

ledgles®
LIGHT FOR EYES



MADE IN ITALY

 **User's manual**





Patented

Medical Device

LEDDLES

CE Directive 93/42/CEE
Class I

 **Manufacturer:**

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Rev. 2.0 30/01/2020


MADE IN ITALY

Printed in Italy

BEFORE USING THE LEDDLERS



WARNING: READ THIS MANUAL CAREFULLY

By carefully reading this manual, you will be able to fully understand the features of the device and use it to its full potential.

By carefully following the instructions provided in this manual, you will be able to maintain the functions of the device over time.

DESCRIPTION OF THE SYMBOLS USED



Manufacturer



Production year



Do not dispose in the general waste



Production batch



Read the user manual



Do not dispose the batteries in the general waste



Do not expose to direct sunlight



Do not expose to water sources



CLASS II device



TYPE B part applied

Warnings for the user

The Leddles device is used directly by the patient.

The following operations can be performed directly by the patient:

- To wear the device
- To turn the device on and off
- To charge the device following the instructions enlisted in the user manual
- To clean up the device following the instructions enlisted in the user manual
- To store the device in its own case
- To carry the device around

The following operations can only performed only by specialist staff.

The patient alone CAN NOT perform these operations:

- To dismantle the device
- To remove screws or replace components
- To replace the rechargeable batteries
- To remove or replace the lenses

Leddles service life is of 5 years.

Warnings for security

- Do not soak the device
- Do not expose to humidity or steam
- The charger provided with the device is similar to normal domestic charger, therefore it does not have any lifesaving function and cannot guarantee electric isolation. The following instructions are thus recommended to avoid any accident:
 - * Do not use the device while charging
 - * Do not use the device while connected to the electricity.
 - * Charge the device only in safe, domestic environments, far from heat sources, water, steam and other sources of danger.
 - * Avoid to charge the device in environments that are overly humid, hot or exposed to the elements.
- Danger of strangulation:
 - * Do not tighten the charging cable around the neck.
 - * Keep the charging cable away from children.
- Choking hazard:
 - * the magnetic charging cable is composed of detachable parts that could be accidentally swallowed.
The charging cable and the μ USB magnetic adapter should be stored out the reach of children and animals.

- When the device is in-use, the light source can reach high temperatures: avoid the contact between the light and the skin and do not touch the LED (located in the middle of the frame).
- When the device is in-use, the part between the temples and the lenses can reach moderately high temperatures. Avoid the contact between this part and the skin. Whenever an excessive heat is perceived, turn the device off and get it immediately away from the body and from people.




INTENDED USE

This is a wearable self-lighting magnifying system for the generation of an evenly lit field of view with guaranteed stability.

The Leddles device is capable of improving visual performance at close range. The device is particularly useful for the visually impaired.

NOTES ON THE OPERATING MANUAL

This operating manual contains different types of warnings. Read these warnings carefully.

-  This symbol indicates **potential risks of injury or to the health of the patient or other people.**
-  This symbol indicates important information.
-  This symbol indicates types of behaviour that may damage the device.

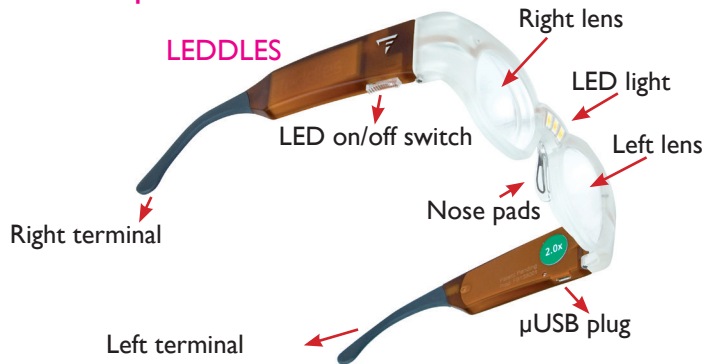
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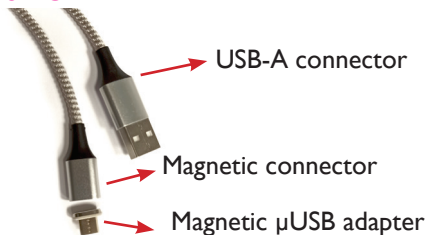
Content of the package:

- Leddles
- Case
- Microfibre cloth
- Battery charger
- USB cable to connect the Leddles to the battery charger
- Supports to adjust the width of the shafts
- Operating manual

Main components



USB CABLE



BATTERY CHARGER






Use of the device

Where can you use this device?

