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1. PRODUCT OVERVIEW

1.1 Description

EDGE™ Universal are active 3D glasses that use infra-red technology. These glasses synchronize with most of the IR signal currently available. As a result of Volfoni's long experience in managing the world's largest stock of active 3D glasses, the EDGE™ line of glasses showcases the latest in 3D technical innovations, with unmatched comfort and ease-of-use.

The quality:

- These glasses use ultra-fast-response liquid crystal lenses, which create the best image quality
- No silver screen required, high image quality preserved at all seating positions
- Bright images and natural colors

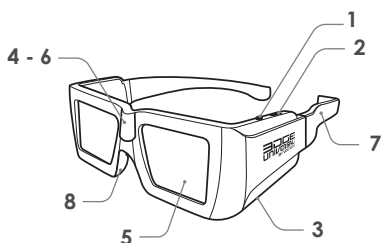
The comfort:

- Volfoni's ergonomic design
- Weighs only 56gr
- Rubberized nosepiece and 3 sizes of adjustable arms

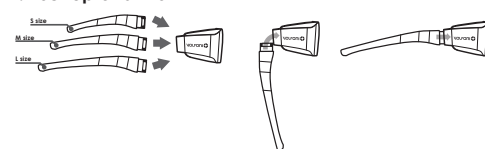
The efficiency:

- Best-in-class lenses with high contrast and light efficiency
- Software programmable 3D glasses (dark time, delay...)
- Automatic power-off function (Auto OFF) saves energy
- Rechargeable glasses / Battery life up to 45 hours
- Three-positions switch : 3D, 3D reverse, dual view

1. ON/OFF button
2. Programmable 3-positions switch
3. MicroUSB (µUSB) connection (recharging and updating)
4. Electronic component (with IR receiver)
5. Liquid crystal lenses (STN)
6. LED light
7. Interchangeable arms
8. Rubberized nosepiece



1.2 set up of arms



1.3 Package composition

- EDGE™ Universal (x1)
- MicroUSB cable (x1)
- Removable arms S, M, L (x1)
- User guide (x1)
- Microfiber cleaning wipe (x1)

2. EDGE™ UNIVERSAL FEATURES

2.1 General Specifications

- Stylish, ergonomic design
- Rubber nosepiece provides universal comfort
- Unbeatable luminosity and natural colors
- Wide receiving angle and extremely stable range
- Rechargeable battery (with µUSB/USB cable)
- Optimal circuit layout
- ON/OFF button
- Three positions switch
- Automatic OFF for glasses after 5 minutes no movement
- Automatic OFF for glasses after 10 minutes no IR signal
- Flashing glasses if battery too low (after restart if remaining autonomy is less than 3 hours)
- 3 available sizes of removable arms (S, M, L)

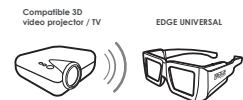
2.2 Technical Specifications

- Sync operation: infra-red
- Compatible with all refresh-rates up to 240Hz (including 96, 120, 144 and 192Hz)
- Optic Transmission: 38%
- Residual light: 18.6%
- Contrast: > 950:1 (no ghosting)
- Chromaticity: Color correction not mandatory
- Weight: 56 grams
- Autonomy: 45 hours in use, auto OFF
- Operating Temperature: 0°C ~ +40°C (32F-104F)
- Storage Temperature: -10°C ~ +50°C (14F-122F)
- CE certified
- ROHS certified

3. REQUIREMENTS

3.1 General setup

EDGE IR glasses are only compatible with the IR protocols listed in part 3.2, or with one of Volfoni's ActivHub IR emitters. To synchronize your glasses directly to your 3DTV's IR emitter, proceed as follows:



If you have an ActivHub IR (ActivHub IR50, ActivHub IR100, ActivHub IR Cinema) to sync, proceed as follows:



The glasses are programmed to search for any IR protocol in the immediate vicinity.

