



***ken-a-vision***<sup>®</sup>  
KNOWLEDGE THROUGH VISION

## **Digital Comprehensive Scope 2**

Instruction Manual

T-19542C

T-19642C

T-19542CP

T-19642CP

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# Introduction

Thank you for purchasing the Digital Comprehensive Scope 2. This digital compound microscope series is specifically designed with advanced features of a 5 megapixel digital camera, a mechanical stage with spring-loaded stage clips, an Abbe condenser with iris diaphragm, an adjustable light dimmer (rheostat), and high-quality objective lenses that will magnify 40-1000 times. Combined with Ken-A-Vision's Applied Vision™ software, this microscope is a powerful product allowing the user to take digital pictures, annotate images, make measurements, and record full-length or time-lapse videos that add to the classroom and educational experience.



Instruction Manual



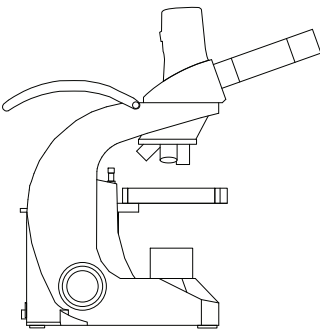
AV 4 Software Instruction Manual



Applied Vision™ 4 Software



Warranty Sheet



Digital Comprehensive Scope 2 Microscope



Slide Micrometer



USB Cable



Microscope Cover



Power Supply



Allen Wrench

## Microscope Set-up Guide

The Digital Comprehensive Scope 2 compound microscope can be set up in a matter of minutes. To get the most out of this amazing tool, follow these step-by-step instructions:

1. After unpacking the box, take the Applied Vision™ software CD and insert it into your computer to install.

**NOTE:** For a complete instruction manual of Applied Vision software, refer to the .pdf version on [www.ken-a-vision.com](http://www.ken-a-vision.com).

2. Follow the directions to install the software. Once completed, an Applied Vision icon should appear on your computer's desktop.
3. Remove the Applied Vision CD from your computer and restart the computer.
4. Remove the Digital Comprehensive Scope 2 from the plastic bag and remove the protective coverings from the objective lenses and the eyepiece(s).
5. Place the microscope on a flat, firm surface next to the computer with the installed Applied Vision software.
6. Check the coarse focus knob on either side of the main body support. The coarse focus knobs should turn easily.

**NOTE:** The stage should move freely up and down the main body support when focusing. When you release the knob, the stage should remain stationary, and not slide down the post on its own.

7. To operate the cordless feature of this microscope, immediately plug in the microscope to charge for eight (8) hours.
  - a. Plug in the round pin adapter from the power supply to the back of your microscope.
  - b. Connect the opposite end to a Ken-A-Vision® multicharger (Part # SCGN061) or an 110V (220V international) electrical outlet.

**NOTE:** The cordless microscope can also be operated with the cord plugged into the power source.

- c. The best option, when not in use, is to plug the microscope into a Ken-A-Vision multicharger that will automatically stop charging once the microscope is fully charged to keep it at the

optimal full charge for longer battery-life. This prevents over charging and the user can charge up to eight (8) microscopes at once.

- d. Once finished charging, store the power cord in the stow away integrated storage compartment on the back of the microscope.
8. Plug the narrow end of the USB 2.0 cable into the back of the camera body.
9. Plug the wide end of the USB 2.0 cable into the USB port of your computer with the installed Applied Vision™ software.
10. To turn on the LED lights, locate the power switch on the right back side of each microscope base.
11. Place a prepared slide on the stage and move it into position for viewing.
12. Start with the 4x objective by raising the stage with the coarse focus knobs until it will go no higher.
13. Lower the stage slowly to bring it into focus using the coarse focus knobs.
14. To sharpen the image, adjust with the fine focus knobs.
15. Launch Applied Vision software.
16. The image that is being viewed through the eyepiece(s) of the microscope should be displayed on the computer screen.
17. Once the image appears on the computer screen, simply turn the nosepiece to the next higher objective lens and do minor adjustments with the fine focus knobs.