This device can be used in everyday life by the visually impaired, wherever it is useful to see things up close and well-lit, both at home and at work. For example, its use may improve visual performance in activities such as reading, manipulating objects, and housework.

Using the device does not have contraindications for people who are not visually impaired.

-  **Do not use this device while walking or while driving vehicles.**
-  **Use for periods lasting longer than an hour may cause fatigue to the eyes.**
-  **Do not look at the light source directly, and do not point it at people, animals, or approaching vehicles.**


Turning the LED light source on and off

The device is equipped with an LED light source designed to generate optimal light and contrast conditions for near sight. The light source is powered by a couple of rechargeable batteries. If the LEDs don't turn on, proceed as indicated in the section entitled "*Charging the battery*" in this manual.

To turn the light source on, move the switch towards the front of the glasses - the part containing the lenses.



To turn the light source off, move the switch towards the terminals.

Optimal performance of the device can be reached only with the light source turned on.

-  Turning the light source off reduces the performance level of the device, while maintaining the magnifying power of the lenses.

Operating the device

Remove the Leddles from the case and put them on.

-  Turn the LED lighting on by moving the on/off switch on the right shaft as described above.
-  When you wear the Leddles, the optimal distance of the face from the object to be viewed varies, depending on the lens correction. The optimal range is between 10 cm and 40 cm.

To wear the Leddles in the most comfortable way, you can model the nose pads and the terminals. This adaptation should preferably be carried out by an optician.

- ① If the LEDs flash, it means that the batteries are almost flat. Recharge them by following the instructions in the section entitled “Charging the battery” in this manual.

Turning the device off

Once you have finished using the Leddles, turn the LED lighting off by moving the on/off switch towards the terminals.

In order to maintain the integrity of your Leddles, device always store it carefully in the provided case and never leave it unattended.

Charging the battery

The device is equipped with a chargeable battery, just like a normal cellular phone. The following notions will help you to guarantee optimal duration of the batteries, in addition to adequate charge.

CHARGING CABLE WITH MAGNETIC ADAPTER

Fig. 1a

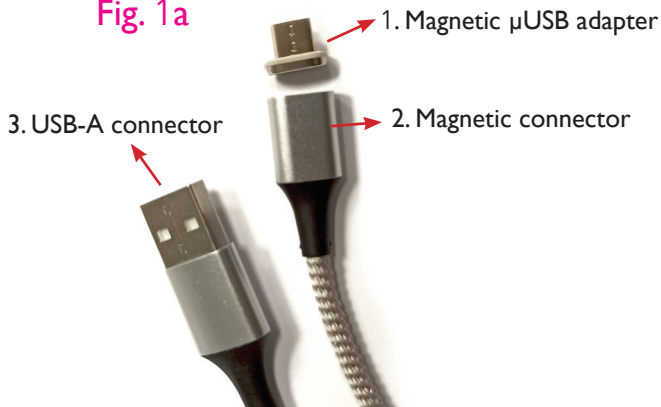


Fig. 1b



Details of the magnetic connector when linked to the adaptor

Preliminary operations – Inserting the magnetic adaptor into the glasses frame

The following procedure must be performed only on the first charge operation and in the event that the magnetic adapter (1) detaches from the glasses.

- 1) Make sure the magnetic adapter (1) and the magnetic connector (2) are connected as in Fig.1 (b)
- 2) Fully insert the magnetic adapter and the magnetic connector into the glasses, respecting the correct direction for insertion (wider part of the adapter (1) towards the outside of the temple) Fig. 2 (a).

If you experience excessive resistance during insertion, stop the operation and check whether you have respected the correct direction of the connector:

- 3) Disconnect the magnetic connector (2) from the magnetic adapter (1) without pulling it out.

