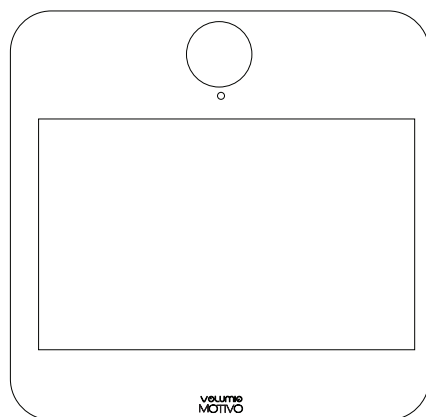# VOLUMIO

THE MUSIC PLAYER

VOLUMIO MOTIVO

Touchscreen streamer, transport & headphone amplifier

USER MANUAL

ENGLISH

FOR MUSIC LOVERS,
BY MUSIC LOVERS

INTRODUCTION

Congratulations on your purchase!

Volumio **Motivo** is a **touchscreen streamer, transport & headphone amp**, designed with three key principles in mind: ease of use, universal compatibility with music sources and sound quality.

To take full advantage of Motivo's capabilities, please read this manual carefully.

Our support team is available to assist you with any questions regarding Motivo and all of our products at **support@volumio.org**

USER MANUAL TRANSLATED IN OTHER LANGUAGES

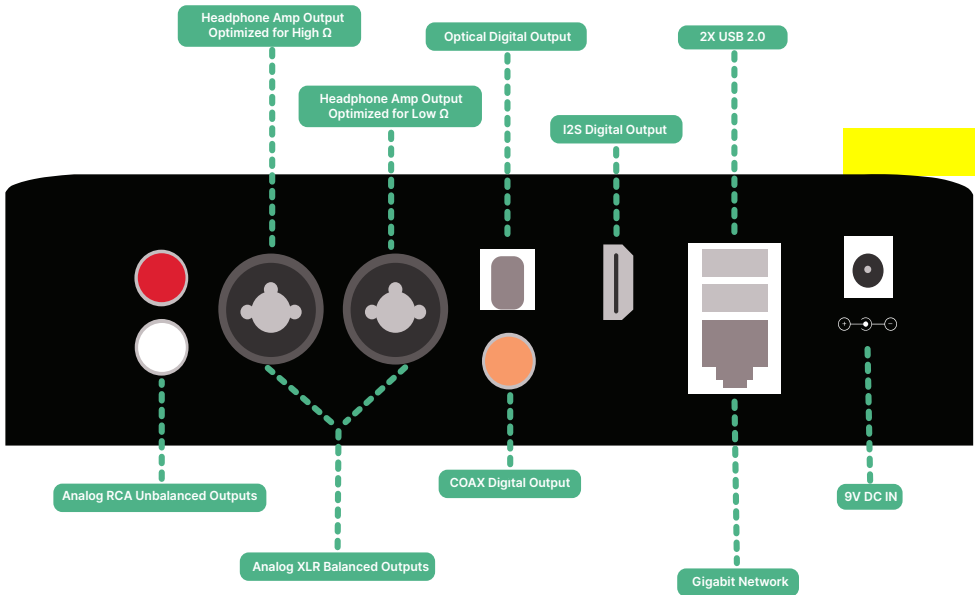For the translation of this manual in other languages, scan the QR CODE:

WHAT'S IN THE BOX?

- Volumio Motivo Touchscreen Streamer, Transport & Headphone amp
- 9v 4A Switching Power Supply*
- 2 XLR M-M cables*
- Hardware User Manual

(*) Specifications subject to change without notice

CONNECTIONS OVERVIEW

Headphone Amp Output Optimized for High Ω

Headphone Amp Output Optimized for Low Ω

Optical Digital Output

2X USB 2.0

I2S Digital Output

Analog RCA Unbalanced Outputs

COAX Digital Output

9V DC IN

Analog XLR Balanced Outputs

Gigabit Network

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ANALOG RCA UNBALANCED OUTPUTS: RCA Output connection that will output 2V RMS analog audio. This is the recommended connectivity option for achieving optimal sound quality by leveraging Motivo's integrated high-resolution DAC.

ANALOG XLR BALANCED OUTPUTS (NEUTRIK): XLR Output connection will allow you to run longer lengths of wire without picking up interference. If you own an amplifier with XLR inputs, this connection gives you a cleaner audio signal.

