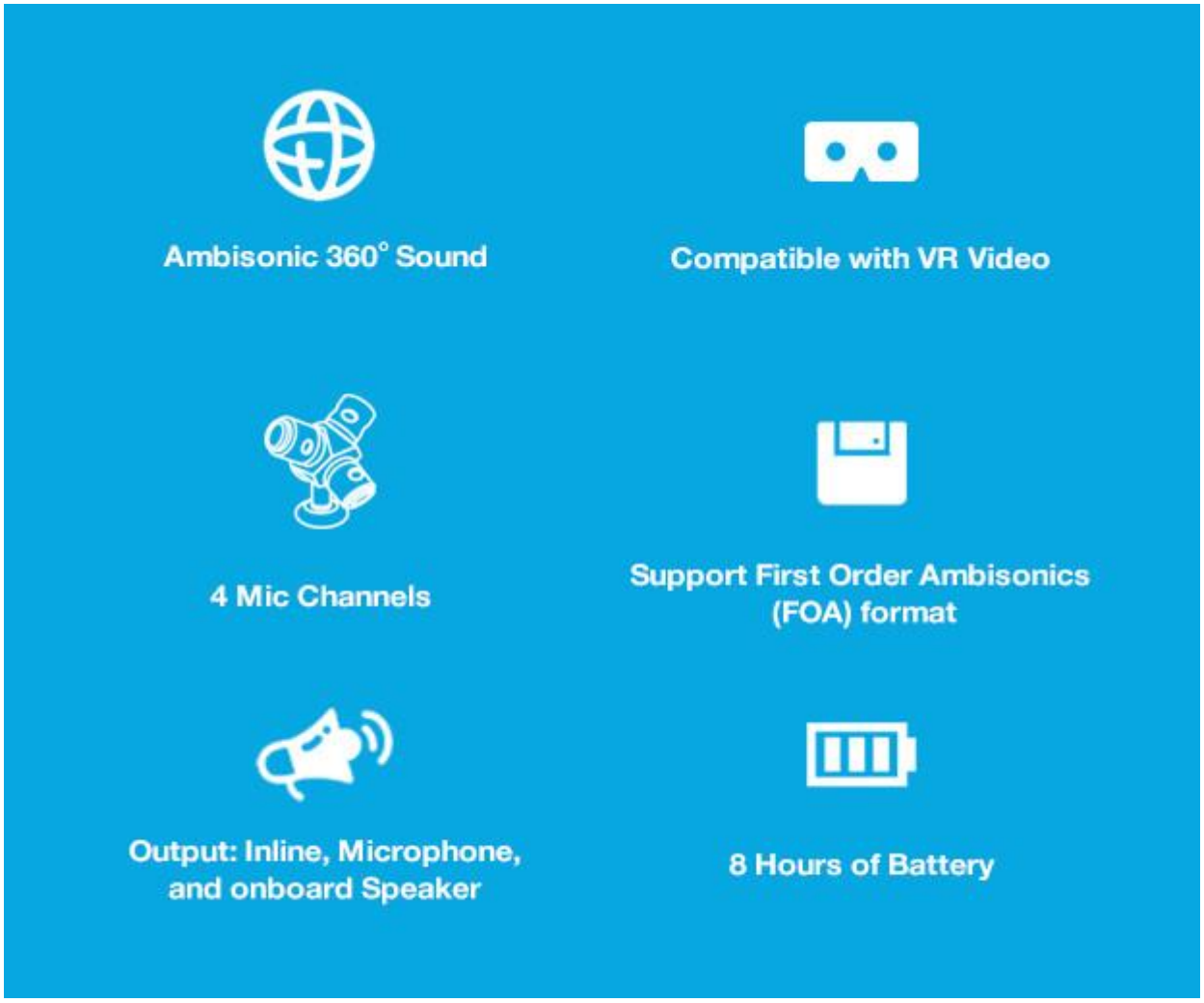
TWIRLING

Twirling720
VR Audio Recorder

Shape the Future of Sound.

