYCLE PROPERLY**

This device should not be disposed of with other household waste. It should be discarded through an authorized recycling center able to accept electrical and electronic waste.

### **CAUTION**

**WARNING - TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.**

**CAUTION - RISK OF ELECTRIC SHOCK - Do not attempt to service unit. Do not remove cover. There are no user-serviceable parts inside the unit. Unit should be returned to the manufacturer for service.**

### **Precautions When Using**

- Do not use on unstable tray, table, or cart. Use only on stable surface.
- Do not use near water, steam, or excessive direct heat source.
- Only use the power adapter provided by the manufacturer.
- Always unplug the document camera before cleaning any part of the camera.
- Unplug the device when not in use for long periods of time and during electrical storms.

**Table of Contents**

**PACKAGE CONTENTS.....4**

**GETTING TO KNOW YOUR iMMCam AFL-80.....5**

**THE INPUT/OUTPUT PANELS.....6**

**CONTROL PANEL.....7**

**REMOTE CONTROL.....8**

**SPECIAL FUNCTIONS.....8**

**TECHNICAL SPECIFICATIONS.....9**

**DEVICE DRIVER INSTALLATION.....10**

**VIDEOGLIDE FOR MAC OSX.....11**

**DEBUT VIDEO CAPTURE FOR WINDOWS.....12**

**MAKING THE CONNECTIONS.....13**

**TROUBLESHOOTING.....14**

**RECORD PRODUCT INFORMATION.....15**

**WARRANTY.....16**

## PACKAGE CONTENTS

Take a moment to confirm that you received all the items listed below:



Recordex iMMCam AFL-80



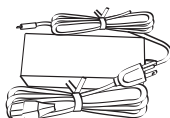
Instruction Manual



Anti-Glare Sheet



Driver/Software Discs



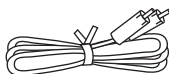
Power Adapter & Cord



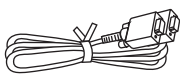
Remote



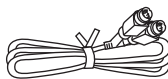
Carrying Case



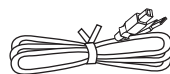
RCA Cable



VGA D-Sub Cable



S-Video Cable



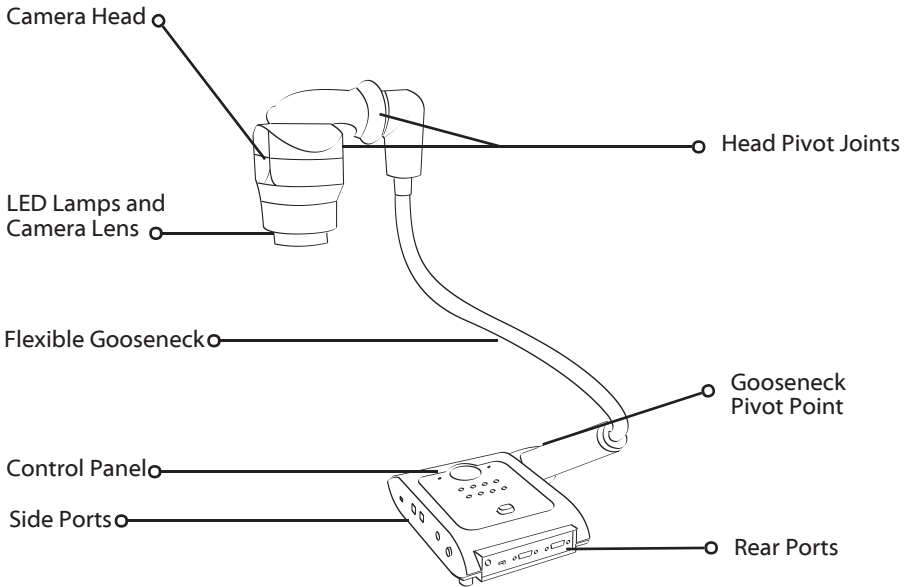
USB Cable



**Optional** Microscope  
Adapter (28 mm)

## GETTING TO KNOW YOUR iMMCam AFL-80

Use the illustrations below to familiarize yourself with the Recordex iMMCam AFL-80.