Perform this operation by holding the cable by the body of the magnetic connector (2), slightly bending the magnetic connector (2) towards the outer or inner part of the frame - Fig. 2 (b).

When the operation is completed, the magnetic adapter (1) must remain incorporated in the glasses as in Fig. 2 (c).

In case the magnetic adapter too is extracted (1) repeat the preliminary operations from point 1.



Fig. 2a

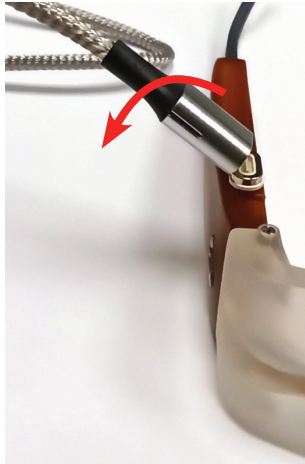


Fig. 2b



Fig. 2c

 Disconnect the magnetic connector without pulling.

Use of the cable with magnetic adapter for charging the Leddles device


The following procedure must be performed whenever the device needs to be charged.

1) Make sure the magnetic adapter (1) is inserted into the glasses as in Fig. 2 (c). If not, follow the instructions in the “**Preliminary operations - Inserting the magnetic adapter into the glasses frame**” section.

2) Place the glasses on a flat surface, near to a power outlet, with the temples open and the magnetic adapter (1) facing upwards; bring the magnetic connector close to the magnetic adapter - Fig.3 (a) - until they perfectly fit - Fig.3 (b).

If the other end of the cable is not connected to the charger, insert the USB-A connector (3) in the appropriate slot on the charger. Link the charger to the power outlet. Make sure all the parts are connected - Fig.3 (c).

3) Make sure that the glasses light source is turned off during the recharging operations.

 It takes at least 3 hours for a full recharge of the batteries. If the batteries have been completely discharged for long time, the full recharge can take over 4 hours.

 With fully charged batteries, the LED lighting has an autonomy of about 2 hours and a half.



Fig. 3a



Fig. 3b



Fig. 3c

- ① Charge the device with the temples open and the adapter facing upwards.
- ① When charging, keep the glasses on a flat surface.

4) At the end of the charging operations, remove the charger from the power outlet and disconnect the magnetic connector (2) from the magnetic adapter (1) without pulling it out. Perform this operation by holding the cable by the body of the magnetic connector (2), slightly bending the magnetic connector (2) towards the outer or inner part of the frame - Fig. 4 (a) and Fig. 4 (b). When the operation ends, the magnetic adaptor (1) must remain incorporated in the glasses as in Fig. 4 (c).

In case the magnetic adapter (1) too is extracted follow the instructions in the “**Preliminary operations - Inserting the magnetic adapter into the glasses frame**” section to reposition it correctly.

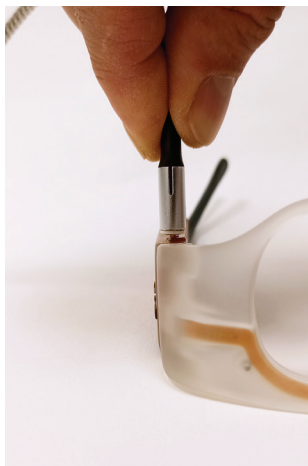


Fig. 4a

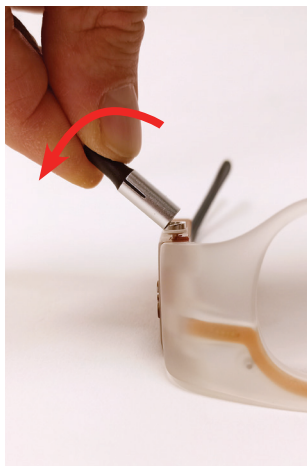


Fig. 4b

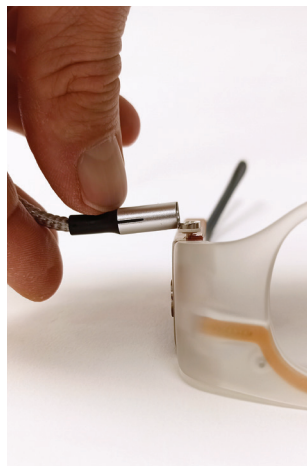


Fig. 4c

- ① Handle the device, the charger and the magnetic connector with care.
- ① Before each recharge always check the presence of the magnetic adapter (1).

