VIRTUAL REALITY 3D GLASSES REV.B 180

3DGE™ VR
BY VOLFONI®

User Guide

model
VPEG-05010

www.volfoni.com

SUMMARY

VOLFONI
CREATIVE 3D TECHNOLOGY

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1. PRODUCT OVERVIEW

1.1 Description
EDGE™ VR are active 3D glasses that use either radio frequency or infra-red (IR) technology. These glasses can synchronize with the RF signal of Volfoni's ActivHub RF brand of emitters, or with most all IR signals currently available. If you want use the EDGE™ VR 3D glasses with an IR emitter, please consult the Volfoni website.

As a result of Volfoni's long experience in managing the world's largest stock of active 3D glasses, the EDGE™ line of glasses showcase 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 56g
- Rubberized nosepiece and 3 sizes of adjustable arms

The efficiency:
- Superior head-tracking integration thanks to RF synchronization and custom-built targets
- RF-link allows wireless battery level monitoring
- Best-in-class lenses with high contrast and light efficiency
- Programmable electronics with rechargeable battery and 3-functions button
- Universal IR mode compatible with most industry standard IR protocols

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

1.2 set up of arms

S size
M size
L size
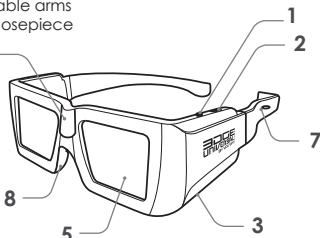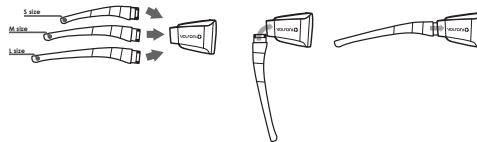
1.3 Packaging composition
- EDGE™ VR (x1)
- MicroUSB cable (x1)
- Removable arms, S, M, L (x3)
- User guide (x1)
- Microfiber cleaning wipe (x1)

2. EDGE™ VR 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
- 3 available sizes of removable arms (S, M, L)
- Battery monitoring (please refer to ActivHub RF50 user manual for more information)

2.2 Technical Specifications
- Sync operation: Radio-Frequency or infra-red
- Frequency: 2.4Ghz
- Compatible with all refresh-rates up to 220Hz (including 96, 120, 144 and 192Hz)
- Optic Transmission: 38%
- Residual light: 18.6%
- Contrast: > 940:1 (no ghosting)
- Chromaticity: Color correction not mandatory
- Weight: 56 grams
- Autonomy: 40 hours in use, auto OFF
- Range with an ActivHub: 30 meters maximum
- Operating Temperature: 0°C ~ +40°C (32F-104F)
- Storage Temperature: -10°C ~ +50°C (14F-122F)
- CE certified

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3. REQUIREMENTS

General setup

3.1 Infra-red synchronization
- When using an IR emitter not provided by Volfoni, please refer to the user guide of the system. When the 3D display or the projector you are using emits the IR signal, the EDGE™ VR will automatically synchronize with it.

- When using an ActivHub™ IR emitter from Volfoni, please see below the 3D set-up overview.

3D Content
Movie, sports...

ActivHUB™ IR
Volfoni
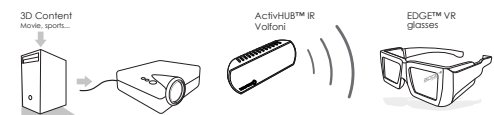
EDGE™ VR
glasses

If you need more information on how to connect an ActivHub™ IR emitter to your projector, all user guides are available on the Volfoni website, www.volfoni.com.

3.2 IR compatible protocols
The EDGE™ VR 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™ VR glasses.

3.3 ActivHub™ RF50 overview
ActivHub™ RF is a transmitter used to synchronize the EDGE™ VR 3D glasses with the protocols currently used.

1. USB connector
2. Jack 3.5 connector
3. IR & DLP-Link reception window
4. RF emission window
5. Function selector with the rotary wheel (12 positions)
6. Power and Function LED
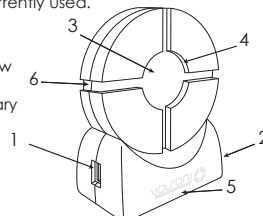
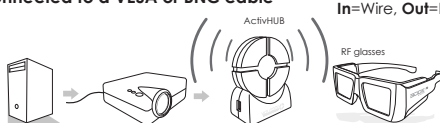## 3.4 Radio frequency synchronization

- Choose a compatible source: IR, DLP-Link or VESA
- Depending on the type of synchronization used, connect the ActivHub™ RF as follows :

The ActivHub™ can transmit RF synchronization when receiving an IR 3D signal.

