

Magic Glass



User Manual

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Magic Glass is part of the MAGIC project that has received funding from the European Union's Horizon 2020 Research and Innovation Programme. Information and opinions expressed are reflecting only MAGIC GLASS partners' views.

Thank you for selecting the Magic Glass system!

Your feedback to the project will be very important for the development of new and innovative services to support stroke survivors.

Magic Glass project is funded by the MAGIC project (that has received funding from the European Union's Horizon 2020 Research and Innovation Programme), all costs are supported by the project and nobody, never, will ask you money for the products/services which you will receive.

Tech4Care may change product specifications and update this information from time to time. The latest version of the manual is available at www.magicglassvr.com

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1.1 Health and safety warnings

TO REDUCE THE RISK OF PERSONAL INJURY OR PROPERTY DAMAGE, PLEASE READ THE WARNINGS BELOW CAREFULLY BEFORE USING MAGIC GLASS.



GENERAL INFORMATION

- Virtual reality requires an unimpaired sense of motion and balance. Do not use the headset in case of tiredness, need sleep, influence of alcohol or drugs, digestive problems, stress or anxiety, cold, flu, headaches, migraines, earaches, as this can increase susceptibility to adverse symptoms.
- See a doctor before using the headset in case of pregnancy, oldness, pre-existing binocular vision abnormalities, psychiatric disorders, or suffering from a heart condition or other serious medical condition.



CHILDREN

- This product should not be used by children under the age of 13 as the headset is not sized for children and improper sizing can lead to discomfort or health effects, and younger children are in a critical period in visual development.
- Adults should make sure children (age 13 and older) use the headset in accordance with health and safety warnings described in this manual.



SEIZURES

- Some people (about 1 in 4000) may have seizures, eye or muscle twitching or blackouts triggered by light flashes or patterns, and this may occur while

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they are watching TV, playing video games or experiencing virtual reality, even if they have never had a seizure before.

- Anyone who experiences any of these symptoms should discontinue use of the headset and see a doctor.

- Anyone who has ever experienced seizures, loss of awareness or any other symptom linked to an epileptic condition should consult a doctor before using the headset.



WARNING

DISCOMFORT – EYE STRAIN – MOTION SICKNESS

- Immediately discontinue use the headset if any of the following symptoms are experienced: eye strain, altered vision, dizziness, impaired balance, impaired hand-eye coordination, panic or anxiety attack, nausea, pain in the head or eye, or any other symptom similar to motion sickness.

- Do not drive, operate machinery or engage in other physical activity until fully recovered from any symptoms.

- See a doctor in case of serious and/or persistent symptoms.



WARNING

REPETITIVE MOTION INJURIES

- Using the headset can make your muscles, joints or skin hurt.

- In case of parts of the body tired or sore, tingling, numbness, burning or stiffness, stop and rest for several hours before using the headset again.

- In case of serious and/or persistent symptoms, stop use and consult a doctor.

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WARNING

INTERFERENCE WITH MEDICAL DEVICES

- The headset and the sensors can emit radio waves that may interfere with the proper operation of nearby electronics, including cardiac pacemakers, hearing aids and defibrillators.
- If you have a pacemaker or other implanted medical device, do not use these devices without first consulting your doctor or the manufacturer of your medical device.
- Maintain a safe distance between these devices and your medical devices, and stop using these devices if you observe a persistent interference with your medical device.



CAUTION

CONTAGIOUS CONDITIONS – SKIN IRRITATION

- To avoid transferring contagious conditions (like pink eye), do not share the headset with persons with contagious conditions, infections or diseases, particularly of the eye, skin or scalp.
- The headset should be cleaned between each use with skin-friendly non-alcoholic antibacterial wipes and with a dry microfiber cloth for the lenses.
- Stop using the headset in case of swelling, itchiness, skin irritation or other skin reaction.
- If symptoms persist, contact a doctor.