Cleaning and Maintenance

The Leddles is a technically sophisticated optical aid. You must take special care in safely storing it. When you are not using the Leddles, put it in the provided case to protect it from dust and foreign agents.

Keep the Leddles clean by following these simple instructions:

- To clean the lenses and frame, use the microfibre cloth provided, or a cloth specifically for glasses.
- For a more accurate cleaning, you can slightly damp the microfibre cloth, paying attention not to get in touch with the LED light source and the μ USB socket used to connect the battery charger.



Always clean the Leddles when it is turned off and disconnected from the power supply.



During cleaning operations, take special care to prevent any liquids from penetrating into the device, and not to allow any liquids to get in touch with the LEDs.



DO NOT use ultrasonic baths to clean the Leddles.

- Do not open the device's cover for any reason.
For technical assistance, please contact the retailer where the device was purchased.
- Battery replacement: the rechargeable batteries can only be replaced by qualified FONDA staff.
- For battery replacement, please contact the retailer where the medical device was purchased.

General safety precautions

Before using the device, read carefully all the information to avoid injuring yourself and others or damaging the device itself.

Do not tamper with, disassemble, modify or repair the device.

- Any change or modification to the device may void the manufacturer's warranty. For assistance, please consult your retailer.
- Do not unscrew any screws or open any device cover.
- Do not remove or perforate the batteries.
- FONDA is not responsible for the safety of the user in the event of tampering with the product and does not guarantee operation of the product in this case.

Preventing electrical shock, fires and explosions.


- Do not use damaged power cables or electrical plugs and do not pull the sockets.
- Do not touch the power cable with wet hands and do not disconnect the battery charger by pulling the cable.
- Do not bend or damage the power cable.
- Do not short-circuit the battery charger.
- Do not drop or subject the battery charger and Leddles to shock.
- Do not charge the battery with battery chargers and USB cables that have not been approved by FONDA.


- Do not wet the device, and do not touch it with wet hands, under any circumstances.
- Do not connect the device's battery charger to the electrical grid during storms.
- Never position the device on or inside heating devices such as microwave ovens, ovens or radiators.

Always turn the device off in potentially explosive environments.

- Always comply with standards, instructions and indications provided for potentially explosive environments.
- Never use the device near fuels or flammable chemicals.
- Do not leave or carry flammable liquids, gases or explosives in the same compartment in which the device or its relative parts and accessories are located.

Never expose the device to rain or, in general, to liquid substances.

 Water and liquids in general can generate electric short-circuits, which may potentially cause damage to property or people.

 Exposing the Leddles to liquids may cause irreparable damage to the device's electrical circuits.

Propper care and use of the device

Follow these simple instructions to make the best use of your Leddles, and protect it from accidental damage.



Protecting the device, the batteries and the battery charger.

- Do not expose the device and the batteries to extremely hot or cold temperatures.
- Extreme temperatures can cause deformation of the device components, and reduce the charging capacity and life of the device and batteries.
- Never use damaged battery chargers.



Keep the device dry.

- Moisture and all types of liquids could damage parts of the device or the electronic circuits.
- Do not turn the device on if it is wet.

Do not use or store the device in dusty or dirty areas.

- Dirt may cause the device to malfunction.

Do not store the device on sloping surfaces.

- The device may fall and be damaged.



Do not store the device in areas that are too hot or cold.

- The device can explode if left inside a closed vehicle, or in other closed environments where high temperatures are reached.
- Do not leave the device in direct sunlight for long periods of time (for example, on the dashboard of your car).

Do not drop or hit the device.

- If it is bent or deformed, the device may be damaged and the internal components may not work properly.



Do not point the LED light towards the eyes of people or animals.

- Pointing the light close to the eyes may cause a temporary loss of vision, injury to the the eyes.
- Never look directly at the light source.

Preserve maximum battery and charger life.

