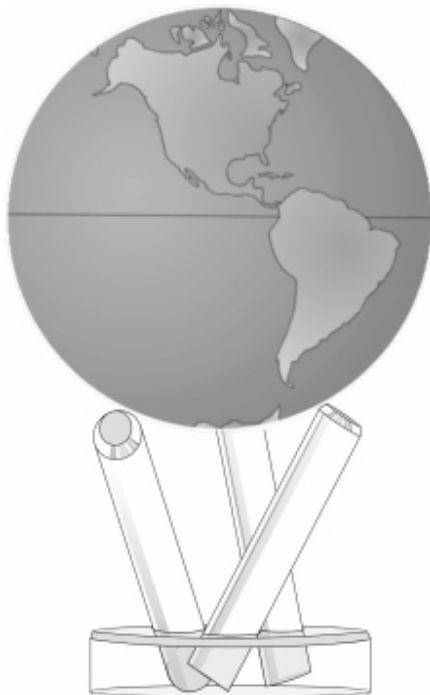


MOVA™ globe

User Manual



MOVA™ Globe Owners Manual

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Disclaimer

Your MOVA™ globe, like the earth itself, will simply turn on its own, without any help from you. However, as we are learning about the earth, there are some things you need to avoid doing, outlined below.

- 1) The MOVA™ globe can roll very easily and can roll off a shelf and damage the MOVA™ globe or something it might hit.
- 2) Avoid any exposure to high heat and any kind of fire. The MOVA™ globe contains a small amount of fluid, something like charcoal fire starting fluid, and this fluid can support burning if the outer shell is broken or the fluid leaks out. Please avoid igniting this fluid. Otherwise, the fluid is completely harmless.
- 3) Your MOVA™ globe should not be stored or used outside the range of 40°F to 100°F.
- 5) Please try to avoid long term (months) exposure to average humidity outside the range of 30 % to 70% RH.
- 6) Do not place anything near the north pole of the MOVA™ globe, such as a mechanical wristwatch, TV screen, or an implanted pacemaker, that can be affected or damaged by a magnetic field.

Any damage caused to the MOVA™ globe or by mishandling the MOVA™ globe, including, but not limited to examples outlined above, are not covered by the warranty and are not the responsibility of TurtleTech Design, Inc. or its contract manufacturers, or sales partners.

Finding a place for your MOVA™ globe

Immediately after removing the MOVA™ globe from the box, inspect the globe to check for any leakage. If a leakage is detected, immediately put the MOVA™ globe inside a well sealed plastic bag to contain the fluid. Place it back inside the foam of the box it comes in with, call TurtleTech Design, Inc. customer care to arrange for shipping it back for repair.

Assemble the enclosed stand by inserting each of the three rods into holes in the acrylic base. Make sure that each rod is fully inserted into the hole.

Your Mova Globe is designed for indoor uses only, and we also do not recommend placing it at an indoor location that receives direct sunlight over an extended period of time every day. Such harsh light will tend to cause the pigments to fade over time. The MOVA™ globe is powered by room light found in most indoor environments.

If light level becomes low and almost no energy is available for moving the globe, the globe might start showing a speed variation pattern every revolution or might stop. This is not a sign of impending failure, and is simply fixed by providing more light.

With sufficient light level, the Mova Globe may occasionally still have trouble turning steadily in a few locations, such as high-rise buildings, where the earth's magnetic field is shielded by iron girders in the walls. If the earth magnetic field level is suspected of being the cause of irregular globe rotation, we recommend:

- 1) Trying different locations in the room, particularly by a window (but not in the direct sunlight !)
- 2) Avoid placing the MOVA™ globe near any massive iron object such as a refrigerator.
- 3) Trying a slightly dimmer light location, because less earth magnetic field strength is needed if the rotation speed is slower, as it will be in dim light.
- 4) Sometimes a globe in a weak magnetic field environment will have trouble getting started, particularly if a bright light is suddenly turned on in a dark room. If the earth magnetic field is suspected of being weak, then it is best if the light gets bright slowly, as in a sunrise.
- 5) Each MOVA™ globe contains a strong magnet inside to interact with the earth's magnetic field. If two MOVA™ globe are placed closer than about 12 inches from each other these magnets can interact with each other and interfere with the globe's operation.
- 6) Be patient, sometimes it just takes a few minutes to get going steadily.
- 7) Move the MOVA™ globe to another room, office to try.