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WARNING

ELECTRICAL SAFETY

- Use the Magic Glass system only with the designated power supply units.
- Be sure your computer is properly grounded (earthed) before connecting the product.
- Do not overload the circuit by connecting an excessive amount of equipment to plug outlet or wiring accessories (e.g. connecting a series of multi-plug adapters).
- Do not use the system during a lightning storm.
- Do not disassemble, modify or open any of the components provided.
- Do not step on, forcefully bend, pull on or short the cables.
- Do not use the product if any cable is damaged or any wires are exposed.
- The computer is equipped with a lithium-ion battery. It exist a danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type.



WARNING

HEADSET - SENSORS - WORKSTATION

- Do not expose to temperature above 60°C (140°F), or dispose of in fire, water or fluids.

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- Avoid dropping the product headset, sensors or workstation. If dropped, especially on a hard surface, and the user suspects damage, take it to the service centre for inspection.



WARNING

DIRECT SUNLIGHT

- Do not leave the product in places such as on a car dashboard, window sill, or behind a glass that is exposed to direct sunlight or strong ultraviolet light for extended periods of time.

- The headset contains lenses which may focus and intensify bright light sources, causing damage to the hardware.



WARNING

TEMPERATURE - HUMIDITY

- Keep the product away from excessive moisture and extreme temperatures .

- Place the product away from heat sources such as radiators, heat registers, stoves, or any other product producing heat.

- Avoid using the product after a dramatic change in temperature. When moving the product between environments with very different temperature and/or humidity ranges, condensation may form on or within the product. To avoid damaging the product, allow sufficient time for the moisture to evaporate before using the product.



CAUTION

CLEANING THE PRODUCT

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- Unplug the product from its power source before cleaning.
- Use a damp cloth for cleaning, but NEVER use water, liquid, chemical cleanser, alcohol or any other abrasive cleaning solution.
- Use only dry optical lens micro-fiber cloths for cleaning the headset lenses and the sensors.
- Clean and dry skin that regularly comes in contact with the headset. If there is any itching, eczema, swelling, irritation of the skin, or the user experiences any discomfort, please discontinue use and consult a physician.



IN CASE OF DAMAGE

- Do not use Magic Glass if any part is broken or damaged.
- Do not attempt to repair any part of the system.
- In case of damage, contact the Magic Glass service assistance, the only authorized technicians (see section 3. Troubleshooting).

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1.2 Equipment

The system is composed by several elements fixed in a single frame as shown in the figure.



- A) frame/support
- B) laptop computer
- C) sensor
- D) headset
- E) motion sensor
- F) support arm

In the package you will find also:

- a placemat that you can use to protect the table during the exercises and to easily place the Magic Glass system;
- a cloth for cleaning the headset lenses (D), the sensors (C) and the motion sensor (E).

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1.3 Precautions for a safe use of the system

PLEASE FOLLOW THESE INSTRUCTIONS AND OBSERVE THESE PRECAUTIONS WHILE USING MAGIC GLASS.

1. When installing the workstation, avoid using unstable mounting accessories or surfaces that are prone to vibration, movement or chance of impact. A secure structure must support the weight or load of the workstation.
2. Do not install close to a heater, fireplace, direct sunlight, air conditioning unit or other source of direct energy.
3. Use only in a safe environment. The virtual reality experience distracts you from and blocks the view of the actual surroundings. Always be aware of the physical environment, remain seated whenever possible, and take special care to ensure that you are not near other people, stairs, balconies, windows, open doorways, furniture, lamps, ceiling fans or other objects that you may impact or trip over when using the headset. Do not handle dangerous objects while using the headset.
4. Make sure the computer power cord is properly plugged into the power outlet before starting the system. Otherwise, or in case of a power failure, do not use the headset. Although the computer is equipped with a battery, this type of power supply is not sufficient for the proper operation of the virtual reality program. Images displayed through the headset could be discontinuous and cause a feeling of discomfort.
5. Make sure to comfortably secure the headset and to see a single, clear image. Remember that in order to display your hands in virtual reality it is necessary to keep them in the visual field of the motion sensor (E).