- Avoid keeping the batteries under charge for more than one week. Overcharging them can shorten reduce their lifes.
- Over time, unused batteries will discharge, and must be recharged before use.
- When the battery charger is not in use, disconnect it from the power supply.
- Only use batteries, battery chargers, accessories and supplies approved by FONDA.

- Using generic batteries or battery chargers may reduce the life of the device or cause it to malfunction.
- FONDA is not responsible for the user's safety when using accessories or products not approved by FONDA.

Do not bite or suck in the device.

- This may cause damage to the device or even cause explosions and injuries. Always supervise children using the device.
- Do not put the device or accessories supplied into your eyes, ears or mouth. This may cause suffocation or serious injury.

Do not use this device while walking, moving or driving a vehicle.

- This aid is designed for close-up activities like reading or manual work.
- Always pay attention to your surroundings to avoid injuring yourself or others.

Do not transport the device in your back pocket or around your waist.

- You may injure yourself or damage the device if it falls.

Do not disassemble, modify or repair the device.

- Any change to the device may void the manufacturer's warranty. For assistance, please consult your retailer.
- Do not remove or perforate the batteries.

Do not paint the device and do not put stickers on it.

- Paint and stickers can block the moving parts and prevent proper operation. The materials of which the product is made are biocompatible. However, in the case of allergies to paints or metal components of the product, itching, eczema or swollen skin may occur. In this case, stop using the product and consult a doctor.
- During cleaning operations, clean the device or battery charger with a soft microfibre cloth. Do not use chemical agents or detergents.

Do not use the device if the lenses are cracked or broken.

- Broken glass or acrylic may cause injuries to the hands and face. Take the device to your retailer to have it fixed.

This device is not a toy.

- Do not allow children to play with the device, since they could hurt themselves or others. They may also damage the device.

Only allow qualified personnel to carry out maintenance operations on the device.

- If maintenance on the device is carried out by unqualified personnel, they may damage the device, and subsequently void the manufacturer's warranty.
- Protect the device against strong shocks.

Disposal of the product



Do not dispose of the product with ordinary waste.

The Leddles is a medical device, that contains an electronic circuit inside. It therefore cannot be disposed of with normal domestic waste.

Contact an authorised service centre for safe disposal.



Do not dispose of batteries with ordinary waste.

REMOVING THE BATTERIES

Remove the screws located on the covers inside the battery compartment. Remove the batteries and dispose of them as special waste, at the collection points indicated for recycling Lithium Polymer (Li-Po) batteries. For further information on disposal of used batteries, please contact the retailer the device that contained the batteries was purchased, the Municipality, or the local waste disposal service. Warning: for greater safety, it is not recommended to allow children below the age of 10 years to remove the batteries. Used batteries and the device that contained them must be disposed of separately.



Never dispose of the batteries or the device by throwing them in the fire. Follow current laws for their disposal.

Technical aspects for the optician

SETTING THE LEDDLLES

Setting the terminals

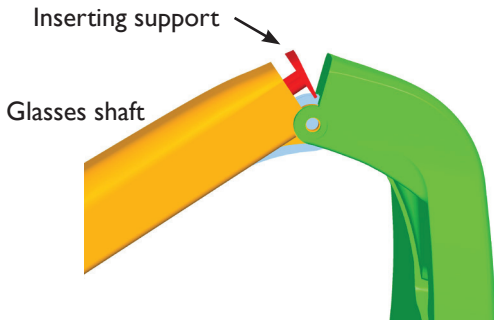
The terminals are adjustable to make the aid suitable for all users. It is sufficient to delicately bend the rubber end part with metal core as needed.

Nose pads

Made of silicon with a metal core, they can be adapted to the user's nasal septum.

Adjusting the width of the shafts

By inserting the two 4 mm or 9 mm supports contained in the package (see figure) into the designated slot, it is possible to limit the opening of the shafts to better adapt the Leddles to the user's face.



Leddles is provided with the lenses already installed. Do not replace them with other lenses!

FONDA rejects any responsibility for malfunctions and/or damage that may be derived from tampering with the frames.

