VOLUMIO
THE AUDIOPHILE MUSIC PLAYER

VOLUMIO PRIMO

Audiophile Music Network Player and Streamer

USER MANUAL
ENGLISH

INTRODUCTION

Congratulations on your purchase! Volumio Primo is an integrated Audiophile Music Network Player and Streamer designed with three key principles in mind: ease of use, universal compatibility with music sources and sound quality. To take full advantage of Primo's capabilities, please read this manual carefully. Our support team is available to assist you with any questions regarding Primo and all of our products at support@volumio.org.

QUICK START GUIDE

Primo is a ready to play device. From unboxing, the unit is ready to play in less than five minutes. In order to get started please follow these steps:

Step 1: Unbox your Primo.
Step 2: Connect to your audio system to the available RCA, SPDIF or USB connections.
Step 3: Attach the included Wireless Antenna.
Step 4: Plug the Power Supply into a power outlet and plug the other end into the Primo.
Step 5: Wait five minutes for the Primo to perform initialization upon first start up.
Step 6: To access the Primo, connect to the Ad Hoc wireless network called *Volumio* with your wifi enabled device – mobile phone, tablet, etc. Note: Password is *volumio2*.
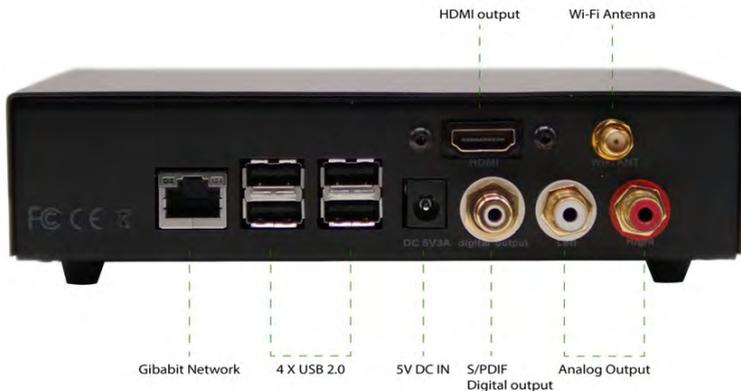Step 7: Follow the onscreen prompts to complete the setup wizard.
Step 8: Enjoy your favorite music.

WHAT'S IN THE BOX

- Volumio Primo audiophile music player and streamer
- Wireless Antenna
- 5V 3A Switching Power Supply*
- User Manual

    (*) Power Adaptor is optional, depending on the region and local seller's policy.

I\O OVERVIEW

GIGABIT NETWORK: Wired Network Interface. This is the suggested network connection for playing Hi-Resolution content. Connect this interface to your router via an ethernet cable.

USB 2.0: These ports can be used to attach USB accessories such as: thumb drives, USB storage drives and SSD, keyboards, mice, smart remotes and USB CD-ROM drives.
Note: Any one of the four available USB ports can be used as output connecting to your external DAC.

5V DC IN: Connect the power mains of the provided Power Supply Unit (or a compatible 5V 3A power supply). By connecting Power, the unit will turn on. To turn off the device, simply disconnect the Power Supply (WARNING: To avoid data loss, remove the power supply after selecting "Shutdown" from the settings menu. Do not remove power while updating or restoring factory settings).

S/PDIF Digital Output: This output can be used to stream digital audio to an external DAC via coax.

Analog Audio Output: RCA Output connection that will output 2V analog audio. This is the recommended connectivity option for achieving optimal sound quality leveraging Primo's integrated High resolution DAC.

HDMI Output: This output allows connection to TV or monitor and will display the User Interface. It can be used as an alternative to the smaller screen of a mobile device. Note: In order to control the unit, the attached monitor must be a touchscreen, unless a mouse and/or keyboard is connected via USB.

Wi-Fi Antenna: To ensure optimal Wireless performances, connect the provided wireless antenna. Please note that wireless connection performances might not be optimal (as compared to direct ethernet connection) for streaming high resolution audio. This may be the case if the Primo is not physically located near your router or if there are many other wifi networks near you.

CONNECTION TO THE UNIT

Volumio Primo works best when it is connected to your network, since it is meant to be used as a headless device: no monitor connected, and controlled via another device (PC, smartphone, tablet, etc).

