

All I can see is a partial circle of light. Why?

To see your sample properly, you need to have even light shining up through the slide. If you are using the mirror for light, try gently moving it about while looking through the microscope until you see an evenly lit full circle.

I have a very thin sample on my slide, but I can't see any detail.

First, make sure that the image is in sharp focus by adjusting the focusing knobs. If the problem still exists you should add a drop of dye or stain to the sample. Stains make hard-to-see objects like plant cells stand out.

BATTERY INFORMATION: This unit uses 2 AA 1.5 volt batteries. Always use fresh batteries. Do not mix old and new batteries. Do not mix batteries of different types. Remove exhausted batteries and dispose of them properly. If this toy will not be used for an extended term please remove the batteries. Do not try to recharge a non-rechargeable battery. Rechargeable batteries are to be removed from the toy before being charged. Rechargeable batteries are only to be charged under adult supervision. Only batteries of the same or equivalent type as recommended are to be used. Do not take a battery apart. Do not short-circuit the terminals. Do not dispose of batteries in fire - they may explode.

CARE INSTRUCTIONS

- Wipe the microscope body with a damp cloth; then dry with a clean, soft cotton cloth. To clean the lenses, gently wipe them with cleaning cloths or wipes specifically designed for camera or binocular lenses.



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Product made in China
Manual printed in China

Instructions for the

CASSINI™
C-900M 300X/600X/900X
98PC. MICROSCOPE KIT

WARNING! Only for use by children over 8 years old.
Only for use under the supervision of an adult.

 **WARNING! CHOKING HAZARD-**
Small parts. Not suitable for
children under 3 years.

CASSINI™ Limited One Year Warranty

We guarantee to replace or, at our option, repair any products or parts thereof which are found defective in material or workmanship during the first year from date of purchase. Our obligation with respect to such products or parts shall be limited to replacement or repair. In no event shall we be liable for consequential or special damages or for transportation, installation, adjustment, or other expenses which may arise in connection with such product or parts. The customer shall be responsible for all costs of transportation and insurance, both to and from CASSINI/COSMO BRANDS INC., and shall be required to prepay such costs. No expenses, warranties and implied warranties, whether or not merchantability of fitness for any particular use or otherwise (except as to title) other than these expressly set forth above which are made in writing and signed by executive officer of our corporation.

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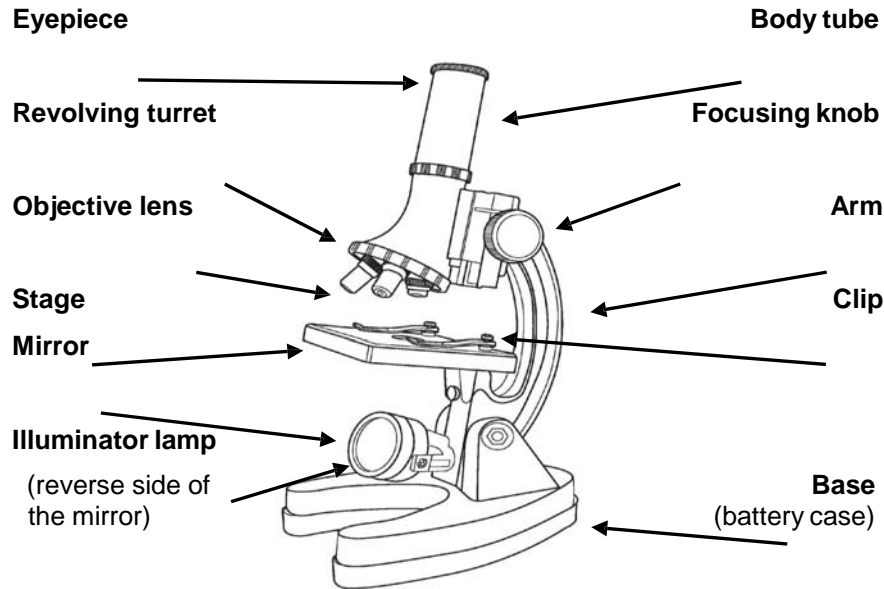
IF YOU NEED ANY FURTHER HELP WITH YOUR CASSINI TELESCOPE
PLEASE E-MAIL US AT CUSTOMERSERVICE@COSMOSOPTICS.COM

WELCOME TO THE MICROSCOPIC WORLD

We take great pleasure in introducing you to the world of the microscope. Your new microscope is an instrument with lenses for making very small objects appear much larger so they can be studied. There are millions of tiny living plants and animals that can be easily seen with your microscope.