How your MOVA™ globe works

The inner globe floats in an almost friction free environment, much like the earth itself. This globe has the same average density as the fluid it floats in, so there is no force or contact between the inner globe at the north and south poles and the inside surface of the outer shell.

The rotation of the globe creates forces in the fluid that center the inner ball and prevent contact at the equator, so the inner globe is not actually touching the outer shell. At these low speeds the fluid friction is very low.

The energy to overcome the fluid friction is provided by room light that passes through the graphic design and is incident on very specialized solar cells within the globe. An electric current provided by the cells powers a drive mechanism designed to move at very low speed and low power.

Think of a compass. The earth's magnetic field is able to reach inside a compass and rotate the compass needle to align it with the earth's magnetic field. Since the inner MOVA™ globe is floating and not touching the outer shell, something is needed to reach into the globe and give the drive mechanism something solid to push against to create and maintain motion. The earth's magnetic field pushes against the drive mechanism much as it pushes against a compass to move it toward alignment.

The graphic on the inner globe is about 1/4 inch below the outer surface of the outer shell, but the optical qualities of the fluid and the outer shell magnify the inner globe and cause its surface to appear to be on the outside surface of the outer shell.

The synergistic interaction of all these elements creates this completely new and magical object.

A Few Other Suggestions

The outer shell is made by bonding two hemispheres together. This is done carefully, but is impossible to make the bond line at equator completely invisible. We suggest aligning the outer shell so this bond line is parallel to the equator to make it harder to notice. The fluid is injected through a fill hole that is later sealed. Please orient the outer shell so this sealed hole is at the south pole, so it is not visible and distracting.

Frequently Asked Questions

Can I use some different kind of stand?

Just about any stand will work so long as it is not made of so much iron that the earth's magnetic field is shielded.

The outer shell of your MOVA™ globe is made of a carefully selected, high quality plastic resin, but it can be scratched by rough handling, or improper cleaning. Take care not to scratch the outer surface by rotating or moving the shell while it is resting in the stand, particularly if a new stand is used made of something hard like metal.

Please also make sure that the base is stable and can hold your MOVA™ globe securely without the risk of dropping out of the stand.

It is also advisable to use a stand no higher than 9" to ensure that, in case an accidental fall occurs, the mechanism and the outside shell may not be damaged.

If my MOVA™ globe accidentally falls and the fluid leaks, what do I do?

This fluid is completely non-toxic oil like "liquid candle wax" and can be cleaned up using paper towels or rags. Whatever cannot be cleaned up in this way will evaporate within a day or so.

Take care not to allow the oil or cleanup rags to come in contact with a flame because the fluid can burn as charcoal lighter fluid would.

The fluid will not affect most plastics and other materials, except for rubber and rubber cements.

Simply wash the fluid from hands with soap and water.

What if a bubble appears on the top of my MovaGlobe?

Under some circumstances a bubble can form within the fluid near the North Pole. When this happens it is usually a considered normal and may come and go with changes in temperature and long term humidity, especially after it is shipped to you. Excessively hot and humid environments tend to promote a bubble.

Please examine the globe carefully if a bubble occurs to determine if some of the oil is leaking out. If such a leak is found, please feel free to call Earthtech Products at 1-877-548-3387.

How Should the MOVA globe be Cleaned

We recommend keeping the MOVA globe free of finger prints and dust to maintain its beauty and mystery.

- 1) Rinse clean water and wipe dry with soft cloth. Warm water and a little mild soap can be used if needed.
- 2) Do not use any coarse kitchen type abrasive cleaner or solvent based cleaner such as alcohol.
- 3) Small scratches can be buffed out using slightly abrasive toothpaste rubbed on the scratched area vigorously with a soft cloth.