Volumio Primo can be controlled via its Web User Interface with a mobile phone, a tablet, a PC, or even a Smart TV. More generally, Primo can be controlled with any device with a browser, and on the same network as Primo. For an optimal experience, Google Chrome is recommended.

To reach Volumio's User Interface, first discover the IP address of your Primo. To do so, an easy way is to use the FING Android App or the Net Analyzer iOS App. Note: By default, navigate to http://volumio.local. If you have renamed your Primo, enter the name you selected in lieu of 'volumio'.

Primo can also be controlled with available Android and iOS apps. These apps are not mandatory to use Volumio Primo, but strongly recommended as they will automatically discover the Primo on your Network.

Another easy way to connect to Volumio Primo, especially on first setup, is to connect in Hotspot Mode. Upon first use, Primo will create an ad hoc wireless network called *Volumio*. Simply connect your device, mobile phone or tablet, to this *Volumio* network (password: volumio2) and the User Interface will automatically pop up.

FIRST SETUP

When first powered on, the Primo will initialize, and this will take a few minutes to complete. Make sure not to remove power and do not operate it for at least five minutes on first power up.

Once the system is operational and you have connected to it through your network or via the hotspot, you will reach Volumio's web-UI. During this first setup, a helper will assist you in configuring Volumio. Any configuration done in this phase can be later changed by navigating to Settings. The configuration wizard can be found in: Settings → System → Run First Config Wizard.

These are the first configuration steps:

LANGUAGE: Select your desired operational language.

NAME: Give your Primo a unique name like "Living Room", "Studio" etc. This will be useful to identify your Primo when you have more than one. Remember you will connect to Primo via mobile device using this name – http://volumio.local by default or http://studio.local if you rename Primo to *studio* for example.

OUTPUT: Select the desired audio output: Analog audio out via RCA (using Primo's internal DAC), Digital output via S/PDIF (connecting to your external DAC via S/PDIF over coax) or connecting to your external DAC via USB (if connected). HDMI is used to connect to your monitor.

NETWORK: If you wish to configure your Primo to connect to your wireless network, you will be able to see all available wireless network and connect to them. In case of Hotspot operation, Primo will connect to the wireless network after the Setup Wizard has been terminated. In this case, you must find its IP address again (see Connection to the Unit section).

MUSIC: You can configure a Network Attached Storage (NAS) for music retrieval or connect a USB Drive containing your music.

Once the first setup has been completed, your Primo is ready.
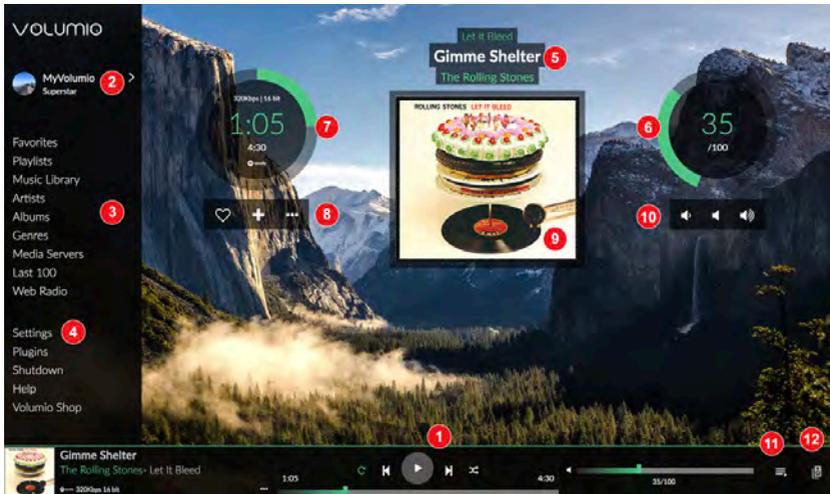
FIRST STEPS WITH VOLUMIO

Depending on the device used to connect to Primo, a desktop or mobile version of the User Interface is displayed. Both interfaces (mobile device or desktop) provide the same features and are optimized ergonomically for the display.

