

# GRAVITY DISPLAYS

MANUAL

MERCURY 1000 DISPLAY

GRAVITY DISPLAYS

# Let's begin to levitate.

Please take some time to read all the instructions we propose in this user manual. This levitation module has to be used correctly for a pleasurable experience.

You will find included everything there is to know about safety, warranty, technical assistance, proper use and the limits of this product.

It is our strong advisement to carefully read all the information in this manual before using the product.

Understand that you are accepting all the terms and conditions once you start using the levitation module.

Always keep this manual close for reference.

## CONTENT

- 1) GENERAL DESCRIPTION
- 2) SAFETY AND PROTECTION
  - a. General safety warnings
  - b. Overheating
  - c. Electromagnetic fields EMF
  - d. Power interruptions
- 3) MODULE SETUP
  - a. Unpacking
  - b. Placing the base module
  - c. How to set up the module
  - d. Use of platform
  - e. Switching the levitation system off
- 4) ROTATION
  - a. Rotation by imbalance
  - b. Rotation motor
- 5) CLEANING AND MAINTENANCE
  - a. Cleaning
  - b. Storage
  - c. Replacement
  - d. Environment
- 6) WARRANTY AND SERVICE
- 7) PRODUCT SPECIFICATIONS
- 8) DECLARATION OF CONFORMITY

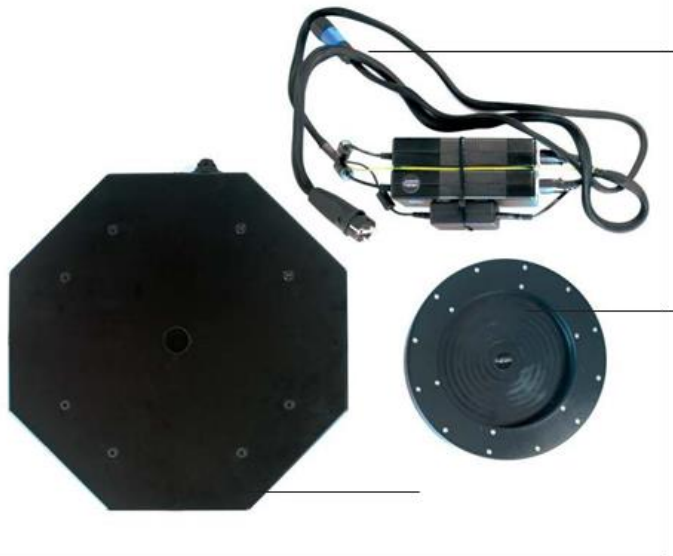
## GENERAL DESCRIPTION

You can use this system for levitating a particular material. Also, it is optional to combine it with another product or system.

This levitation system has 3 different parts.

1. First we have the square base unit, that consists of permanent magnets and electromagnets.
2. Second, we see the carrier ring (which is a carrying plateau) that also has permanent magnets.
3. Lastly, we opted to include some adaptors. They are specifically customized for the MERCURY 1000

Don't use any other adaptors, for safety purposes!



MERCURY 1000 DISPLAY MANUAL

## 2 SAFETY AND PROTECTION

### A. GENERAL WARNINGS

Always do your best to avoid dangerous and complicated situations, like:

The combination of water and electricity. So avoid using this product in environments with water, like near a shower or a toilet. Not a single droplet of water or any other liquid should touch this product.

Be advised, that electric shocks might be the result of taking this device apart. Therefore always leave this to professionals and qualified individuals. All warranties will expire when performed by yourself.

Also avoid placing flames or any forms of heating objects near or on this device.

Note that the power adaptor is congruent with voltages between 100V and 240V. Also the adaptor itself is produced according to the EU standard.

Is the safety transformer defect? Then replace it with a new one to ensure maximal safety.

Steer clear of damaging the cable and avoid all windy locations.

Always leave the rubber cover under the carrier ring in its place.

Understand that this device is not suited to be used by children or people that suffer from any kind of disability. Only in supervised circumstances, this is allowed.

Note that you should separate multiple levitation devices if you've ordered more than one. Dangerous situations might arise if placed nearby each other.

Create a free space of 20 cm around and 40 cm above the device to keep the system cool at all times.