In today's technological world every science from the most fundamental biology to the highly skilled field of astro-physiology use microscopes. Microscopes are used by geologists for studying rocks and minerals, archaeologists who study very old items, police departments who can study very small pieces of evidence, and even by astronomers when they study fallen meteorites. Your microscope will let you see the basic building blocks of life on Earth.

PARTS OF YOUR MICROSCOPE:



You should replace the water with clean salt water every three or four days. Use a magnifying glass to study the brine shrimp. Start with the dried eggs, then study an egg that has been in the salt water for a few hours. You can then study a freshly-hatched larva, and finally a mature brine shrimp.

You can carefully place a wet egg, larva, or adult brine shrimp on a blank slide for study under low power on your microscope.

If you have brine shrimp remaining in your first container, and you have fish in a bowl or aquarium, you can feed the shrimp to your fish. **YOU MUST PLACE THE BRINE SHRIMP IN FRESH WATER BEFORE YOU PLACE THEM IN A FISH TANK AS FOOD. THIS IS BECAUSE TOO MUCH SALT CAN INJURE OR KILL MANY FISH TYPES.**

MORE HELPFUL HINTS

- 1) Always use the lowest magnification to begin a sample study. Higher magnifications may not be better, as they are usually less bright.
- 2) Look through the microscope with both eyes open. This may seem awkward at first, but will soon feel natural. You will find that keeping both eyes open is less stressful.
- 3) Keep your work area clean and organized.
- 4) Wash your hands before and after each session.

FAQS – FREQUENTLY ASKED QUESTIONS

What can I see with my microscope?

You can see thousands of things that are difficult or impossible to see with your eyes. You can see tiny plants and animals. You can observe plant and animal cells. You can see the differences between different plants, different papers, different fibers and hairs from different people. You can study crystals, rocks, and minerals. The uses for your microscope are practically endless.

What is meant by power?

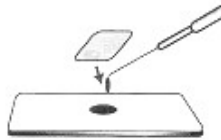
Power is a measure of the seeing ability of your microscope. It is really a short way of saying "magnifying power." Your microscope has three powers. They are 300X (pronounced "300 times"), 600X, and 1,200X. This means that your microscope can magnify the view of a sample so that it appears 300 times, 600 times, or 1,200 times larger than the way you see it with your eyes alone.

I look through my microscope and all I see is darkness. Why?

This could be because the mirror is not positioned properly to aim light up into your microscope. Or maybe the sample you are looking at is too thick so that the light cannot shine through it.

MAKING A PERMANENT SLIDE

1. Start with a clean slide and slide cover. Take care when handling these slide covers.
2. Follow Steps 2 and 3 above.
3. Before placing the slide cover over your sample add several drops of gum media, Canada balsam, or transparent glue.
4. Place the cover glass gently over the sample and gently squeeze out any air bubbles.
5. Place your new slide in a safe place and let it dry for a day.



Now you can observe your slide.

THE BRINE SHRIMP HATCHERY

Brine shrimp are tiny swimming animals that are members of the *crustacean* family. Crustaceans have shells and antennae. Brine shrimp's cousins are crabs, lobsters, and other shrimp. Brine is water with salt in it, like sea water. So brine shrimp live in salt water.

This set includes a shrimp hatchery, sea salt, and dried brine shrimp eggs. The eggs should remain alive for several years if they are kept dry, and not allowed to freeze or get too warm. You will need a clean container and some yeast (yeast used for bread making is inexpensive and easy to locate. Ask your parents if you have any yeast in the kitchen, and if you may have a small amount.

Into a large, well-washed plastic bottle (such as a 1.5 or 2 liter soda pop bottle, or a 1 or 2 quart milk jug, pour 0.95 liters (1 U.S. Quart) of tap water. Let this water stand at room temperature for one day to allow chlorine in the water to dissipate.

After the water has been standing for a day, check the temperature. It should be between 70° and 80°F (21° and 26°C). Place about one sixth of the brine shrimp eggs in the salt water and leave the container alone for between 24 and 48 hours. The eggs will hatch into nauplius larvae. These nauplii only have one eye. In one to three days these larvae will look like small brine shrimp, with two eyes!

Using a pipette or eye dropper, place some of the newly hatched larvae into one of the shrimp hatchery chambers.

Place some of the salt water into the next chamber of your shrimp hatchery. Add a few grains of yeast to this chamber. Transfer some of the brine shrimp from the first chamber into the chamber with the yeast.

