

### **Connecting The USB Cable:**

Prior to connecting the USB cable, you must first install the supplied software. When connecting the USB cable, insert the square end of the cable into the USB port on the Digital Video Microscope. Next, insert the rectangular end into the USB port on your computer.

### **Loading the Software:**

Insert software provided into your CD-Rom drive and follow the instructions.

### **System Requirements:**

#### **T-1951, T-1952 & T-1953**

**Pentium II 433mhz**  
**Microsoft Internet Explorer 5.0**  
**128mb of RAM**  
**Windows 2000**  
**8mb Video (24bit color)**

#### **T-1954**

**256mb RAM**  
**Windows XP**  
**8mb Video**  
**USB 2.0**

### **BULB REPLACEMENT**

- a. Before changing the bulb, make sure that the power switch is off and the power cord has been disconnected from the main supply.
- b. Under your digital video microscope use a slotted screwdriver to remove the screw on the lamp door. Pull open the lamp door and carefully remove the old light bulb from the socket. Put in new bulb and push into socket.
- c. Clean the bulb surface with alcohol and lens paper.
- d. Close lamp door and replace screw.
- e. Replacement bulbs may be purchased on Ken-A-Vision web site under accessories at [www.ken-a-vision.com](http://www.ken-a-vision.com)

### **CARE AND MAINTENANCE**

Your Digital Video Microscope is a fine precision instrument and should be treated with care. When not in use it should be protected from dust by the plastic cover provided. Lenses and eyepieces should be cleaned periodically with optical lens tissue which is soft and lint free. Painted surfaces can be cleaned with a moistened cloth.

When using a 100xR objective oil immersion lens, be sure not to leave any oil on the lens after use. Dip a cotton swab or lens paper with a small amount of denatured alcohol, and clean the lens surface carefully. Do not use aggressive solvents to clean lens.

Ken-A-Vision has quality technicians on staff to repair or service your Digital Video Microscopes. Contact us at 1.816.353.4787 for more details.

WARRANTY: ONE YEAR (CAMERA) AND TEN YEAR (MICROSCOPE) WARRANTY AGAINST DEFECTIVE PARTS AND WORKMANSHIP.



# **Digital Video Microscope**

## **Instruction Manual**

**T-1951**  
**T-1952**  
**T-1953**  
**T-1954**



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## COMPREHENSIVE SCOPE

### APPLICATION

The Digital Video Microscope is a microscope with our high quality built-in camera. Use the T-1951 to view microscopic images on your TV monitor. The T-1952 to capture images in your computer via USB, or the T-1953 for both video and computer image capturing. The Digital Video Microscope is combined with our unique software that allows Video Streaming and FTP uploading, so you can share your images with others. (T-1952, T-1953 and T-1954 models only)

## SPECIFICATIONS

Catalog#	T- 1951	T-1952	T-1953	T-1954
10x Widefield Eyepiece with pointer	•	•	•	•
4x, 10x, 40xR, 100xR Objective lens	•	•	•	•
Coarse and Fine Focal Adjustment	•	•	•	•
Built-in 20 watt Illuminator	•	•	•	•
Built-in Abbe Condenser	•	•	•	•
Mechanical Stage	•	•	•	•
Output Signal Video USB	•		•	
		1.1	1.1	2.0

### DIGITAL VIDEO MICROSCOPE PREPARATION

**Make sure the lenses are all in place.** Carefully check the objective lenses to be sure that they are screwed in firmly into the nosepiece.

**Check the coarse focus tension.** The knobs are oversized were designed for better gripping. The coarse focus knob should turn easily to change the focus, but the stage should not drift or slip on its own.

**Check the stage stop safety feature.** Be sure the stage moves up and down when turning the focusing knob. The stage stop is a thumb screw with a lock nut found just behind the stage. To check the stop, first place a prepared slide in position for viewing. Move the coarse focus until the object and stage are as close together as they can be. Look at the slide and turn the 40x objective into place. This objective should be very close to the slide, but not touching.

## OPERATION

### Built-In Illuminator

Turn off the power switch before connecting the power cord located at the rear of the Digital Video Microscope. An in-base illuminator is built into the base of the microscope and cannot be removed. Bulb replacement can be done from the underneath side. See Bulb Replacement instructions. The built-in 20 watt bayonet incandescent bulb provides all the light needed for illumination.

### Eyepiece

The widefield eyepiece is locked in to avoid loss of eyepiece. The eyepointer is built-in to the eyepiece.

### Focus

Place a prepared slide under the stage clips or in mechanical stage and move into position for viewing. Use the 4x objective first. Raise the stage until it will go no higher. Then lower the stage to bring into focus. Use the fine focus knob to achieve optimum resolution. Once the image is sharp you should be able to simply turn the nosepiece to the next objective lens and do minor adjustments with the fine focus knob.

With Coaxial focusing both the coarse and fine focus knobs are on the same axis. The coarse focus knob is the larger knob located next to the arm of the microscope. The fine focus knob is the smaller knob mounted on the outside of the coarse focus knob. Having both sets of knobs on the same axis makes it easier to switch from one focus knob to the other without removing your attention from your prepared slide.

### Diopter

After obtaining focus of the specimen on monitor/computer using the microscope focus adjustments, adjust the diopter, located on eyepiece, for individual eye correction when viewing through the microscope.

### Abbe Condenser 1.25 N.A.

The purpose of the condenser lens is to focus the light onto the specimen. (adjust the amount of light needed on a specimen) The N.A. of 1.25 gives it the ability to be used with higher magnification 100x objective lens. Movement of the condenser is controlled by a lever that moves from side to side.

### Mechanical Stage

The mechanical stage is a mechanical way to move the slide around on your stage. It consists of a slide holder and two knobs. The knobs are located on side below the stage. One knob moves the slide forward and backward. The other knob moves the slide from left to right.

### Connecting The Video Cable:

Simply connect one end of the supplied video cable into the "Video Out" connector on the base of the Digital Video Microscope. Connect the other end of the cable into the "Video In" connector of your TV monitor, VCR, or Video Projector.