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6. Adjust the inter-pupillary distance before using the headset, and check the settings before resuming use after a break.
7. Turn down the volume before using headphones or other audio devices and then adjust the volume. Do not use Magic Glass with the sound at a high volume in order to maintain awareness of the surroundings.
8. Make sure the headset cables are not tripping or choking hazards.
9. Take a 10 to 15 minute break every 30 minutes. Remember it is always possible to have a break at any time simply pulling off the headset
10. If you experience discomfort, immediately discontinue use of the system. If you have serious and/or persistent symptoms see a doctor.
11. Always treat the product and its accessories with care and keep them in a clean and dust-free place.

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1.4 System setup

PLEASE FOLLOW THESE INSTRUCTIONS FOR A PROPER SYSTEM SETUP BEFORE USING MAGIC GLASS.

1. Put the placemat on the table, by aligning the underside to the edge of the table.
2. Open the sensor support arms (F) up to the maximum width. Make sure the orientation of the sensors is parallel to the computer. If necessary, adjust them using the lever at the base of the sensor.
3. For limited repositioning of the Magic Glass system: wrap the headset cables around it and insert them inside the frame (A); then close the sensors support arms (F). Lift the system by holding the support to the sides.
4. For more extended repositioning of the Magic Glass system it is recommended to reuse the original packaging.

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1.5 How to put on the headset

Before putting on the headset, it is recommended to clean the lenses using the provided cloth.



In case you need eyeglasses, make sure the dimension of the frame is compatible with that of the headset, as shown in the figure. Remember that it is possible to wear eyeglasses together with the headset.



For a comfortable use of the headset, its wearability can be adapted by adjusting the straps.

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At the bottom of the headset there is a button that let you adjust the distance between the lenses in order to see a clear image. It is necessary to put on the headset to do it.



2.1 System start-up and shutdown



CAUTION

Please, do not put on the headset until it is explicitly required by the tutorial.

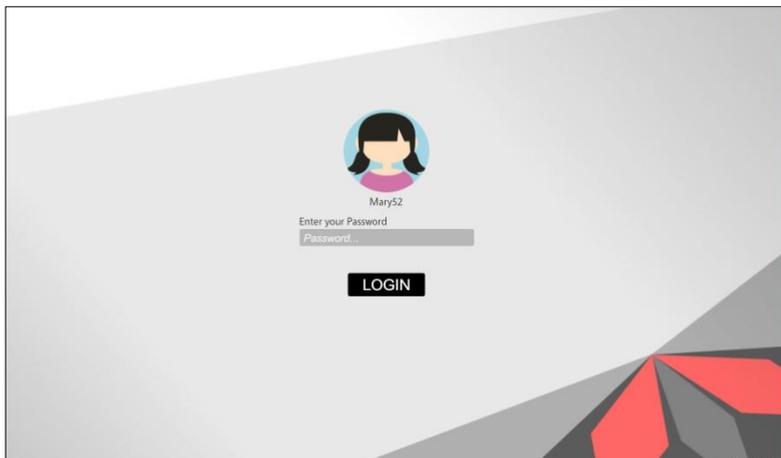


CAUTION

You can interact with the system using your hands and your eyes. The type of interaction required in every passage is described in the following paragraphs.

To start the system push the button on/off of the computer, as shown in the picture.

Wait for the program to load (30-60 second), until the following screen appears.



Enter your password (see page 3 of this manual) in the appropriate field. Then click on "login" using the left button of the touchpad.



The system will ask you to put on the headset. Follow the video instruction on screen to know how to do it properly (for more information, please see paragraph 1.5).





Remember to always clean lenses and to tighten or widen the straps of the headset if necessary. (For more information on how to do it, see paragraph 1.5)

To shut down the system after the use, push the button on/off again.