Volumio's User Interface is made up by four main components:

- Playback Page
- Browser Page
- Play Queue
- Settings

PLAYBACK PAGE

1 - Command buttons

Play/Stop
Previous: Skip to the previous track.
Next: Skip to next track.

2 - My Volumio

Here you have access to your account.

3 - Browse page

Clicking here you have access to all of available music on your system (NAS, USB drives, Web Radio, Spotify, etc depending on plugins/options installed).

4 - Settings

Here you will find the settings for Volumio such as:

My Music: Music sources (NAS, USB, and album art management).

Playback: Output Device Settings (Output device S/PDIF or RCA, General Playback options, and Volume Options (mixer) and Resampling.

Appearance: To select your language, image background or color.

Network: Set your wifi, ethernet, DNS.

System: Name your device, have version number and update if available, reset your system, and see credits for Volumio.

Plugins: To add features to Volumio such Streaming service (Spotify...), gpio management; equalizer, Internet radio ...

Alarm: You love to wake up with your favorite music? It's here!

Sleep: You love listening music before sleeping? It's here!

Shutdown: To stop or reboot your device properly.

Help: Link to the online help.

Volumio Shop: A link to the Volumio shop where you will find compatible and quality sounding hardware.

5 - Track text information

First line: Album name
Second line: Track title
Third line: Artist name

6 - Volume Settings

Inside value: Current volume level
External circle: Graphic volume level.
Change the volume by moving it.

7 - Timer zone

Miscellaneous info about the played track
First line: Sample rate / bit resolution
Second line: Ellapsed time
Third line: Total duration
Fourth line: Track source

8 - Track management

Left: Add to favorite
Middle: Add to playlist
Right: Go to - Artist/Album - Twitter

9 - Album art Display

Display album art for the played track or radio if available.

10 - Volume control

Left: Lower volume
Middle: Mute
Right: Higher volume

11 - Queue

Here you access to the current queue with all tracks listed.

12 -Multiroom zone

Here appear all available Volumio devices on your network.

BROWSE PAGE

Clicking on Browse tab will allow to access all available music sources on your system.

1 - Favorites
Access your favorites tracks.

2 - Playlists
 Access your Playlists.

3 - Music Library
Access your library in files/folder
mode.

4 - Artists
Access your library by artist.

5 -Albums
Access your library by Albums.

6 - Genres
Access your library by Genres.

7 - Media server
Access your media server if any.

8 - Last 100
List the last 100 tracks played.

9 - Web Radio
Access web radio.
To add your personal webradio
stations, click on the three dots in *My
Web Radios*. Then fill the fields with
the Radio Name and Radio Stream
and click add.

10 - Other
Depending on plugins/options you
have installed, you may have other
tabs such Spotify, Qobuz...

QUEUE PAGE

Clicking on Queue tab will provide to access to the queue of the tracks that are going to be played.

1 - Random
Randomize the order tracks are played.

2 - Repeat
Repeat the track.

3 - Save
Save the current queue as a Playlist. A name is asked for this Playlist.

4 - Clear queue
Clear the current queue.

5 - Remove track
Remove track from the queue.

More features
You can change the order of each track by clicking and moving it up or down.

SOFTWARE UPDATES

Volumio features an OTA (Over The Air) updater which is meant to provide a seamless and reliable way to update to new system versions. It is strongly recommended to check for updates periodically to ensure that your system is always at the latest version.

How to check for Updates
- Verify that your Volumio Primo is connected to the Internet
- Click on *Settings* in the browse menu, left side of the UI
- Select *System*
- Click on *Check Updates*
- If an update is available, you'll be presented with the new features.
- Click on *Update Now*
- System update will start, and depending on the update size it might take up to 20 minutes
- Once Update has finished, you will be asked to reboot. Do so.
- The system will now restart, and the new version will be applied
- IMPORTANT: Do not remove power during this phase, as this might damage the unit.

RESTORE TO FACTORY SETTINGS

Volumio Primo can be reset to factory settings (the software version will be reverted to the one applied in production) and all settings and music stored on the device will be deleted.

There are two ways to perform a Factory Reset: one from the UI and one with a USB Thumb Drive (in case the unit is not operational due to software error).