The yeast acts as food for the larvae, and helps them grow. You can also use green algae from a fish tank, or even a few drops of raw, liquid egg yolk. If you do not feed the larvae they will live for about three days. If you feed them and care for them they can live up to three months.

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7 Blank slides
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1 Scalpel
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1 Stirring rod
10 Slide labels and 10 static slide labels
1 Vial of sea salt
1 Vial of brine shrimp eggs
1 Vial of gum media
3 empty vials
Instructions
Carrying case

Read all instructions before use. Follow them and keep them for future reference. Keep small children and animals away from any experiments or projects. Store your microscope set out of reach of small children. Eye protection is not included.

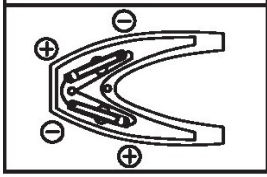
Your microscope has been designed to provide hours of enjoyment. Have fun! Always wash your hands carefully after handling any samples and always dispose of any samples in a safe manner. When working with samples, keep your hands away from your mouth and eyes.

HELPFUL HINTS

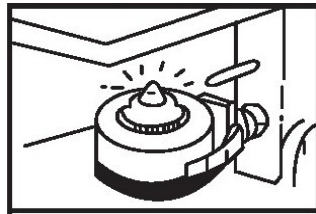
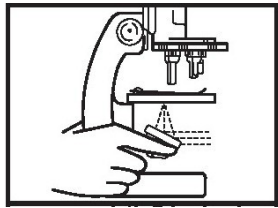
1. The most important parts of your microscope are the lenses. Handle them with care. If the lenses are dirty or dusty you can clean them with a soft cotton cloth or a special lens cleaning tissue. Do not wipe them with a finger or a regular facial tissue.
2. Protect your microscope from dust and moisture by always storing it in its box or case.

GETTING STARTED

First, turn the microscope over. Insert two AA alkaline batteries in the base of the microscope. In order to remove the bottom cover of the microscope you will need a Phillips head (+) screwdriver. Insert the batteries as shown, making sure that the (+) and (-) terminals are properly identified. Replace the bottom cover and reinsert the screw. Do not over-tighten.

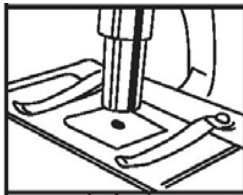


Place the microscope on a flat surface near a bright light, or in the daytime, a window. Locate the mirror and adjust the angle so that when you look into the eyepiece you see a bright circle of light. **Do not point the mirror toward the sun as eye damage may result.** If there is no bright light available or, if the room lighting is poor, you can use the microscope's electric illuminator. To turn on the illuminator, flip the mirror over so that the light bulb is aimed upward. The light will come on by itself. Look through the eyepiece and adjust the angle of the light until you see a bright circle.



Once you can see a bright light circle in the eyepiece your microscope is ready for use.

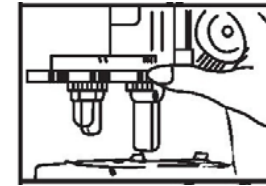
Choose one of the prepared sample slides from your set. Place it under the two spring clips on top of the stage.



Next, choose the magnifying power you want to use. Your microscope can provide magnifying powers of 300X, 600X, and 1,200X.

Remember that the longer objective lenses provide the higher powers. Most observing is done at low power.

To change the magnifying strength turn the revolving lens turret until you hear a click.



Turn the focusing knob until the objective lens is almost touching the slide. Don't let the lens touch the slide as you may break the slide and damage the lens. Now look through the eyepiece and slowly turn the focusing knob back until you see the sample clearly.

HOW TO MAKE A PREPARED SLIDE

Samples for examination should be very thin so that light can pass through them. If the sample is too thick it will appear dark in the microscope.

Cloth fibers, pollen, dust, or salt crystals will be easy to see and make good samples for beginners to observe.

If the sample is very thin and clear a drop of dye may make details show more clearly. Methylene blue dye can be obtained from an aquarium supply store.

You can transfer a drop of dye from the bottle to your slide with the pipette. Be careful with dyes as they can stain clothing, furniture, or carpets.

MAKING A TEMPORARY SLIDE

1. Wipe the slide clean.
2. Prepare a thin sample. You may have to slice it with a scalpel or a razor blade. Be very careful. Ask for adult help.
3. Pick up your sample with the tweezers and put it on the center section of the slide. Add one drop of water. Or, if needed, you can now add a drop of dye.
4. Gently place a temporary slide cover (plastic) over the sample, being careful not to allow any air bubbles in.
5. Remove any excess water or dye with a piece of paper towel by pressing it down gently over the slide cover.