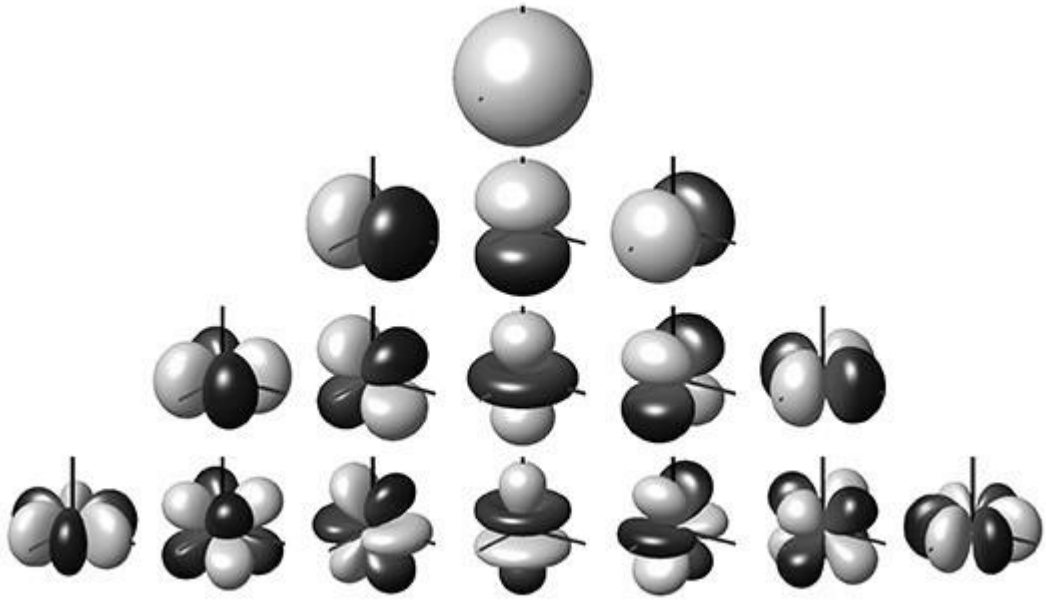
Introducing Twirling720 VR Audio Recorder

The Twirling720 VR Audio Recording system works with ambisonics, a multi-channel audio recording technique that lets you capture 360° of sound at one single point. This high precision quad channel microphone models the characteristics and response of an assortment of microphone array configurations to accurately record the sound of a 3D space. The perfect tool to create VR worlds of sound.



True 360° Soundfield Recording

Unlike traditional microphones which use one or two channel recording to emulate 360 ° sound, the Twirling720 VR Audio Recorder makes use of its inventive quad-channel microphone to record beyond just the horizontal plane, but also a multitude of 3D sound and elevation cues including three-dimensional polar response, direction of arrival (DOA), transient response, harmonics, and proximity effects. Each of the 4 directional inputs work together to pick up the microphone's distance in relation to the sounds – letting you record an acoustic space as it truly exists in real life.



Post-Processing Versatility with Twirling720 Studio

The Twirling720 recorder is accompanied with our versatile post-processing software Twirling720 Studio. This software converts raw 4-channel recordings into a variety of output formats.

- First Order Ambisonic B format SN3D
- First Order Ambisonic B format FuMa
- Quad Binaural
- 5.1
- Stereo

First Order Ambisonic B (FOA-B) format is supported by all major VR platforms such as Google Daydream/YouTube, Facebook/Oculus, Milk VR etc. With FOA B format recordings, you can pan, tilt and zoom a sound image and easily switch between countless mic patterns and combinations to create your perfect sound all in post-processing! If you can dream it, you can produce it.

Quad Binaural is another common VR audio format used by most major platforms and content creation teams. It represents the soundfield through 8 tracks of audio with two tracks for each of the four directions (0, 90, 180, 270 degrees).

Endless possibilities in sound manipulation.

- Pan, Tilt or Zoom the sound image
- Easily switch between Mic Patterns like: omni, cardioid, hyper-cardioid, sub-cardioid, super-cardioid and figure-8.
- Even advanced Combination Patterns like: blumlein, height-enabled blumlein, Mid/Side, or any combination and arrangement of microphones for VR, Spatial Audio and other effects.
- Perform detailed equalization based on each of the 4 individual channel inputs.
- Ambisonic spatial noise suppression with 20dB noise reduction without altering sound image and sacrificing audio quality
- Highly accurate sound source tracking in 3D space providing a real time visualization of the soundfield

Binaural Sound Preview

Powered by our state-of-the-art VR audio engine, Twirling720 Studio also lets you preview your 720 sound recording with a binaural rendering, allowing you to explore how human ears will hear the 720° sound image in a full 3D space.

Google Omnitone, Youtube 360° & Facebook 360° Compatibility

Twirling720 VR's support for Google Omnitone, Youtube 360° and Facebook 360° spatial audio playback means everyone will be able to hear your 360° sound recordings.

These entirely web-based platforms allow your Twirling720 VR ambisonic recordings to be played directly in the browser. All your audience will need to hear your VR and 3D sound is access to the internet.

Portable, all-in-one VR sound recording

The power and versatility of a microphone array in one single portable device.

The Twirling720 VR Audio Recorder combines a high quality 4-channel microphone and a fully integrated recording device into a revolutionary all-in-one 360° sound recorder. Never be tied down by bulky multi-microphone and recorder configurations or compromise the details in your sound recording again. Now you have the freedom to capture sound in its true 3 dimensions anywhere, anytime.