Factory Reset Via User Interface

- Click on *Settings* on the browse menu (left side of the UI).
- Select *System.*
- Click on *Factory Reset* and confirm the warning dialog.
- The unit will restart in about five minutes.
- WARNING: All settings and user data will be permanently deleted.
- IMPORTANT: Do not remove power in this phase, as it might damage the unit.

Factory Reset Via USB Thumb Drive

- Get a USB thumb drive.
- Format your USB thumb drive as: *FAT32*
- Download the factory reset file from: http://repo.volumio.org/Primo/factory_reset
- Copy the factory reset file to your thumb drive and make sure the file is named exactly "factory_reset" (Do not rename this file after download).
- Remove power from Primo.
- Insert the thumb drive to one of the USB ports.
- Apply power to Primo.
- IMPORTANT: During this phase the unit may restart multiple times and the factory reset will take about five to ten minutes to complete.

After Factory Reset: If you have **Volumio Primo Hi-Fi Edition** and want to reactivate MyVolumio Superstar Lifetime plan, go to *System* and *Run First Config Wizard*. Insert your code under the "Device Code" step and click on "Verify Device Code". Your unit will be activated with the Superstar features.

SPECIFICATIONS

Analog output: ES9038Q2M DAC via I2S, PCM 24 bits 192kHz , DSD128 via DoP
S/PDIF output: PCM 24 bits 192kHz
USB output: 4X USB 2.0 , PCM 32 bits 768kHz
CPU: Quad core 1.8 GHz ARM Cortex-A17 with passive heatsink
RAM: 2GB
Internal Memory: 16GB Emmc
Video Output: HDMI, up to 4K resolution
LAN: Gigabit
Wireless Networking: 802.11 b/g/n Wi-Fi & Bluetooth 4.0 + EDR with External Antenna
Dimensions: 170x450x120mm
Weight: 300gr

* Specifications subject to change without notice.

IMPORTANT SAFETY INFORMATION

- Review this user manual carefully.
- Keep this user manual for future reference.
- Heed all warnings.
- Follow all instructions.
- Do not use the Primo near water or liquids of any sort.
- Clean only with dry soft cloth. Household cleaners or solvents can damage the finish of the Primo. Please clean and handle the product only after disconnecting from mains power for at least five minutes.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus that produce heat.
- Protect the power cable from being walked on or pinched, particularly at the plugs, convenience receptacles, and the point where they exit from the apparatus.
- Only use original attachments/accessories.
- Unplug the Primo during lightning storms or when unused for long periods of time.
- Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cable or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
- The mains plug should be readily available to disconnect the equipment.
- Warning: To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.
- Do not expose apparatus to dripping or splashing and do not place objects filled with liquids, such as vases, on or near the apparatus.
- AC outlet voltages vary from country to country. Before connecting to the mains, make sure that the voltage in your area meets the voltage requirements printed on the power supply.
- The power supply is used to disconnect the unit from the mains. Make sure that the power supply is easily accessible at all times. Never handle the device or the power supply while your hands are wet or damp.

- Avoid allowing liquids to enter the device or the power supply. Never place any item containing liquid, such as a flower vase on or near the device. Never spill any liquid on or near the device or the power supply.
- Never place any naked flame sources, such as lighted candles on or near the device. The product shall not be used in damp or wet locations, next to a bathtub, sink, swimming pool or any other similar conditions.
- For optimal performance please place the unit on a well vented spot.

WARRANTY

The manufacturer accepts no responsibility for damage caused by not adhering to these instructions for use. Modification or changes to any part of the product by unauthorized persons release the manufacturer from any liability over and above the lawful rights of the customer.

The Volumio Warranty is valid for all new products purchased from an officially authorized Volumio retailer or from our online store (volumio.org). This warranty is non-transferrable and does not apply to third-party or private sales of Volumio products.

All parts defective in material and workmanship are covered under warranty for two (2) years from the date of original purchase by the original owner. Software defects are not covered by Warranty.

We guarantee your total satisfaction with Volumio products. New, sealed in the box items can be returned within 30 days for a full refund. Used products must be returned within 14 days of delivery for a store credit. Defective items will be replaced with an identical or similarly priced model after inspection by a qualified technician.

New, unused products must be returned in the condition you received it and with the original box and/or packaging, including manufacturer tags where applicable.