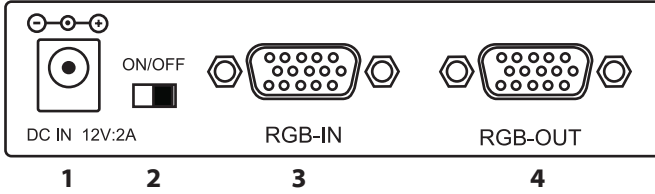


**AFL-80: Rear Side View**

## THE INPUT/OUTPUT PANELS

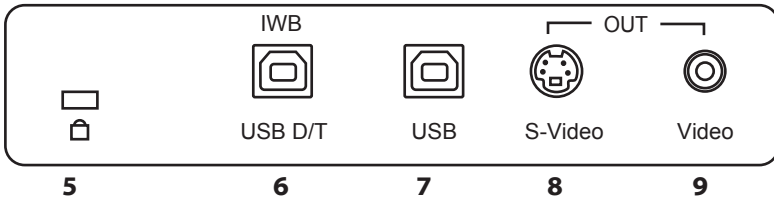
Use the illustrations below to familiarize yourself with the various ports found on the rear and side panel of the camera.

### Rear I/O Panel



#	Label	Description
1	DC12V:2A	Power Supply Port (DC 12V)
2	ON/OFF	Power Switch
3	RGB-IN	D-Sub RGB Port (VGA Input) - Used for VGA Passthrough
4	RGB-OUT	D-Sub RGB Port (VGA Output) - Connect to Projector

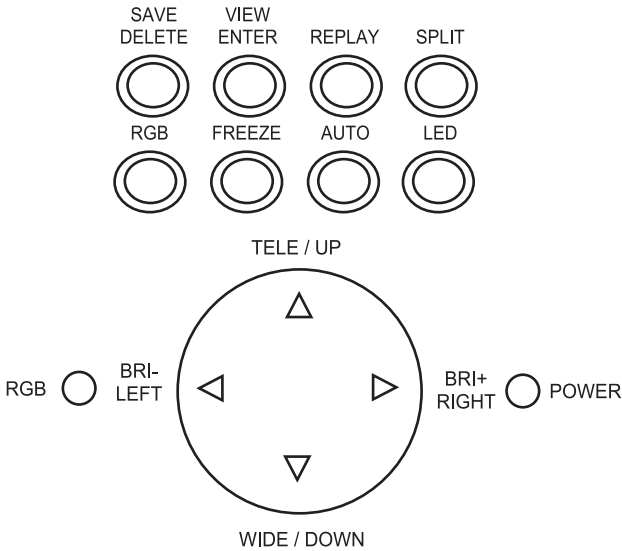
### Right Side I/O Panel



#	Label	Description
5	LOCK	Kensington Lock
6	IWB USB-D/T	USB 2.0 Port (OUTPUT to Computer) TWAIN Compliant, Full 96x Zoom, Including Image Effects, VGA Resolution
7	USB	USB 2.0 Port (OUTPUT to Computer), 12 X Optical Zoom, SXGA Resolution (This Hi-res USB Port does not have TWAIN Support)
8	SVIDEO	S-Video Out- To projector or TV
9	RCA	RCA/Composite Video Out - To projector or TV

## CONTROL PANEL

Refer to the illustration below and the summary table for a description of the control panel function buttons.