Always turn the device off before moving it.

Keep the device turned off in environments outside the -10 to 35 degrees Celsius borders.

Always make sure the ventilation openings stay opened.

Want to clean or store the device? Let it cool off after turning it off for 15 minutes.

A damaged levitation device shouldn't be used anymore. This includes missing parts.

When turning off the device, first remove the carrier ring from its levitated place. Then plug out the adaptor.

After professional set-up the levitating item shouldn't be touched anymore.

Always make sure there's a safety cover used.

# GRAVITY DISPLAYS

## B. OVERHEATING OF THE UNIT

When too hot, the levitation device will switch off automatically. This is due to the automatic overheating trip. This also happens when the levitation device is experiencing overload.

Temperatures:

Note that this data applies in a situation where the device stands on a table. Built into another system of casing, things may be different.

Maximum operating temperature	40°C
Minimum operating temperature	-5°C
Rise of temperature with no external forces	15°C

When the automatic trip system due to overheating activates, the carrier ring will fall. Anticipate this as well as possible.

Does the device overheat? Then let it cool off for at least an hour, completely plugged out and turned off.

## C. ELECTRO MAGNETIC

Guidelines for magnetic sensitive objects:

Understand that there is a magnetic field at play. This could infer with objects that are sensitive to this, like a pacemaker, hard drives and credit cards.

We advise to keep a distance of at least 20 cm to avoid magnetic interference. The strength of the magnetic field will then be below 100 Gauss, which is considered safe.

All in all, this device is in compliance with all guidelines regarding electromagnetic fields. When used in the right way, current standards tell it's 100% safe to use.

## D. POWER INTERRUPTION

If the device turns off, be aware that the carrier ring will fall with force. However, this doesn't negatively affect the base unit. Just navigate to the next part of this manual, where we explain how to set up the levitation device.

Remember to unplug the base unit to avoid overheating when there is no ring carrier in place!

## 3. MODULE SETUP

### A. UNPACKING

First remember to keep the carrier ring away from any magnetic devices when unpacking. Think credit cards and hard drives. This is to avoid possible damage to any of the objects.

Warning: Never place 2+ carrier rings close to each other. The attractive forces between them will be so great, that you might get hurt in the process.

### B. PLACING THE BASE MODULE

[WATCHING THE VIDEO IS RECOMMENDED WHEN SETTING UP THE MODULE, THE VIDEO CAN BE FOUND ON THE MANUAL PAGE]

Place the base unit in a horizontal way on a flat surface. The deviation shouldn't be more than 4°.

Keep the bottom of the base unit open, so air can flow alongside it. Overheating will then be avoided.

It is allowed to cover the top with a non-magnetic material. This can be a couple mm's thick max.

Preferably you pick a material that consists of glass or something else that is transparent. It should be around 3 mm thick, with an absolute maximum of 4 mm. In this case direct contact with the base unit is best.

### C. MODULE SETUP

[WATCHING THE VIDEO IS RECOMMENDED WHEN SETTING UP THE MODULE]

USE OF THE POSITIONING TOOLS IS ADVISED

1. Put the base unit in place (taking all previously mentioned conditions into account.)
2. Make sure the main plug to the main power supply is connected (230V max). And leave enough air flow alongside the power adaptor.
3. Try to keep the the carrier ring directly in the middle of the base unit. This should be at a height of about 4 to 6 cm. You can then feel the magnetic forces.
4. When the levitation unit activates, the carrier ring will be fixed in its position by the magnetic forces. Your work is done.
5. Gently let go of the carrier ring.

### ATTENTION

The magnetic field operates vertically. This horizontal movement of the carrier ring might result in it falling down.

Does the carrier ring fall down? Please repeat the previous steps in setting up the system.

It's possible to place something on the carrier ring. Just make sure it won't break or damage in the case of falling down.

Never use any other power supply.

### D. USE OF THE LEVITATING PLATFORM

It's possible to bolt the carrier ring into another material. Just make sure that the air intakes at the bottom won't be hindered.

The carrier ring is always magnetic. And thus should be kept away from materials that might be (negatively) influenced by it.

When the carrier ring attracted other materials, this might influence it's levitation in a negative way. Try removing the external magnetic parts.