HEADPHONE AMPLIFIER OUTPUTS: 2X 6.3mm Jack. The left headphone output is optimized to drive low-impedance headphones, the right output is optimized for high-impedance headphones.

NOTE: Only one headphone must be connected at a time

COAX DIGITAL OUTPUT: This output can be used to stream digital audio to an external DAC via a coax S/PDIF connection.

OPTICAL DIGITAL OUTPUT: This output can be used to stream digital audio to an external DAC via a Toslink OPTICAL connection.

I2S DIGITAL OUTPUT: This output can be used to stream digital audio to an external DAC over a HDMI I2S connection. (see the specs tab for the I2S/DSD over HDMI digital output pin configuration in the SPECIFICATIONS section).

2 x USB 2.0: These ports can be used to attach USB hi-speed drives, external DAC, or digital sources such as CD drives.

GIGABIT NETWORK: Wired Network interface. This is the suggested network connection for playing High-resolution content. Connect this interface to your router via an ethernet cable.
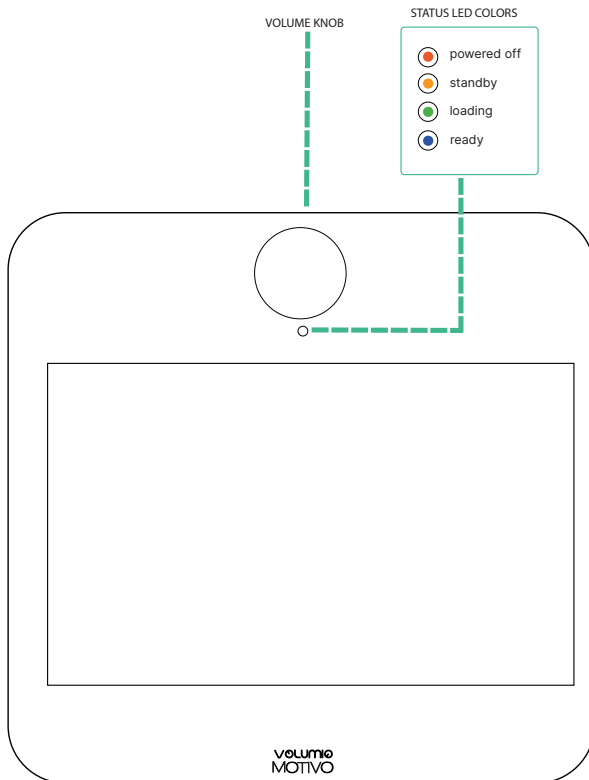
9V DC IN: Connect the power mains of the provided Power Supply Unit (9V 4A).

TOP PANEL OVERVIEW

8" Touchscreen display: the touchscreen display will show the Volumio UI, allowing the user to interact with all the Volumio OS playback and operation capabilities.

Volume Knob:
- Rotation: Adjust the volume (clockwise to increase, counterclockwise to decrease)
- Short press from Power-off state: Turn the device on
- Short press from Ready State: Enter standby mode
- Short press from Stand-by State: Enter ready mode
- Long press for 5 seconds: Turn the device off

VOLUME KNOB

STATUS LED COLORS

- 🔴 powered off
- 🟠 standby
- 🟢 loading
- 🔵 ready

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FIRST SETUP

When first powered on, the Motivo 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.

To reach Volumio Motivo's User Interface:

- Follow the first configuration wizard directly on the Motivo's display
  OR
- Download the **Android and/or iOS app** on your mobile device. Launch the app and Launch the app and select "Configure a new Device".
- Follow the step-by-step instructions inside the app to set up the unit.

Once the first setup has been completed, your Motivo is ready.
For more information on the **QUICK START GUIDE**, scan the QR CODE:

CONNECTION TO THE UNIT

Motivo works best when it is connected to your network. It is meant to be used as a head device (with touchscreen display), but also headless, browsing inside it with the **Android/iOS app.**

Alternatively:

- You can type the **http://motivo.local** name previously selected in the First Setup Wizard, in the web addresses bar of your favorite web browser.

THE SOFTWARE : VOLUMIO OS

The OS inside the Motivo is an higly customized version of Volumio OS, carefully optimized to leverage the sonic capabilities of Motivo's hardware design.

Furthermore, Volumio OS on Motivo is enriched with premium features accessible right out of the box, without the need of a paid Volumio Premium account.