Being portable also means you can easily deploy Twirling720 at multiple spots on site to have more complete coverage of the sound scene, never missing any details of the sound of you are recording. The ability to distribute recordings provides more flexibility in both post processing and in on site recording, allowing you to record detailed sound scenes simultaneously with the video scenes. Where will your imagination take you?

Compatible with VR Video

Immersive Sound for Immersive VR

VR is meant to create an alternate reality with life-like accuracy, but without the right audio cues to match the visuals, the effect isn’t convincing and your experience is compromised. Our audio-engineers designed the Twirling720 VR Audio recorder specifically with VR and 360° video in mind. Now you can create convincing, realistic worlds of sound to match those impressive VR and 360° video landscapes.

TwirlingWorks VST & AAX Plugin for Professionals

To ensure that the experience of Twirling720 VR Audio Recorder owners is seamless, we've designed TwirlingWorks, a powerful audio tool for professional VR audio creation. Programed with assistance from some of the world's experts in Ambisonics and audio mixing, TwirlingWorks supports both VST and AAX plugin formats, which can work with almost all the professional digital audio workstations (DAWs), such as Cubase, Pro Tools, Adobe Audition, etc. For the audio designer, TwirlingWorks is perfect for setting up mixes within your favorite DAW, and for real time auralization of the mix in 3D virtual reality. It further has a full suite of advanced features including:

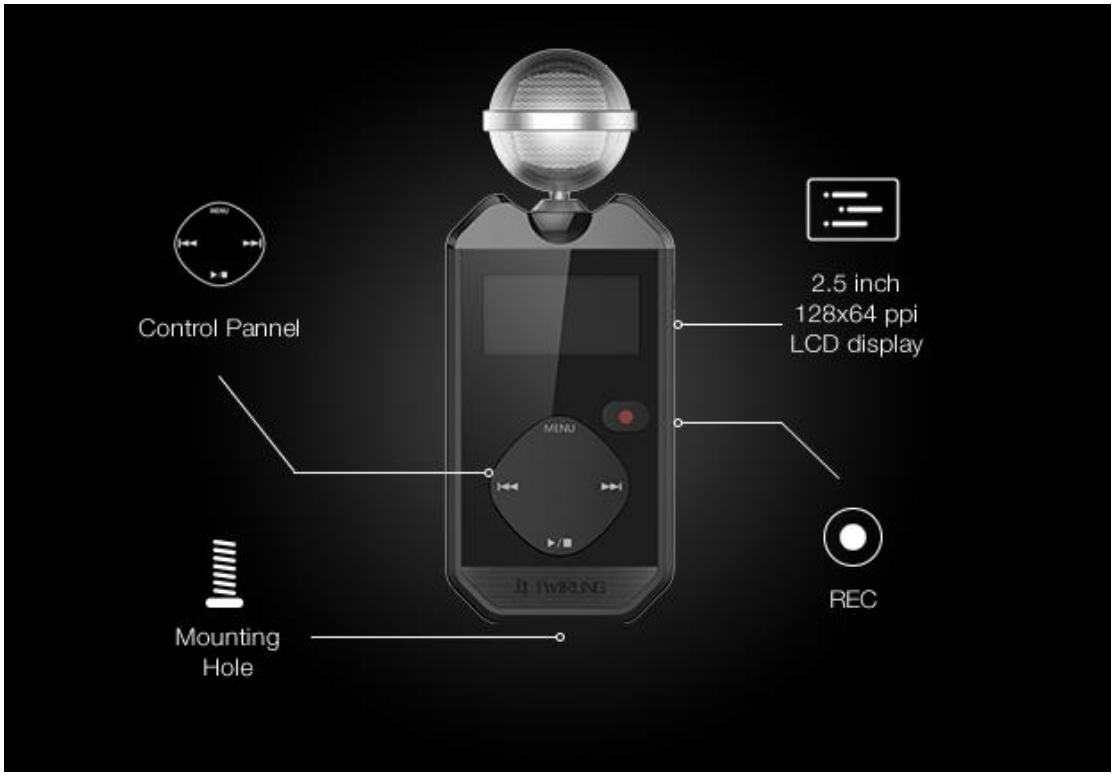
- Mixes Twirling720 ambisonic files with individual audio objects, and allows for sound sources (monophonic, stereo, FOA) to be properly spatialized in 3D relative to the user's head location.
- Time-based editing
- Automation recording
- Room model with high quality physical reverb generation
- Metadata generation and various file format export
- And much more

Design

Expertly crafted with ease of use in mind. Just one simple click could

Start/Stop recording and export your recording files to a computer by using a SD adapter