3.2 IR compatible protocols

The EDGE™ Universal 3D glasses are compatible with all infra-red 3D sync protocols currently available:

- KONKA®
- ARCELIK®
- SHARP®
- SONY® (*)
- PANASONIC® (*)
- LG®
- MITSUBISHI®
- SAMSUNG® (*)
- NuVisionXPAND® (unencrypted)
- HI-SENSE®
- NVIDIA® (including "light boost")

* Bluetooth® and Full HD3D™ not supported

New IR protocols entering the market will be available on the Volfoni website via software update. Please refer to part 5 of this user guide for updating the software of the EDGE™ Universal glasses.

4. USING YOUR EDGE™ UNIVERSAL

4.1 ON/OFF and Auto Off

ON :
Turn the glasses ON with just a short press of the ON/OFF button. When switched ON, the lenses will alternately flash one time (left and right) to indicate to the user that the glasses are powered ON.

OFF :
Turning the glasses OFF is possible by holding down the ON/OFF button.
The glasses will turn off automatically in the following cases:
- No movement of the glasses after 5 minutes.
- Loss of IR synchronization after 10 minutes.

4.2 Switch button

EDGE™ Universal has a switch button with 3 positions
- Position A : 3D mode*
- Position B : Dual view player A*
- Position C : Dual view player B*
*By default



4.3 Battery

The EDGE Universal battery life is about 45H

4.3.1 Battery Level

When starting up the glasses and with a short press of the button, the glasses will show the level of battery life by the number of flashes of the LED:
- Low level (less than 30%): one flash
- Intermediate level (between 30 and 90%): two flashes
- High level (greater than 90%): three flashes

4.3.2 Battery Charge

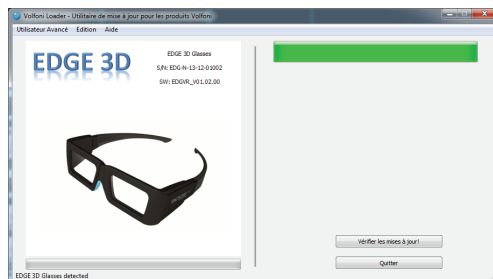
The battery charging will be indicated by the LED when the USB cable is connected:

- Steady light: charging.
- Off: charging is complete.
It is also possible to see the exact level of your glasses' battery charge by connecting to your computer and using the Volfoni Loader (see section Advanced settings via Volfoni Loader). Once the glasses are recognized, the level bar is displayed.

5. SOFTWARE UPDATES

Before using the EDGE™ Universal glasses, make sure you have the latest version of software from our website.
For this purpose, please download the (« Volfoni Loader ») software (<http://www.volfoni.com/en/services-support/download>) and connect your glasses to your computer. Then start the software and follow the instructions below.

- choose the menu "SUPPORT"
- choose "Upgradable Software"
- download the application "VOLFONI LOADER"
- connect your computer to the µUSB connector on the arm of the EDGE™ RF with the USB/µUSB cable
- press and hold the ON/OFF button of the EDGE™ Universal during 3 seconds.
- the LED of the EDGE™ Universal will light red
- verify that the application recognizes your system
- once you are connected, press the button "Check for updates"
- download the latest version



6. VOLFONI LOADER - PARAMETERS

You can access to this part by clicking on "parameter" in the menu "edit"

3D Switch :

- 3D on all positions : In this configuration the glasses will receive a normal 3d sync whatever the switch position
- 3D Reverse : In this configuration the glasses will receive a reverse 3d sync whatever the switch position
- Shared screen : In this configuration
 - Switch in A position : 3D
 - Switch in B position : 2D left
 - Switch in C position : 2D right

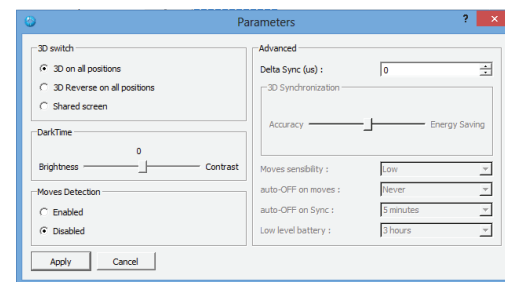
Dark Time : allows you to change the value of DarkTime
The slider allows you to adjust the value between -4000 microseconds (better luminosity) and 4000 microseconds (better contrast). The value applied is inscribed above the slider (0 in this example).