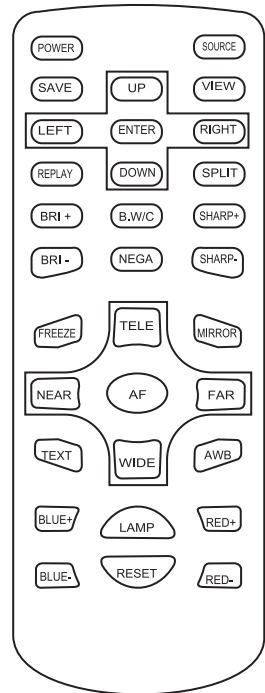


Label	Description
TELE	Zoom in
WIDE	Zoom out
UP	Navigate saved images
DOWN	Navigate saved images
LEFT	Navigate saved images
RIGHT	Navigate saved images
BRI-	Reduce image brightness
BRI+	Increase image brightness
SAVE	Capture current view to internal memory
DELETE	Delete saved images (hold down for 3 seconds when selected in thumbnail view)
VIEW	Bring up catalog of saved images, press to cycle through pages of images
ENTER	Select saved image for full screen viewing
REPLAY	View saved images in slideshow
SPLIT	Divide display: ½ screen is frozen, ½ screen is live image
RGB	Switch to VGA Passthrough (RGB-IN passed through to RGB-OUT)
FREEZE	Toggle on/off image freeze mode (press again for normal view)
AUTO	Automatically optimize image focus, brightness, and white balance
LED	Toggle on/off the LED lamps
<b>LIGHTS</b>	<b>Description</b>
RGB	Lit when VGA Passthrough is active
POWER	Lit when camera is powered on

## REMOTE CONTROL

Refer to the illustration below and the summary table for a description of the remote control function buttons.

Label	Description
<i>NOTE: most buttons are defined in the table on page 8. This table defines function buttons that only appear on the remote control.</i>	
B.W/C	Switch between black and white or color viewing
MIRROR	Displays mirror image of current presenter view
NEAR	Small nudge adjustment to AutoFocus
FAR	Small nudge adjustment to AutoFocus
SHARP+	Increase edge sharpness
SHARP-	Decrease edge sharpness
TEXT	Increase text sharpness (toggle text/graphic mode)
AWB	Auto white balance the image
RESET	Reset image settings
BLUE+	Increase blue color level (manual white balance, remote control function only)
BLUE-	Decrease blue color level (manual white balance, remote control function only)
RED+	Increase red color level (manual white balance, remote control function only)
RED-	Decrease red color level (manual white balance, remote control function only)



## SPECIAL FUNCTIONS

**Changing VGA Output Resolution.** The default output resolution of the camera is SXGA (1280x1024 @60Hz). The VGA output resolution can be changed to XGA (1024x768 @60Hz) or to HD (1920x1080 @ 60Hz). To do this press the AUTO button on base control panel and hold it down for three seconds. Doing so will cycle the camera through the three output resolutions 1024x768, 1280x1024, 1920x1080.

**Deleting Saved Images.** To delete the images stored to the internal memory follow these steps:

- Press VIEW/ENTER and then select the image you wish to delete by using the UP, DOWN, LEFT and RIGHT buttons.
- After the image is highlighted press the SAVE/DEL button and hold it down for three seconds.
- **NOTE: The images can only be deleted while in thumbnail view.** Do not enlarge/view and then try to delete. Highlight the image in the thumbnail view and then hold down the ENTER/DEL button for three seconds.



## TECHNICAL SPECIFICATIONS

<b>Feature/Specification</b>	<b>AFL-80 // Portable Gooseneck</b>
<b>Image Sensor</b>	½ " CMOS
<b>Pixels</b>	3.2 Mega Pixel
<b>Zoom</b>	12x Optical, 8x Digital (96x Total)
<b>Lens</b>	Glass
<b>Frame Rate</b>	25 fps (max)
<b>Focus</b>	Auto Focus
<b>Image Effect</b>	Mirror/Freeze/B&W/Negative/Split
<b>Head Rotation</b>	270 degrees/ 45 d. pivot
<b>White Balance</b>	Auto/Manual
<b>Exposure</b>	Auto
<b>Flicker Level</b>	2 levels
<b>Horizontal Resolution</b>	1000TV
<b>Shooting Area</b>	11" x 15" (max)
<b>VGA/RGB Output</b>	HD (1920x1080), SXGA (1280x1024), XGA (1024x768)
<b>Video Input Switching</b>	VGA Passthrough Switch
<b>USB 2.0 Output (D/T)</b>	USB Video Device (640x480, 720x576) Full 96 x zoom and image effects TWAIN 32-bit
<b>USB 2.0 Output (Hi-Res)</b>	USB Video Device (1280x1024) 12x Optical Zoom No Twain
<b>Save Images</b>	Unlimited capture by USB 2.0 (Video and still capture) 32-image store to internal memory
<b>Software</b>	Debut Video Capture for Windows VideoGlide Video Capture for MAC
<b>Video Input</b>	1 VGA Passthrough
<b>Video Output</b>	1 x VGA Out (1080HD, SXGA, XGA) 1 x S-Video Out (mini DIN-4) 1 x Composite Video (RCA) 1 x USB 2.0 (VGA 640x480/720x576) 1 x USB 2.0 (SXGA 1280x1024)
<b>Power (brick)</b>	DC 12V/2A (100-240v 50/60 Hz)
<b>Light Source</b>	LED Lamp
<b>IR Remote</b>	Yes
<b>Carrying Case</b>	Included
<b>Microscope Adapter</b>	Optional
<b>Physical Dimensions/Weight</b>	Folded: 15.25 x 8 x 2.5 (in) Open: 7.25 x 7.7x 24 (in) Weight: 4.5 lbs Shipping Weight: 10 lbs