Warranty

The Leddles manufactured by FONDA S.r.l. is covered by warranty by the final retailer to the consumer, against defects in conformity for a period of 24 (twenty-four) months from the date of initial purchase (or 6 months in the case of the batteries). If, during the warranty period, the product shows - under normal operating and maintenance conditions - the aforementioned defects, it is necessary to promptly report the problem and bring the product to the retailer where it was initially purchased.

WARRANTY CONDITIONS:

1. This warranty is valid as long as proof of purchase is provided, in the form of the original receipt, or another fiscal document provided to the user, indicating the date of purchase, the name of the retailer, the model, and the serial number. The service covered by warranty will be refused by the retailer if the aforementioned information is cancelled or altered after the initial purchase of the product.
2. Under this warranty, retailers will be required to repair defective components or, at their discretion, to replace the defective product, or parts thereof, with another identical or equivalent product.
3. Repairs under warranty may be performed exclusively by the retailer where the product was initially purchased.
4. Execution of repairs and/or replacements, under the conditions indicated in this warranty, does not imply an extension of the warranty or a renewal of its term of validity. Both repairs and replacements performed under the conditions indicated in this warranty can also be performed

by using to parts or unit that are not identical but functionally equivalent to that being replaced or repaired.

5. This warranty exclusively covers original defects in the material, the design, or manufacture, that arise and are promptly reported during the term of validity of the warranty. In particular, and among other things, it does not cover:
 - Inspections, maintenance, repairs, and periodical replacement of components resulting from natural wear in the product.
 - Abuse and poor use, including but not limited to the inability to use the product for normal purposes or in accordance with the operating and maintenance instructions provided by FONDA S.r.l..
 - Using the product in combination with accessories not approved by FONDA S.r.l. as suitable for the product itself.
 - Product problems derived from incorrect installation or use that does not comply with current technical and safety standards, or contrary to the instructions contained in this manual.
 - Accidents, natural calamity or other causes outside of the control of FONDA S.r.l., such as natural causes as a result of lightning, water, fire, disorders and improper ventilation.
 - Unauthorised modifications to the product.
 - Damage to the battery caused by overloading or use that does not comply with the specific instructions for correct maintenance indicated in the product manual.
 - Repairs carried out by subjects other than the initial retailers, including those resulting from

- unauthorised personnel opening the product.
- Cases in which the model and serial number have been altered, cancelled, removed, or made illegible.
 - Cases in which the batteries have been charged using charger models other than the one provided with the product.
 - Cases in which one of the seals on the outside or on the battery elements has been broken or shows evident signs of tampering.
6. This guarantee does not modify or extend the rights of professional users established by law, nor those that the professional users may have in relation to retailers as a result of sales contracts stipulated with the retailers themselves. The warranty against defects in FONDA S.r.l. products is limited only and exclusively to services indicated in this warranty. It replaces and overcomes any other explicit or implicit warranty. Any responsibility resulting from indirect damage or lost profits is to be excluded.
 7. For anything not mentioned, the conditions indicated by Italian law on warranty against defects are to be considered valid.
 8. For purposes concerning repairing or replacing the product, final retailers reserve the right to use components, spare parts or products that have been regenerated. By this we mean components, spare parts or products with features that are equal or superior to those of the product to be repaired and/or replaced, and subsequently regenerated and tested by FONDA S.r.l..

TECHNICAL SPECIFICATIONS

Medical device	Class I 93/42/CEE, EN60601-I
Name of the product	Leddles
LED light	ON/OFF
Batteries	2 rechargeable Li-Ion polymer batteries Replaceable only with the manufacturer's technical support
Light flow	100 Lumen
Colour temperature	4.000 K
Operating temperature	+5 ÷ +40 °C
Lenses material (standard)	CR39 index 1,500, without treatments
Frame material	Grilamid TR 90, Kraiburg TF9AAB
Battery life	About 2.5 hours of ongoing use with the LEDs turned on
Recharging time	3 hours for a complete charge
Power supply connection to the device	µUSB
Power supply	Input: AC 100-240V, 50/60 Hz Output: 5V DC/1A
Weight of the frame	About 52g
Weight of the frame with lenses	About 70-80 grams (depending on the correction)
Dimensions	15,5 × 4,5 × 4,5 cm (closed)



www.leddles.com



FONDA
Vision Health Technology