Moves Detection :

Enables or disables the Auto OFF feature when glasses are not moving
Enabled: The glasses turn OFF automatically if no movement is detected after 5 minutes (AUTO OFF enabled).
Disabled: The glasses will stay on even if no motion is detected. (AUTO OFF function disabled).

Advanced :

- Delta Sync (µs) : Modify the sync offset (between -2000 and 2000 microseconds). Default = 0.



You must be in "Bootloader Mode" so that the EDGE™ Universal is recognized by the software.
To do this, once the USB/µUSB cable is connected to the computer, press and hold the ON/OFF button for 3 seconds.

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7. TROUBLESHOOTING

PROBLEM	SOLUTION
My glasses are not displaying 3D.	Check that your original source is broadcasting 3D. If yes, check if your 3D system is correctly emitting IR. Then make sure the EDGE™ Universal glasses are facing the IR emitter.
The same problem continue. My glasses are still not displaying 3D.	Please check if you have the latest software version (part 5 of this user guide). If the problem persists please ask the IR compatibility to support@volfoni.com.
The glasses are blinking strongly	Check that there is no other IR source within a range of 30 meters around the 3D system set-up.
The glasses blink when I turn them ON.	When this phenomenon occurs, it means that the battery is low. Please recharge the glasses.
The EDGE™ RF glasses stay OFF.	Try recharging your glasses. If the problem persists, contact support@volfoni.com

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8. IMPORTANT SAFETY RECOMMENDATIONS

-If you are unsure about your vision, take a test to verify your ability to see stereoscopic 3D images.

- Do not sit too close to the screen when watching 3D images.
- Watching 3D may cause discomfort (such as eye strain, altered vision, fatigue, nausea, lightheadedness, dizziness, confusion, loss of awareness, convulsions, cramps and/or disorientation) for some people.

Volfoni recommends that you take regular breaks when watching 3D content or playing 3D video games until the discomfort ends. If the discomfort persists, consult a doctor.

-Certain types of TV images or video games that contain flashing patterns of light may cause epilepsy symptoms for some viewers. If you or any member of your family has a history of epilepsy, Volfoni strongly recommends that you consult a physician before the use of this product.

-Be aware of young children, especially those under six years old. Because their vision is still under development, consult a doctor (such as a pediatrician or eye doctor) before allowing young children to watch 3D. Not for children's use without proper adult supervision.

-If the product is broken, please keep broken pieces away from mouth and eyes. Dispose of pieces responsibly.

-Protect the 3D system from direct sunlight, heat, or water. Extreme conditions may alter the product's abilities.

-Do not drop or modify the electrical or mechanical components of the 3D system.

-Do not apply force to the product.

9. WARRANTY

Volfoni Group reserves the right to make changes in the hardware, packaging or other documentation without prior written notice. The EDGE™ Universal glasses are a trademark of Volfoni Group. All trademarks are the property of their respective companies.

The EDGE™ Universal glasses are warrantied. Please refer to your order form to be aware of the warranty terms.

The system should be returned in its original box with original proof of purchase. Volfoni does not warrant uninterrupted or error-free operation of the product.

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10. REGULATIONS



European Union - Disposal information :

This symbol means that according to local laws and regulations your product should be disposed of separately from household waste. When this product reaches the end of its life, take it to a collection point designated by local authorities. Some collection points accept products for free. The separate collection and recycling of your product at the time of disposal will help conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment.
- This Class B digital apparatus complies with Canadian ICES-003.

FCC Compliance Statement :

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interferences that may cause undesired operation.

CE Certification

This device complies with CE Certification.

Electrical Safety (IEC 60950-1)

This device complies with IEC 60950-1

11. MORE INFORMATION AND CONTACTS

For more information, please contact Volfoni.
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