## DEVICE DRIVER INSTALLATION

Your iMMCam AFL-80 document camera can be used as a visualizer without installing any device drivers or additional software. However, if you wish to capture video or image stills from your iMMCam then you will need to install USB drivers and USB capture software.

Your iMMCam AFL-80 document camera is equipped with two hi-speed 2.0 USB Ports. This gives you maximum flexibility and quality when capturing live video or image stills from your iMMCam. It is possible to use the camera with both USB ports connected to your computer, however, most users will find that their needs are met best by one or the other port and will typically only run the camera with a single USB cable connection. Don't worry about picking the wrong port. You can always switch ports at any time.

### Hi-Resolution USB Port (Labeled : USB) (Located next to the S-Video Port)

This port is designed for hi-resolution image capture. It will support up to 1600x1200 image capture, however, this is highly dependent upon optimum USB bandwidth. Some users may experience image artifacts or video interference when capturing at 1600x1200. These users should use 1280x1024 as their capture resolution. (See page 12 for instructions on changing image capture resolution)	
TYPICAL USE	Best used for capturing hi-resolution image stills and video using Debut (Windows) or VideoGlide (MAC)
MAX ZOOM	Up to 12x Optical Zoom
CAMERA EFFECTS	Negative image
DRIVER	Plug-n-Play, no driver installation required (Installs as USB Video Device)
TWAIN	The hi-resolution USB port does not support TWAIN image transfer.
INSTALLATION	No special driver installation required. Simply plug in device, connect the USB cable to your computer and allow the operating system to detect the hardware and install the appropriate driver. This device will appear as a USB Video Device under Windows and MAC OSX.

### Standard Resolution USB (Labeled: USB D/T) (Located next to the Kensington lock slot)

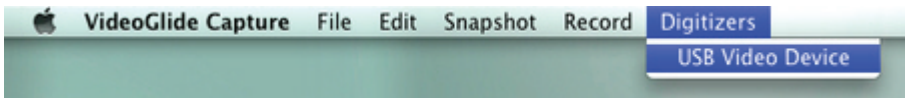
TYPICAL USE	Best used when you need to capture images at maximum zoom and this port must be used when using the AFL-80 as a TWAIN compliant device (i.e. Directly acquiring images from within whiteboard software by using the 'insert from scanner or camera' function.)
MAX ZOOM	Up to 96x Total Zoom (12x optical * 8x digital)
CAMERA EFFECTS	Negative, Mirror, Black White/Color, Split, Brightness, Sharpness
DRIVER	Camera driver installation is required. (USB 2860 Device)
TWAIN	The standard resolution USB Port DOES support TWAIN image transfer on 32-bit Windows operating systems. There is no TWAIN support for 64-bit systems.
INSTALLATION	Windows users should insert the disc labeled "iMMCam AFL-80 Windows Setup Disc" and follow the on screen instructions for installing the device drivers and capture software.  MAC users should insert the disc labeled "iMMCam AFL-80 VideoGlide for MAC" disc and install the software package. See Page 11 for additional install steps.

## VIDEOGLIDE FOR MAC OSX

If you are running MAC OSX you will use VideoGlide to capture still images and video with your AFL-80.

After installing VideoGlide from the "AFL-80 VideoGlide for MAC" install disc you will want to connect your AFL-80 to your computer by following these steps:

1. Plug in your AFL-80
2. Make sure it is powered on.
3. Connect the AFL-80 to your MAC using the supplied USB cable. Use any open USB 2.0 port on your computer. *TIP: For best results use the USB port located next to the S-Video port. This will provide high-resolution image capture.*
4. The MAC OS will auto-detect the camera.
5. Next, launch VideoGlide and then select USB Video Device from digitizers on the main menu bar.



