

AMVIZO

SURROUND ENGINE



SAFETY INSTRUCTIONS AND QUICK START GUIDE

WWW.AMVIZO.COM

Surround Engine

Thank you for choosing Surround Engine. You have made an excellent decision. Now you have all the sound engineering tools needed to shape your music experience to your own liking. You don't need a full-fledged sound studio, just plug Surround Engine into your existing home theater surround sound system and experience your own custom surround sound mixes.

User manual

A full user manual is included in Surround Engine's web-based user interface. Throughout this text, this user manual is referred to as the *online help*. The *online help* contains more extensive getting started and legal information than this printed text.

Intended use

Surround Engine is intended for playing and real-time processing (mastering, mixing, etc.) of digital music / audio. The result can be played back through a home theater surround receiver, AV receiver, soundbar, amplifier, etc., or it can be recorded digitally.

When using copyrighted recordings or distributing recordings, you must not infringe any applicable copyright or other rights. The manufacturer is in no way liable for unlawful acts of a user.

Surround Engine is intended for indoor use only. Do not use it outdoors. Contact with moisture, e.g. in bathrooms, must be avoided under all circumstances.

If you use Surround Engine for purposes other than described above, it may become damaged. Do not modify or rebuild the product. Do not try to repair it yourself. Improper use can result in short circuits, fires, electric shocks or other hazards. Familiarize yourself with the operating instructions before use.

Safety instructions

In this section, the word *product* refers to the Surround Engine device, unless stated otherwise.

- The product is not a toy. Keep it out of the reach of children and pets. Do not leave packaging material lying around carelessly, as this may be dangerous for children.
- The external power supply connected to the product must be rated 5V DC with a minimum current of 2.5 amp.
- The product should be used in a well-ventilated environment. Do not expose the product to heat from any source. Only use the product when conditions are close to normal ambient room temperature.
- Protect the product from high temperatures and direct sunlight. High temperatures may deform the product housing. The housing is made of polylactide: a plastic fabricated from renewable sources such as corn starch. Polylactide can soften and deform at temperatures above 50°C, especially under load.
- Protect the product from vibration, jolts, high humidity, moisture, flammable gases, steam and solvents.
- Do not place the product under mechanical stress.
- The product should be placed on a flat surface when in use.
- All peripherals used with the product should comply with relevant standards for the country of use and be marked accordingly to ensure that safety and performance requirements are met. Peripherals must be connected using the correct cable and connectors.
- Do not use the product if it is (a) visibly damaged, (b) no longer working properly, (c) has been stored for extended periods in poor ambient conditions or (d) has been subjected to any serious transport related stresses.
- Please handle the product with care. Jolts, impacts or a fall even from a low height can damage the product. Also be careful when handling and using the connectors

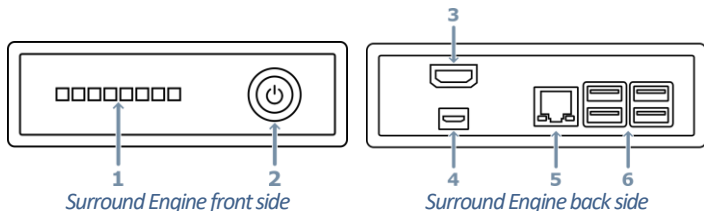
of the product.

- Ensure that the product remains in a clean working condition and clean the outer case with a damp cloth if necessary. Do not use any abrasives or solvents for cleaning.

Delivery content

- Surround Engine device,
- Power supply (USB Micro-B, 2.5A, 5.1V),
- HDMI cable,
- Network cable (RJ45-RJ45, Cat.5e)
- Storage box and
- Safety instructions and quick start guide.

Operating elements



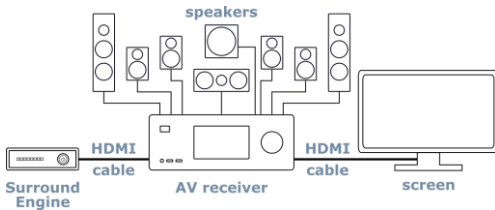
1. Visualizer LEDs
2. Power button
3. HDMI out port
4. Micro-USB power connector
5. Gigabit Ethernet port (max speed 300 Mbps)
6. 4 × USB 2.0 ports

Hardware setup

Upon first use, Surround Engine must at least be connected to a (surround) sound system, a computer network and a power supply.