This means that all premium offerings from AI Music Discovery, to high-resolution streaming services integration, are readily available without additional costs.

A free MyVolumio account is however required if you want to add more functions with plugins, available for free in the Volumio plugin store.
In short, Volumio OS is all about making your music sound great, easy to use, and comes with cool features ready to go if you have Motivo.

For an in-depth guide to **Volumio 3** scan the QR CODE:

SOFTWARE UPDATES

Volumio features an automatic OTA (Over The Air) updater which is meant to provide a seamless and reliable way to update to new system versions.

To change the auto updater to MANUAL go to:

- Go to the Settings menu
- Select *System*
- Click on *Automatic Updates*

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RESTORE TO FACTORY SETTINGS

Volumio Motivo can be reset to factory settings and all settings and music stored on the device will be deleted (no changes will be made on the software version!)

There are two ways to perform a Factory Reset:

- From the UI
- With a USB Thumb Drive (in case the unit is not operational due to software error)

Factory Reset Via User Interface

- Go to the Settings Menu
- 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/Motivo/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)
- Power OFF the unit
- Insert the thumb drive to one of the USB ports
- Power ON the unit
- IMPORTANT: During this phase the unit may restart multiple times and the factory reset will take about five to ten minutes to complete.

SPECIFICATIONS

CPU: Broadcom BCM2711, Quad Core 1.5 GHz

RAM: 2 GB DDR4

Internal Memory: 16 GB EMMC

LAN: Gigabit 10/100/1000M

Wireless Networking: Wi-Fi 802.11a/b/g/n/ac (2.4G and 5G)

Bluetooth 5.0

USB: 2x USB 2.0, current up to 900mA per port

AUDIO RESOLUTION:

Analog Unbalanced output: up to PCM 384kHz/24bit, DSD256

Analog Balanced output: up to PCM 384kHz/24bit, DSD256

Headphone Amplifier output: up to PCM 384kHz/24bit, DSD256

Digital Coaxial S/PDIF output: up to PCM 192kHz/24 bit

Digital Optical S/PDIF output: up to PCM 192kHz/24 bit

Digital I2S over HDMI output: up to PCM 384kHz/24bit, DSD256

USB output: up to PCM 768kHz/32bit (via USB DAC)
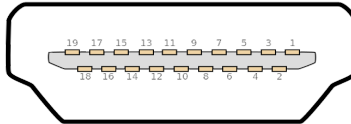
Product dimensions: 19.7×19.7×5.4 cm

Product weight: 1186g

* Specifications subject to change without notice.

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I2S/DSD over HDMI specs

The I2S/DSD over HDMI digital output can be configured to match the pin assignment of most of the DACs available on the market, selecting the corresponding brand in the Playback Options menu.
Details on the pin assignment can be found in the table below:

PIN NUMBER	TYPE	DESCRIPTION
1	Fixed	I2S DATA+ / DSD DATA-R+
2	Fixed	GND
3	Fixed	I2S DATA+ / DSD DATA-R-
4	Fixed	I2S BCK+ / DSD BCK+
5	Fixed	GND
6	Fixed	I2S BCK+ / DSD BCK-
7	Fixed	I2S FS+ / DSD DATA-L+
8	Fixed	GND
9	Fixed	I2S FS+ / DSD DATA-L-
10	Fixed	I2S MCLK+ / DSD MCLK+
11	Fixed	GND
12	Fixed	I2S MCLK- / DSD MCLK-
13	Fixed	Not Connected
14	Configurable	DSD/PCM status (if enabled); 1=DSD, 0=PCM
15	Configurable	DSD/PCM status (if enabled); 1=DSD, 0=PCM
16	Fixed	Not Connected
17	Fixed	GND
18	Configurable	5V Power (if enabled)
19	Fixed	GND

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 Motivo near water or liquids of any sort.
- Clean only with dry soft cloth. Household cleaners or solvents can damage the finish of the Motivo. 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 Motivo 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.

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- 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.com). 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.

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

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.

Detailed infos on warranty and return policies here:

https://volumio.com/en/terms-of-service/

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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.
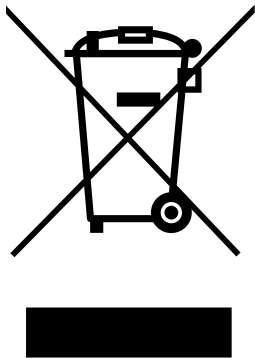Please contact **foss@volumio.org**
This offer is valid to anyone in receipt of this information.