6. Use the Snapshot or Record menu to capture still images or video from the camera.



## DEBUT VIDEO CAPTURE FOR WINDOWS

If you are running Windows you will use Debut to capture still images and video with your AFL-80.

To install Debut insert the ALF-80 Installation Disc for Windows and follow the on-screen directions for installing Debut.

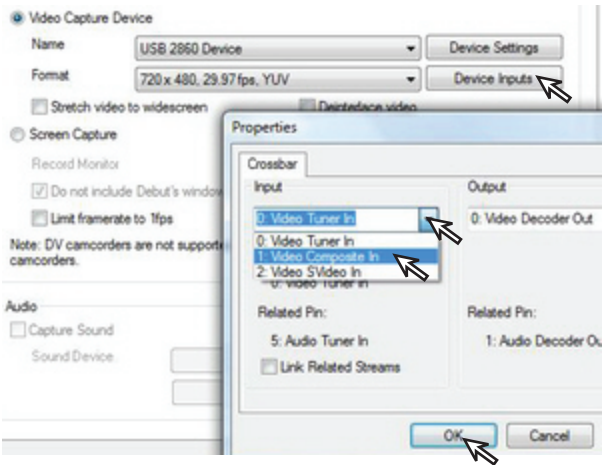
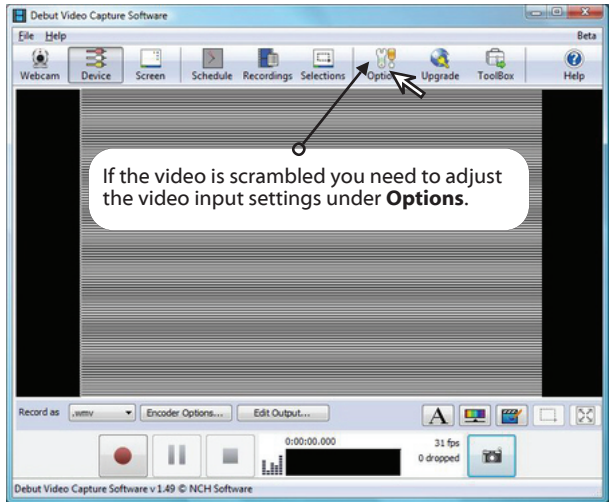
After Debut has been installed you may need to configure the camera settings. If the debut capture window looks like the image to the right then the device settings need to be adjusted.

Debut may initially detect the video source incorrectly as a Video Tuner In which will result in a scrambled video feed.

Changing the input setting from Video Tuner to Video Composite In will fix the problem.

Follow these steps:

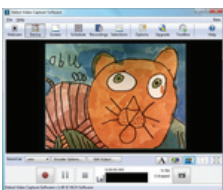
- Click on Options
- Click on Device Inputs under Video Capture Device
- Click on the drop down box under input and select 1: Video Composite In
- Click OK to close the properties window
- Click OK to close the options window
- Debut will now properly display the video feed.