In=IR, **Out**=RF

The ActivHub™ can transmit RF synchronization when connected to a VESA or BNC cable

In=Wire, **Out**=RF

The ActivHub™ can transmit RF synchronization when receiving a DLP-Link 3D signal.

In=DLP, **Out**=RF

- The ActivHub RF has several modes of operation (12), selectable with the wheel. Please select position 8 to use the EDGE™ VR properly.

Auto test mode : position 0

Please note that positions 1 and 2 are not meant to be used in the ActivHub RF.

- When the configuration is ready, please stand in front of the screen and press the On / Off button on your glasses.

- The glasses will automatically search the synchronization signal. Once the glasses are synchronized, the LCD lenses will flash ultra-fast. Then you can watch your 3D content.

4. USING YOUR EDGE™ VR

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 the button.

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.l
3D Sync :
- Choose time of the free wheel to eventually win more autonomy
Moves sensibility :
- Choose the sensibility of the glasses move sensor
Auto-OFF on moves :
Choose time before glasses shut down if there is no movement
Auto-OFF on sync :
Choose the time before shut down if the glasses doesn't receive any 3D sync signal
Low level battery :
Choose the treshold that determines that the battery is low

7. TROUBLESHOOTING

PROBLEM	SOLUTION
The RF signal is not recognized.	Check that your ActivHub is emitting RF. The blue LED on the side of the ActivHub RF will flash 2 times quickly to indicate that it is emitting RF.
The glasses are blinking strongly.	Check that there is no other source using the same RF channel within a range of 30 meters around the ActivHub RF.
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 are not synchronizing with the ActivHub RF20	Verify that the RF channel selected under the ActivHub RF is set to position "8". Check that your original source is broadcasting 3D.
The EDGE™ RF glasses stay OFF despite the fact that I press the ON/OFF button to turn them ON	Try recharging your glasses. If the problem persists, contact support@volfoni.com

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The glasses will turn off automatically in the following cases:
- No movement of the glasses after 5 minutes. (disabled by default)
- Loss of IR/RF synchronization after 10 minutes.

4.2 Switch button

EDGE™ VR has a switch button with 3 positions (all in 3D mode by default)

4.3 Battery
The EDGE VR battery life is about 40H

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.

4.3.3 Wireless battery monitoring (only with EDGE VR)
To enable the wireless battery monitoring you need to plug your ActivHub RF50 to your computer via USB. Launch the Volfoni Loader (available on www.volfoni.com section "Support"), click on battery (menu "Edition"). The popup will show you the battery level of all the glasses synchronised with the ActivHub RF50

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.

-Do not leave the ActivHub turned ON due to Radio-Frequency.

9. WARRANTY

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

The EDGE™ VR are warrantied. Please refer to your order form to be aware of the warrantee terms.

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

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5. SOFTWARE UPDATES

Before using the EDGE™ VR 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™ VR with the USB/µUSB cable
- press and hold the ON/OFF button of the EDGE™ VR during 3 seconds.
- the LED of the EDGE™ VR will light red
- verify that the application recognizes your system
- once you are connected, press the button "Check for updates"
- download the lastest version

6. VOLFONI LOADER - PARAMETERS
You can access to this part by clicking on "parameter" in the menu "edit"
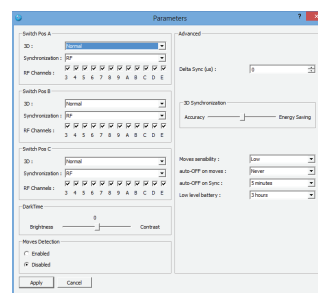
You must be in "Bootloader Mode" so that the EDGE™ VR is recognized by the software.
To do this, once the USB/µUSB cable is connected to the computer, press and hold the ON/OFF button for 3 seconds.

Switch Pos (A, B or C) :
- 3D : You can bind one of these features on each switch position: Inverted / Normal / 2D Left / 2D Right
(if you want to use shared screen you need to set a glasses on 2D Left and the other on 2D Right)
- Synchronisation : choose between IR and RF
- RF Channel : choose which channels the glasses will receive on this switch position (you have to choose the same channel on your ActivHub RF50)

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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