HDMI connection

Surround Engine must be connected to a surround sound system via HDMI. A digital AV receiver with a 5.1 or 7.1 channel surround sound setup is highly recommended. A high-quality surround sound soundbar with separate subwoofer and back speakers can be a suitable alternative.



Typical system setup

The figure above shows a typical system setup. A HDMI cable connects the HDMI out port of Surround Engine to one of the HDMI in ports of an AV receiver. The AV receiver has the speakers and a TV screen attached. The use of a screen is not required for Surround Engine, but it is an option.

If your TV screen and surround sound system both support HDMI-eARC (HDMI Enhanced Audio Return Channel), then Surround Engine can be connected to the TV screen. In this case the TV forwards digital audio to the AV receiver (or soundbar system). The disadvantage of this setup is that the TV screen needs to be turned on while using Surround Engine. For full compatibility HDMI-eARC must be used, the earlier HDMI-ARC standard does not suffice.

Surround Engine only supports Full HD (1080p) video output. To use a screen, this mode must be supported by the connected receiver (in practice this should not be a limitation).

It is highly recommended to **disable any DSP processing on your AV receiver while using Surround Engine**. After all, the idea is to use Surround Engine to shape the soundscape. Different AV receivers use different names and slightly different functions to amplify a source unadulterated. Some commonly used names include *pure*, *pure direct*, *direct* and *straight*. Please refer to the user manual of your AV receiver (or soundbar) for disabling equalizing, bass management and all other DSP processing. If available and if possible, you might consider leaving the per-speaker volume adjustment for room correction enabled.

Initial network connection

Surround Engine must be connected to a Local Area Network (LAN) to access the web-based user interface. The (initial) LAN connection can be established with either an Ethernet cable or a wireless WiFi connection.

Option 1: Wired Ethernet connection

Connect Surround Engine's Ethernet port with a network cable to your (home) network. Depending on your network, connect the network cable to a network switch or to your router, gateway or modem. If needed, you can use the wired connection to set up WiFi in the web-based user interface.

Option 2: Wireless WiFi connection

Setting up WiFi without using a wired Ethernet connection first is accomplished using a USB drive. The USB drive should contain a text file named *wifi.txt* with the WiFi network name (SSID) on the first line and the password (PSK) on the second line. The file *wifi.txt* must be in the root (i.e. topmost) folder of the USB drive and the filename *wifi.txt* must be in lowercase. The first line should only contain the SSID and the second line should only contain the PSK; i.e. any leading or trailing (whitespace) characters are not allowed.

A prepared USB drive containing *wifi.txt* may be plugged into any of Surround Engine's USB ports either before powering up the device or after the device has booted. Surround Engine will try the provided credentials to connect to your WiFi network. For details about this feature and how to (partially) disable it, please refer to the section [online help](#) → [settings](#) → [connectivity](#) → [check USB drives for WiFi credentials](#).

Connected USB drives need to be removed safely as is explained in [online help](#) → [full interface](#) → [system controls](#) → [connecting and safely removing USB storage devices](#). **Unsafe removal may cause permanent loss of data on a USB drive.**

Network requirements

Surround Engine requires automatic assignment of IP addresses. This is achieved using the Dynamic Host Configuration Protocol (DHCP). Therefore, a DHCP service must be available on your network. Virtually all routers used in home networks have a DHCP service enabled by default.

Surround Engine requires an active Internet connection at startup. This is for the sole purpose to access Internet time servers to set the internal clock.