### How to Change the Capture Resolution

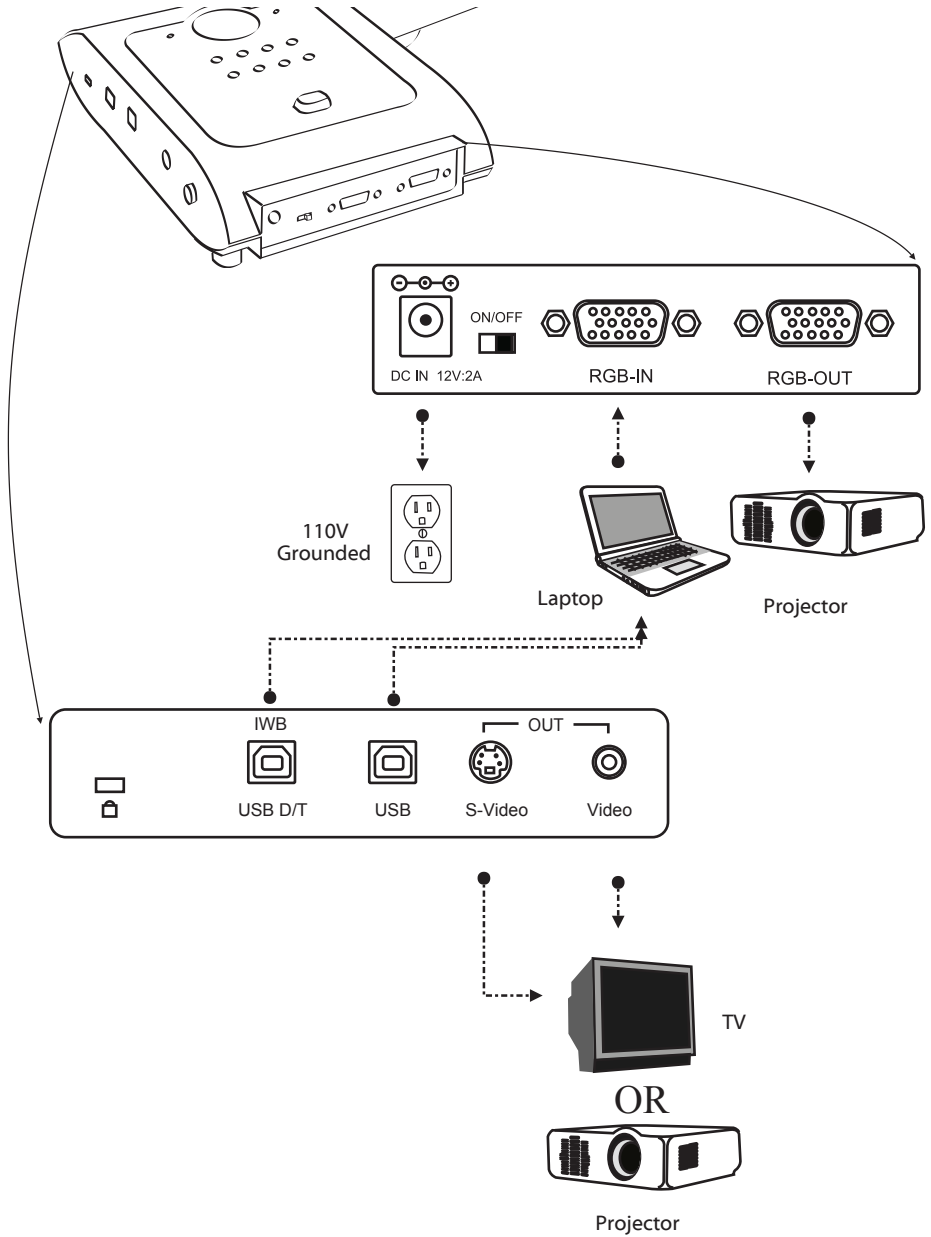


To change the capture resolution use the Format drop down box to select one of the listed resolutions. Some users may find that their computer better supports capture at 1280x1024, others may be able to capture at 1600x1200.



## MAKING THE CONNECTIONS

The diagram below demonstrates the many AV input and output connections the AFL-80 supports.