Used and undamaged products will be issued store credit in the form of credits to be used via coupon in the online store. We will not accept the return of products damaged due to negligence or abuse. Please include all packaging and accessories prior to shipping.

 Please take the time to carefully package your returns. It is the responsibility of the customer to pay costs related to the repair of returned items damaged in shipping due to improper packaging. The customer is responsible for all return shipping costs for new or used products.

If you feel that your product is eligible for a warranty evaluation due to defect in its materials, operation or workmanship on arrival, please contact our team at: support@volumio.org to receive an RMA and return shipping label.

OPEN SOURCE SOFTWARE USED IN THIS PRODUCT

The software included in this product contains copyrighted software that is licensed under the GPL. A copy of that license is included in the "Credits" section of the software, accessible via the System settings menu.

If you would like a copy of the GPL v2.0 source code contained in this product shipped on a DVD, you may obtain the complete Corresponding Source code from us for a period of three years after our last shipment of this product for a charge of 20$ no more than the cost of preparing and mailing a DVD to you. Please contact foss@volumio.org . This offer is valid to anyone in receipt of this information.

Additionally, complete source code of open source components included in this product is available at: http://sources.volumio.org

DISPOSAL INFORMATION

For private households:

Information on Disposal for Users of WEEE This symbol on the product(s) and / or accompanying documents means that used electrical and electronic equipment (WEEE) should not be mixed with general household waste. For proper treatment, recovery and recycling, please take this product(s) to designated collection points where it will be accepted free of charge. Alternatively, in some countries, you may be able to return your products to your local retailer upon purchase of an equivalent new product.

Disposing of this product correctly will help save valuable resources and prevent any potential negative effects on human health and the environment, which could otherwise arise from inappropriate waste handling. Please contact your local authority for further details of your nearest designated collection point. Penalties may be applicable for incorrect disposal of this waste, in accordance with your national legislation.

For professional users in the European Union

If you wish to discard electrical and electronic equipment (EEE), please contact your dealer or supplier for further information. For disposal in countries outside of the European Union This symbol is only valid in the European Union (EU). If you wish to discard this product please contact your local authorities or dealer and ask for the correct method of disposal.

COPYRIGHT AND TRADEMARKS

The information contained in this manual is believed to be accurate and reliable. Volumio assumes no responsability for any error contained in this manual. Volumio assumes no responsability for any differences between the product mentioned in this manual and the product you may have. The information in this user manual was correct at the time of going to press. The manufacturer reserves the right to make changes to the technical specification without prior notice as deemed necessary to uphold the ongoing process of technical development.

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Revision 1.1

Contains FCC ID: TX2-RTL8723BS

FCC Warning

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 interference that may cause undesired operation. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
Note 1: This equipment includes the ASUS Tinkerboard S single board computer that has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.
If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
—Reorient or relocate the receiving antenna.
—Increase the separation between the equipment and receiver.
—Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
—Consult the dealer or an experienced radio/TV technician for help.
Note 2: 1. Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

2. The minimum separation generally be used is at least 20 cm.

Article 3.1(a)
- ☐ EN 60065:2002/A12:2011
- ☐ EN 60065:2014
- ☒ EN 60950-1:2006/A2:2013
- ☐ EN 62368-1:2014
- ☒ EN 62311:2008
- ☐ EN 50566:2013/AC:2014
- ☐ EN 62209-2:2010
- ☐ EN 50332-1:2013
- ☐ EN 50332-2:2013

Article 3.1(b)
- ☒ EN 55022:2010+AC:2011
- ☒ EN 55024:2010+A1:2015
- ☐ EN 55032:2012+AC:2013
- ☒ EN 61000-3-2:2014
- ☒ EN 61000-3-3:2013
- ☒ EN 301 489-1 V2.1.1(2017-02)
- ☒ EN 301 489-17 V3.1.1(2017-02)

Article 3.2
- ☒ EN 300 328 V2.1.1(2016-11)
- ☐ EN 301 893 V2.0.7(2016-11)
- ☐ EN 301 908-1 V11.1.1(2016-07)
- ☐ EN 301 908-2 V11.1.1(2016-07)
- ☐ EN 301 908-13 V11.1.1(2016-07)
- ☐ Draft EN 301 511 V12.1.10(2016-12)
- ☐ Draft EN 303 413 V1.1.0(2017-03)
- ☐ EN 300 330 V2.1.1(2017-02)