Power supply

The power supply may be plugged in after connecting Surround Engine to your surround sound system and, if applicable, to your wired Ethernet network. Connect the supplied power supply to the mains and to the micro-USB power connector located at the rear side of Surround Engine. The device will turn on and start to boot. A moment later the power button lights up and shortly afterwards the system is ready for use. See [online help](#) → [full interface](#) → [system controls](#) → [turning the device on and off](#) for more information. Here you can read, among other things, to **always shut down Surround Engine before unplugging its power supply, as failure to do so may cause permanent damage.**

Web-based user interface

Surround Engine uses a web-based graphical user interface. You can use one of the mainstream web browsers (Edge, Chrome, Safari or Firefox) to access Surround Engine from your computer, tablet or smartphone. It is recommended to use a computer or (large) tablet for working with Surround Engine. On small screens, such as

smartphones, it is recommended to use the *mini interface* that supports select playback features.

Surround Engine supports up to five simultaneous user interface instances (excluding accessing the [online help](#)). There can be simultaneous connections to different tabs in the same browser, or to different browsers on different devices (e.g. on a computer, a tablet and a smartphone).



Surround Engine web-based user interface

Surround Engine web and IP address

In your web browser go to the following URL:

http://surround-engine

or

http://surround-engine.local

Which URL works depends on the network address resolution on your Local Area Network (LAN) and computer or smart device. It is possible to change Surround Engine's URL (see [online help](#) → [settings](#) → [system](#) → [device](#) → [device name](#)).

Alternatively, you can use an IP address to connect to the web-based user interface. Surround Engine's IPv4 address can always be used to reach the device, also when named address resolution is not working properly. An IPv4 address consists of four decimal numbers ranging from 0 to 255 separated by dots, e.g. *192.168.50.65*. You can find Surround Engine's IP address(es) on an attached TV screen in the left bottom corner (see the figure below). You may also obtain Surround Engine's IP address from your network router, gateway or DHCP server. The IP address should be entered as an URL in your browser. For example:

http://192.168.50.65 (*this is an example, your IP address is custom*)

Once connected to Surround Engine's user interface, you can also find its IP address(es) in the [network status](#) section of the [settings](#).

Connections to Surround Engine's web-based user interface use the **http** protocol. The **https** protocol is not supported.



IP addresses shown on a TV screen

Using touch screens



Pinch-to-zoom and finger-scroll

Surround Engine's touch interface behaves as usual, except for pinch-to-zoom and finger-scroll. In order to pinch-to-zoom or finger-scroll on touch screens, first double-tap on any unresponsive area of the interface (such as the white background). The screen dims slightly with a blue tint, as shown in the figure above. When the screen is dimmed, you can pinch-to-zoom and /or finger-scroll. When finished, press the Done button that is in the center of the screen.

Setting up WiFi

Connecting Surround Engine to a WiFi network is explained in [online help](#) → [settings](#) → [connectivity](#) → [WiFi](#). Please note that it is required by law to set the WiFi country correctly when using WiFi in the 5 GHz frequency band.

Disposal

Electronic devices are recyclable waste and must not be disposed of with household waste. At the end of its life, dispose of the product in accordance with applicable legal obligations and regulatory guidelines.

Regulatory compliance

Surround Engine's computer motherboard hardware is extensively tested for conformity with international regulatory compliance. Please refer to [online-help](#) → [appendix](#) → [regulatory compliance](#) for more information.

Warranty

All rights and remedies conveyed by applicable local consumer protection laws and regulations apply.

Amvizo offers a two-year warranty on the Surround Engine product hardware, unless a different warranty term is expressly stated during or at the time of purchase. When having bought a second-hand Surround Engine product, the remaining period of warranty is measured from the moment of purchase by the product's first owner. Eligible warranty claims are entitled to a free repair or replacement of the product or a prorated refund. Normal wear of the power supply and supplied connection cables is not covered by warranty. Products are not covered by warranty if they are opened or modified or if they are subjected to incorrect / improper use, incorrect / improper handling, external influences or force majeure.

All software that Surround Engine uses is provided "as is", without warranty of any kind, express or implied, including but not limited to the warranties of merchantability, fitness for a particular purpose and noninfringement. In no event shall the authors or copyright holders be liable for any claim, damages or other liability, whether in an action of contract, tort or otherwise, arising from, out of or in connection with the software or the use or other dealings in the software.

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