## TROUBLESHOOTING

Problem/Observation	Solution
No image is displayed or image is totally black or totally white.	<ul style="list-style-type: none"> <li>• Check that the unit is plugged in and powered on. Press the LED button to cycle through the lighting options to confirm the unit is on.</li> <li>• Check that the VGA cable is tightly connected to the document camera and the projector.</li> <li>• The camera is zoomed too far in and is displaying only a blank portion of the document or object. Zoom out or move object.</li> </ul>
USB capture is not working	<ul style="list-style-type: none"> <li>• Make sure the USB cable is plugged into the camera and the computer.</li> <li>• Use a rear USB Port on your computer. Some front USB ports do not have adequate bandwidth and power to allow for quality image capture.</li> <li>• Make sure you have installed the drivers according to the manual.</li> <li>• Try using the capture software provided with the camera to rule out any issues with third party software.</li> <li>• Unplug USB cable, restart your computer and camera. Make connection after computer has been logged into Windows. (resets USB ports)</li> </ul>
Debut Video Capture image is scrambled	<ul style="list-style-type: none"> <li>• See page 12</li> </ul>
Image is out of focus	<ul style="list-style-type: none"> <li>• Press the AutoFocus button.</li> <li>• Press the reset button</li> <li>• Try zooming in or out a little (press Tele / Wide)</li> <li>• Use the near/far button on the remote to manually tweak the focus.</li> <li>• Refer to the "Quick Setup Guide" for optimum camera head placement.</li> </ul>
Image is dark or washed out	<ul style="list-style-type: none"> <li>• Press the Auto White Balance button (AWB)</li> <li>• Try changing the lighting</li> <li>• Manually change the brightness (BRI+/BRI-)</li> <li>• Power off camera and try again.</li> </ul>
Image is stuck	<ul style="list-style-type: none"> <li>• Press the Freeze button to resume normal viewing</li> <li>• Power off the unit. Power on and try again.</li> </ul>
VGA passthrough is not working	<ul style="list-style-type: none"> <li>• If using a laptop/notebook make sure to switch the display settings of the notebook to use an external monitor.</li> <li>• Make sure computer has not gone into sleep mode.</li> </ul>
Video projector is unable to project image from camera.	<ul style="list-style-type: none"> <li>• Make sure VGA connection is tight.</li> <li>• Try changing the output resolution by pressing and holding the AUTO button for 3 seconds.</li> </ul>

## **RECORD PRODUCT INFORMATION**

We strongly recommend you fill out the information below:

MODEL NUMBER: \_\_\_\_\_

SERIAL NUMBER: \_\_\_\_\_

SOFTWARE KEY: \_\_\_\_\_

PURCHASED FROM: \_\_\_\_\_

PURCHASE DATE: \_\_\_\_\_  
(staple copy of invoice to this manual)

## **SUPPORT CONTACTS**

**PHONE:** 478-237-5501

**EMAIL:** [service@recordexusa.com](mailto:service@recordexusa.com)

## WARRANTY

### Limited 5-year Warranty on iMMcam Document Camera (“Product”)

**What is my warranty?** Recordex warrants to the original purchaser only that the Product will be free from defects in material and workmanship under normal use for a period of five (5) years from the date of original purchase. Recordex's warranty shall not apply: (i) to any Product subjected to accident, misuse, neglect, alteration, acts of God, improper handling, improper transport, improper storage, improper use or application, improper installation, industrial or commercial use, improper testing or unauthorized repair; or (ii) to cosmetic problems or defects that result from normal wear and tear under ordinary use, and do not affect the performance or use of the product. If the Product develops a covered defect within the warranty period, Recordex will, at its option, either repair or replace the Product at no charge, provided that the Product is returned during the warranty period and this is your exclusive remedy and the entire liability of Recordex under this warranty. No warranty is made or implied as to the effectiveness or suitability of this product for your purposes.

**How long does this warranty last?** Five (5) years from the date of the original purchase.

**Who is responsible for Shipping?** You are responsible for shipping the Product to our Warranty Service Depot. Recordex will pay for return shipment of the repaired Product under warranty. Return shipment will be by ground service to the 48 contiguous US states. You are responsible for shipping to Alaska, Hawaii and any address outside of the United States. If the Product is repaired out of warranty then you are responsible for shipping both ways. Recordex is not responsible for any shipping damage that may occur in transit to the service depot. Damaged units will not be covered under warranty.

**What must I do to obtain warranty service?** To obtain warranty service please contact Recordex's Customer Service Center at 1-478-237-5501 or contact your authorized Recordex Dealer for assistance in filing a warranty claim. You will receive instructions on how to properly return your product for authorized warranty repair. In order to receive warranty service you must be able to provide an original receipt or invoice for the purchase of your Product.

THE ABOVE STATED WARRANTY IS EXCLUSIVE AND REPLACES ALL OTHER WARRANTIES EXPRESSED OR IMPLIED INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. RECORDEX WILL NOT BE HELD LIABLE FOR ANY OTHER DAMAGES OR LOSS INCLUDING INCIDENTAL OR CONSEQUENTIAL DAMAGES AND LOSS OF PROFITS OR REVENUES FROM WHATEVER CAUSE, INCLUDING BREACH OF WARRANTY OR NEGLIGENCE.