**NOTE:** If the image on the screen is flickering, reduce the amount of light entering through the iris diaphragm and rheostat (light dimmer).

18. After obtaining focus of the specimen on the computer screen, adjust the diopter on the eyepiece tube for individual eye correction when viewing through the microscope.

**NOTE:** The T-19642C binocular diopter is on the left eyepiece tube.

# Specifications

Product Number		T-19542C	T-19642C	T-19542CP	T-19642CP
<b>Stand/Frame</b>					
SC12	Comp 2 Stand with 4 hole nose piece	X	X	X	X
SC12M	Comp 2 Mechanical Stage	X	X	X	X
SC12DP	Comp 2 4 hole NP w/ upper/lower light				
<b>Standard Features</b>					
	Charger Storage Compartment	X	X	X	X
	Stow and Go Handle™	X	X	X	X
	Green Battery™	X	X	X	X
	Cordless Rechargeable	X	X	X	X
	COOL LIGHT™ illumination	X	X	X	X
	Increased Range of Focus				
	UPPER LIGHT STALK				
<b>Heads</b>					
SC12MH	Comp 2 Monocular with eyepiece				
SC12DH	Comp 2 Dual View Head with 2 eyepieces				
SC12BH	Comp 2 Binocular Head with 2 eyepieces				
SC12TH	Comp 2 Trinocular Head 2 eyepieces				
SC12CMH	Comp 2 Monocular with 5MP Camera	X		X	
SC12CBH	Comp 2 Binocular Head with 5MP Camera		X		X
<b>Stage</b>					
SC12FS	Comp 2 Floating Stage with built in Condensor				
SC12MS	Comp 2 Mechanical Stage with Built in Abbe & Iris	X	X	X	X
SC12SS	Comp 2 Standard Stage with 5 Hole Disc Diaphragm				
<b>Eyepieces</b>					
SC12EP5	5X				
SC100EP10-19	10X	X	X	X	X
SC12EP16	16X				
SC12EP20	20X				
<b>Objectives</b>					
SC12OB2	2X DIN Achromat				
SC12OB4	4X DIN Achromat	X	X		
SC12OB10	10X DIN Achromat	X	X		
SC12OB40R	40X DIN Achromat 0.65NA	X	X		
SC12OB100R	100X DIN Achromat	X	X		
SC12OB4P	4X Plan Achromat			X	X
SC12OB10P	10X Plan Achromat			X	X
SC12OB20P	20X Plan Achromat				
SC12OB40RP	40X Plan Achromat			X	X
SC12OB60RP	60X Plan Achromat				
SC12OB100RP	100X Plan Achromat			X	X

## Troubleshooting

This section provides many useful tips on how to solve common problems while setting up or using the Digital Comprehensive Scope 2 compound microscope:

I can't see an image. I can only see a partial image.

- Check to see if the USB plug is in the USB port of the computer with installed Applied Vision™ software, or the power supply is plugged into an electrical outlet, or the battery is charged if using cordless.
- Check to see if the objective lens is clicked into place.
- Check to see if the LED lights are turned on by switching the power button on the back of the microscope. A red indicator light should glow if the LED lights are on.
- Check to see if the dimmer switch (rheostat) is turned clockwise to allow the intensity of light to increase.
- Adjust the iris diaphragm, located underneath the stage, to control the amount of light illuminating the prepared slide.
- Close Applied Vision and then reboot Applied Vision to activate the camera.

It is difficult to get an image in focus.

- Adjust the coarse focus knobs slowly.
- Check to see if the objective lens is clicked into place.
- If the image is focused on the computer screen, adjust the diopter on the eyepiece tube to focus for the user's individual vision when viewing through the eyepiece.
- Check to see if there has been damage to the objective lenses and eyepiece(s). If the lens/eyepiece is dirty, use lens paper and distilled water to rub gently clean.

**NOTE:** Never rub the lens/eyepiece when it is dry. This can cause static charge that will attract dirt.



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