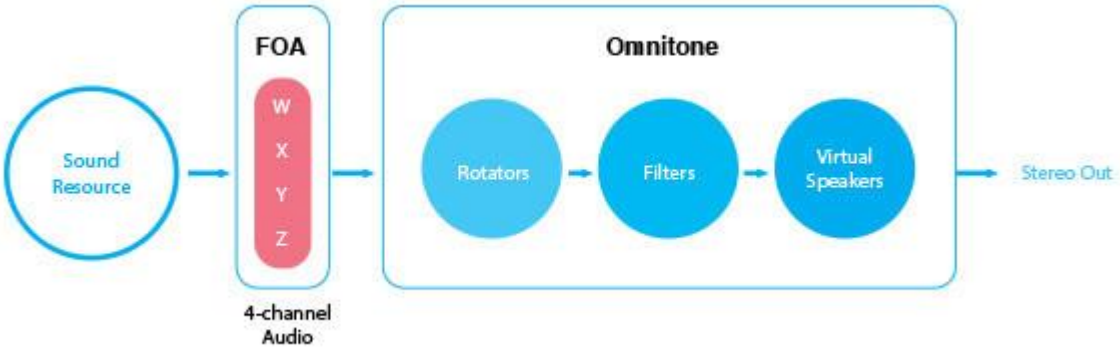
Recording quality is our first and foremost priority. The Twirling720 VR Audio Recorder combines the latest in audio-engineering hardware with a convenient design to make a 360° microphone system that doesn't sacrifice recording quality and yet remains easy to set up and use.



Why get the Twirling720 VR Audio Recorder?

With VR technology on the verge of breaking into the mainstream consumer market, there’s no better time to start innovating and creating 3D Ambisonic audio. The Twirling720 VR Audio Recorder is the perfect one-stop 3D audio recording solution for VR developers, film makers, sound recordists, field recordists, musicians, musical performance recordists and more. If you’re passionate about sound and recognize how difficult it is to capture true 360 °

audio, you deserve the Twirling720 VR Audio Recorder.



SPECS

Size: 200mmx80mmx27mm(L x W x D)

Frequency: 80Hz - 18kHz

Signal to Noise Ratio 68 dB

Weight: 290g

Mic Impedance: Max 2.0KΩ 1kHz (RL=2.0kΩ)

Voltage: 3.8~5V

Microphone Sensitivity: -35dB

Maximum Sound Pressure Level: 115dB SPL

4 high quality built-in microphone units

Support 24bit/48,96Khz WAV format

Lithium battery for 8 hours running

128x64 ppi LCD display

USB 2.0

3.5mm earphone output

Support mirco SD

Mic boost

Accessory Package

This accessory pack is the perfect companion for your Twirling720.

A handy and protective case, windproof sweater, magic arm, mic stand mount and convert screws are all included in this pack. The ultimate accessory for capturing 360 sound anywhere you go.

Recording Samples

Twirling720 recording samples:

https://www.youtube.com/playlist?list=PL5SngWHouwDKojxgdgf0qw1U-01_EDh1a

How to use Twirling720 and Studio?

https://www.youtube.com/watch?v=aplzZ3qIT7c

Software Demos:

https://www.youtube.com/watch?v=i-I2ZtlQcAw&list=PL5SngWHouwDLv9V7-Ka-aZbyCucuHNl92

TwirlingVR YouTube Channel:

https://www.youtube.com/channel/UCrsVUOmLa3HfFvf7WKAZGCA

FAQ

How is VR sound recording different from traditional recording?

While traditional recording techniques utilize multiple microphone arrays and create their surround-sound by mapping it in post-processing, the Twirling720 VR's 4 microphone inputs record sound information beyond just the horizontal plane, but also a multitude of 3D sound and elevation cues.

How does the Twirling720 record 360° sound?

Each of the 4 directional inputs work together to pick up not only the sounds that reach them individually but also each microphone's distance in relation to the sounds – letting you record an acoustic space as it truly exists in real life.

Can I use recordings I capture with the Twirling720 to supplement my 360° video?

Yes, recordings captured with the Twirling720 are ideal for Spatial-Audio used with 360° video. Our accompanied software Twirling720 Studio supports conversion into the FOA format, the standard supported by Youtube's emerging 360° video platform.

Does the Twirling720 require any additional devices to capture audio?

No, the Twirling720 is a completely stand-alone device, meaning it both captures and records audio and saves it to your micro SD card. It also has it's own display and 3.5mm headphone output so you can keep track of your recording on site.

Do I really need VR sound to create a VR Video or VR Game?

Sound is half the picture. This is especially true in the VR world where your ability to create believable immersion truly dictates how enjoyable your VR experience is. Poorly recorded sounds or sounds that don’t adapt to the users’ location in VR space can distract and take the user outside of their VR experience.