EU DECLARATION OF CONFORMITY

- ☐ Regulation (EC) No. 1275/2008
- ☐ Regulation (EC) No. 642/2009

- ☐ Regulation (EC) No. 278/2009
- ☐ Regulation (EU) No. 617/2013

$C\mathcal{E}$

(EU conformity marking)

Signature

Model Name: Volumio Primo

Place of issue

Jerry Shen

Printed Name

10/07/2016

Original Declaration Date

02/06/2017

Corrected Declaration Date

CEO

Position

2017

Year to begin affixing CE marking

EU DIRECTIVES

2014/53/EU, Radio Equipment

2011/65/EU, RoHS

EU DECLARATION OF CONFORMITY

1. Model No. :

   Volumio Primo

2. This declaration of conformity is issued under the sole responsibility of the manufacturer:

   Volumio Srl a socio unico
   Borgo degli Albizi, 15
   50122 Firenze
   ITALY

3. Object of the declaration:

   Audiophile music player

4. The object of the declaration described above is in conformity with:

   2014/53/UE and 2011/65/EU

5. Where applicable, references to the relevant harmonised standards used or references to the technical specifications in relation to which conformity is declared:

Manufacturer:	ASUSTeK COMPUTER INC.
Address:	4F, No. 150, LI-TE Rd., PEITOU, TAIPEI 112, TAIWAN
Authorized representative in Europe:	ASUS COMPUTER GmbH
Address, City:	HARKORT STR. 21-23, 40880 RATINGEN
Country:	GERMANY
Product name	Motherboard
Model name	TINKER BOARD

EN 60950-1:2006/A2 :2013
EN 62311:2008
EN 55022:2010+.AC:2011
EN 55024:2010+A1:2015
EN 61000-3-2
EN 61000-3-3
EN 301 489-1 V2.1.1(2017-02)
EN 301 489-17 V3.1.1 (2017-02)
EN 300 328 V2.1.1 (2016-11)

Article 3.1(a)	Article 3.2
☐ EN 60950-2002/A12:2008	☒ EN 300 328 V2.1.1(2016-11)
☐ EN 60065:2014	☐ EN 301 893 V2.0.7(2016-11)
☐ EN 60950-1:2006/A2:2013	☐ EN 301 908-1 V11.1.1(2016-07)
☐ EN 62368-1:2014	☐ EN 301 908-2 V11.1.1(2016-07)
☒ EN 62311:2008	☐ EN 301 908-13 V11.1.1(2016-07)
☐ EN 50566:2013/AC:2016	☐ Draft EN 301 511 V12.1.10(2016-12)
☐ EN 62209-2:2010	☐ Draft EN 303 413 V1.1.0(2017-03)
☐ EN 50332-1:2013	☒ EN 300 330 V2.1.1(2017-02)
☐ EN 50332-2:2013	
Article 3.1(b)	
☒ EN 55024:2010+A1:2015	
☒ EN 55032:2012+AC:2013	
☒ EN 61000-3-2:2014	
☒ EN 61000-3-3:2013	
☒ EN 301 489-1 V2.1.1(2017-02)	
☒ EN 301 489-17 V3.1.1(2017-02)	
☐ Reg of A/C EC/No 1275/2008	☐ Regulation (EC) No. 278/2009
☐ Regulation (EC) No. 642/2009	☐ Regulation (EU) No. 617/2013

6. Where applicable, the notified body (name and number), description of intervention and certificate:

   Not applicable, the declaration of conformity is compliant with annex II of the European Directive 2014.53.EU, so the notified body is not necessary.

$$\mathsf{C}\,\mathsf{E}$$

(EU conformity marking)

Signed for and on behalf of Volumio Srl a socio unico

Signature	Place of issue	Firenze, 01/11/2018
Jerry Shen	**10/07/2016**	
Printed Name	Original Declaration Date	*Micheldngelo Gudrise*
	02/06/2017	
CEO	Corrected Declaration Date	
Position	**2017**	
	Year to begin affixing CE marking	