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.

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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.

Volumio is a registered Trademark of Michelangelo Guarise.

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 RASPBERRY PI CM4 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 used is at least 20 cm.

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EU DECLARATION OF CONFORMITY

Model Name: Volumio Motivo

EU DIRECTIVES

2014/53/EU, Radio Equipment

2011/65/EU, RoHS

EU DECLARATION OF CONFORMITY

1. Model No. :

    Volumio Motivo

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

    Volumio Srl
    Borgo Albizi 15
    50122 Firenze
    ITALY

3. Object of the declaration:

    Network Music Player and Streamer

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:

    EN Emissions: Radiated
    ETSI EN 301489-1 V. 2.2.3
    ETSI EN 301489-17 V. 3.2.4
    CEI EN 55032:2015 +/A11:2021
    Emissions: Conducted
    ETSI EN 301489-1 V. 2.2.3
    ETSI EN 301489-17 V. 3.2.4
    CEI EN 55032:2015 +/A11:2021
    Emissions: Radio Requirements
    ETSI EN 301893 V.2.1.1
    Emissions: Radio Requirements
    ETSI EN 300328 V.2.2.2
    Emissions:
    Harmonic current
    ETSI EN 301489-1 V. 2.2.3
    ETSI EN 301489-17 V. 3.2.4
    CEI EN IEC 61000-3-2:2019 + /A1:2021

VOLUMIO

EN Emissions: Radiated
ETSI EN 301489-1 V. 2.2.3
ETSI EN 301489-17 V. 3.2.4
CEI EN 55032:2015 +/A11:2021
Emissions: Conducted
ETSI EN 301489-1 V. 2.2.3
ETSI EN 301489-17 V. 3.2.4
CEI EN 55032:2015 +/A11:2021
Emissions: Radio Requirements
ETSI EN 301893 V.2.1.1
Emissions: Radio Requirements
ETSI EN 300328 V.2.2.2
Emissions:
Harmonic current
ETSI EN 301489-1 V. 2.2.3
ETSI EN 301489-17 V. 3.2.4
CEI EN IEC 61000-3-2:2019 + /A1:2021
Emissions: Voltage fluctuations and Flicker
ETSI EN 301489-1 V. 2.2.3
ETSI EN 301489-17 V. 3.2.4
CEI EN 61000-3-3:2014 + /EC:2016 + /A1:2021
Immunity: Electrostatic discharges (ESD)
ETSI EN 301489-1 V. 2.2.3
ETSI EN 301489-17 V. 3.2.4
CEI EN 55035:2021 + /A1:2021
Immunity: Radio Frequency Electromagnetic Fields
ETSI EN 301489-1 V. 2.2.3
ETSI EN 301489-17 V. 3.2.4
CEI EN 55035:2021 + /A1:2021
Immunity: Fast transients (EFT-Bursts)
ETSI EN 301489-1 V. 2.2.3
ETSI EN 301489-17 V. 3.2.4
CEI EN 55035:2021 + /A1:2021
Immunity: Surge
ETSI EN 301489-1 V. 2.2.3
ETSI EN 301489-17 V. 3.2.4
CEI EN 55035:2021 + /A1:2021
Immunity: Radio Frequency common mode
ETSI EN 301489-1 V. 2.2.3
ETSI EN 301489-17 V. 3.2.4
CEI EN 55035:2021 + /A1:2021
Immunity: Voltage dips and short interruptions
ETSI EN 301489-1 V. 2.2.3
ETSI EN 301489-17 V. 3.2.4
CEI EN 55035:2021 + /A1:2021
EMF
CEI EN IEC 62311:2020
Electrical Safety
EN IEC 62368-1:2020

6. Where applicable, the notified body (name and number), description of intervention and certificate
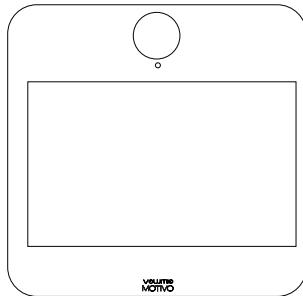
Not applicable, the declaration of conformity is compliant with annex II of the European Directive 2014/53/EU, so the notified body it's not necessary.

Signed for and on behalf of Volumio Srl $C\epsilon$

Firenze, February, 1, 2024

Micheldngelo Gudrise

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