The heavier the load you put on top of the carrier ring, the lower it's levitation will be. And it'll be harder to make it balance perfectly.

Remember to put the weight as close to the carrier ring surface as possible. Especially when the weight is on the heavy side. The better centered it is, the more likely the levitation device will perform correctly.

When the carrier ring is rotating irregularly, it might fall down.

**Maximum load of the** MERCURY is 1000 GRAMS

We strongly advise you to keep non-authorized people away from this device as much as possible. Preferably at a distance of at least 1 meter.

To prevent dangerous situations from occurring, place a protective casing around the levitation unit. This is possible in the form of a transparent case.

### E. SWITCHING THE LEVITATION

If you want to switch the levitation, please first remove the carrier ring from its floating position. Never place it among any magnetic materials.

Next, unplug the power cord and let the whole system cool off for at least 15 min.

After storing the device, place a 10 cm foam in between the base unit and the carrier ring

## 4 ROTATION

The first way is to achieve rotation by imbalance. This occurs when you place the object in the ring carrier slightly off balance. It will create a little spin, that will go on indefinitely. However, when the spinning increases in speed, the imbalance will grow as well. It'll either spin out of control or become completely still. Therefore use a symmetric, simple form to try this. Otherwise it will be impossible to hit the sweet spot.

Rotation can be achieved by spinning the platform. If done correctly the platform will spin infinitely. Make sure the platform is balanced to avoid the platform falling down.

## 5 HIDING THE UNIT

You can cover the base with all materials that don't have a magnetic component. Think wood or plastic for example.

Make sure the unit has airflow for the ventilators. If the unit gets too hot due to no airflow it will automatically turn off.

It's required to have another source of airflow to the bottom of the unit when building the module into a housing.

## 6 MAINTENANCE

### A. MAINTENANCE

Before starting the cleaning process, make sure that you cool off the system first. Do this by unplugging the adapter and waiting for at least 15 minutes afterwards.

Don't use any abrasive materials or aggressive cleaning solvents. They will damage the system and create a deteriorated look.

Try removing dust from the system on the regular. This hinders the optical sensor on the base unit and the reflective sensor of the ring carrier. Don't use any moist cleaning materials. A dry cloth is sufficient.

### B. STORAGE

When storing the device, please do so in the protective wrapping or original packaging of this material.

Always store the levitation device in a dry and safe place, where temperatures are consistently normal.

After storing the levitation device, place the carrier on top of it with a foam layer between them. Preferably a couple centimetres thick.

## 7 WARRANTY AND SERVICE

Do you in any way require help from a professional to gain necessary information about this product? Then please let us know as soon as possible. We will gladly help you to solve this issue.

After making the purchase, you will receive a full 1-year warranty on the complete product. Not that shipment costs will be for the buyer. All costs for repairment within the warranty period will be free of charge. Just note that all warranty expires when altering the device yourself.

## 8 PRODUCT SPECIFICATIONS

- Rated input voltage 100-240V

- Rated frequency 50-60Hz

- Input power 100-240V

- Output power 19V

- Conditions for use temp: from -10°C to +35°C

- Relative humidity: from 30% to 90%

- Storing conditions temp: from -20°C to +50°C (no condensation)

Take measures to prevent any magnetic interference with any other materials or devices in your area.

## 9 DECLARATION OF CONFORMITY

We,

Gravity Displays

declare under our sole responsibility that the product as originally delivered, Name: MERCURY 1000

Function:

This levitation device will levitate several objects from different kinds of materials. The base unit powers the magnetic system, with the ring carrier carrying any number of additional objects.

complies with the essential requirements of the following European Directives, and carries the

CE marking accordingly:

Low voltage directive: EN 2006/95/EC EMC  
directive: EN 2004/108/EC RoHS  
directive: EN 2002/95/EC

and conforms with the following harmonized European standards:

EN 60204-1: 2006 Electrical safety, part 1  
EN 61000-6-1: 2007 EMC, Immunity, part 6-1  
EN 61000-6-3: 2007 EMC, Emission, part 6-3  
EN 14121-1 Risk analysis  
NEN 5509 Design for user manuals

  
\_\_\_\_\_  
Timon Huiden  
CEO