

ZYLLIA

User manual



Version: 0.5

Record audio like never before.

ZYLIA Portable Recording Studio. . . . .	5
------------------------------------------	---

---

<b>Hardware</b>	<b>11</b>
-----------------	-----------

Basic set . . . . .	12
---------------------	----

Identifying parts . . . . .	13
-----------------------------	----

Microphone mounting options . . . . .	14
---------------------------------------	----

LED ring status indicator . . . . .	14
-------------------------------------	----

First use . . . . .	15
---------------------	----

---

<b>ZYLIA Studio</b>	17
ZYLIA Studio requirements . . . . .	18
Key functions . . . . .	19
Instruments placement . . . . .	19
Recording . . . . .	31
Sound source separation . . . . .	34
Mixing . . . . .	35
Sessions management . . . . .	38

---

**Using** the recording system 39

Use and care . . . . . 40

Warning on copyright. . . . . 42

Cleaning . . . . . 42

Troubleshooting . . . . . 43

---

**Technical** specifications 47

Microphone . . . . . 48

General . . . . . 48

Physical. . . . . 49

---

Size. . . . .	50
Data type . . . . .	51
ZYLIA Studio. . . . .	51



# ZYLIA Portable Recording Studio

## **Warning!**

- To reduce fire or shock hazard, do not expose the unit to rain, moisture or high temperatures.
- Use the attached USB cable and microphone adapter for proper usage.

## **Notice**

- If static electricity or electromagnetism causes data transfer failure, restart the application or disconnect and connect the USB cable.
- This product has been tested and found compliant with the limits set out in the EMC regulation for using cables shorter than 3 meters.
- Electromagnetic fields at the specific frequencies may influence the sound quality of this device.

## **Safety precautions**

Handle the microphone with special care, avoiding sudden shocks such as dropping or hitting into other objects.

Do not tap the microphone patches to check if they are working. Do not blow into the microphone patches to check if they are working. The LED ring indicator will show the current status of the microphone.

## **Warranty Information**

ZYLIA's hardware products are covered with warranty against defects in materials and workmanship under normal use for a period of ONE (1) YEAR from the date of purchase by the original end-user purchaser ("Warranty Period").

During this warranty period, if a defect arises, and you follow the instructions for returning the product, we will apply one of the following options:

- repair the product using either new or refurbished parts,
- replace the product with a new or refurbished product,
- refund the purchase price of the product.

A replacement product assumes the remaining warranty of the original product or ninety (90) days from the date of replacement or repair, whichever provides longer coverage for you.

This warranty applies only to hardware products manufactured by or for ZYLIA that can be identified by the ZYLIA trade name, serial number and logo affixed to them and which are sold through our official sales channels.

This warranty **does not apply**:

- to normal tear and wear and cosmetic damage, including but not limited to scratches and dents;
- to defects or damage caused by misuse, alteration, accident (including without



limitation collision, fire and the spillage of food or liquid), neglect, abuse, unusual stress, modification, improper or unauthorized repair, installation, wiring, or testing, improper storage, use in an unapproved device or if the serial number has been removed;

- to damage caused by using the product outside the permitted or intended uses described by ZYLIA;
- to any non ZYLIA hardware products or any software, even if packaged or sold with ZYLIA products;
- to modifications of the products firmware or software by anyone other than ZYLIA. ZYLIA reserves the right to disable products if ZYLIA suspects fraud or if ZYLIA determines that the products are counterfeit, stolen or lost in shipment.

ZYLIA does not warrant that the operation of the products will be uninterrupted or error-free. ZYLIA is not responsible for damage arising from failure to follow instructions relating to the use of the products.

THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM JURISDICTION TO JURISDICTION. ZYLIA'S RESPONSIBILITY FOR HARDWARE DEFECTS IS LIMITED TO REPAIR OR REPLACEMENT SERVICE AS DETERMINED BY ZYLIA AT ITS SOLE DISCRETION. ALL EXPRESS AND IMPLIED WARRANTIES, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTIES AND CONDITIONS OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN TIME TO THE TERM OF THIS LIMITED WARRANTY. NO WARRANTIES, WHETHER EXPRESS OR IMPLIED, WILL APPLY AFTER THE EXPIRATION OF THE LIMITED WARRANTY PERIOD. SOME JURISDICTIONS DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THIS LIMITATION MAY NOT APPLY TO YOU.

To obtain warranty service for any product that is subject to the foregoing warranty, you must notify ZYLIA and return the defective product together with proof of purchase to the address specified by ZYLIA.





Hardware

## Basic set

- ZYLIA ZM-1 microphone
- ZYLIA ZM-1 microphone stand/adaptor
- USB cable
- 5/8" to 3/8" mount adapter
- User Manual
- Quick setup guide

## Identifying parts



ZM-1 microphone



Tripod stand



Mount adapter  
(inserted in the  
tripod stand)



Micro USB cable  
3 meters

## Microphone mounting options

The ZM-1 microphone comes with a  $\frac{1}{4}$ " mount which connects with the bundled tripod stand. The tripod stand has a  $\frac{5}{8}$ " mount. The set also includes a  $\frac{5}{8}$ " to  $\frac{3}{8}$ " mount adapter.

## LED ring status indicator

The LED ring located on the equator of the microphone informs on the current status of the microphone:

- Blue light – The ZM-1 microphone is powered and connected to the computer,
- Red light – The ZM-1 microphone sends recording data to the computer,
- Green light – testing mode.

It is possible to dim the LED ring or even turn it off completely. Please refer to the instructions which are provided with the ZM-1 microphone driver software.

## First use

Product registration is required before first use. Register your ZYLIA Portable Recording Studio at [www.zylia.co/register](http://www.zylia.co/register). After registering download and install ZYLIA Studio software and ZM-1 microphone driver for your operating system (MAC, Windows or Linux).



ZYLIA Studio

## ZYLIA Studio requirements

Supported operating systems:

- Apple – 64 bit, OS X 10.10 or higher,
- Linux – 64 bit, Ubuntu 16.04 or higher,
- Windows – 64 bit, 7, 8.1, 10.

Supported Hardware:

- 64 bit Intel system,
- CPU limits the processing time,
- Minimum 2 GB of RAM,
- Minimum 500 MB of free space to install ZYLIA Studio. You need much more disk-space for recording.

## Key functions

ZYLIA Studio is a software designed to work exclusively with ZYLIA ZM-1 microphone. The main features of ZYLIA Studio:

- Audio recording
- Storage of recordings
- Separation of individual sound sources from recordings
- Mixing of recordings

## Instruments placement

To fully benefit from using ZYLIA Portable Recording Studio you are recommended to adjust the placement of instruments during a rehearsal. Below we are present a few examples of good practice when recording with ZYLIA.



Sound sources (acoustic instruments, vocalists) must be located around the microphone keeping an approximately equal angle from each other and equal distance from the microphone (fig. 1). It is also advisable to locate sound sources in the optimal range of elevation (fig. 2). Sometimes it is good to check two or three different placements and choose the best one.

To avoid signal distortion from the ZM-1 microphone, it is recommended to place the ZYLIA microphone at a larger distance from a full drum set or loud instruments, 2-4 meters (6-13 ft). The appropriate distance can be tested by the user during test

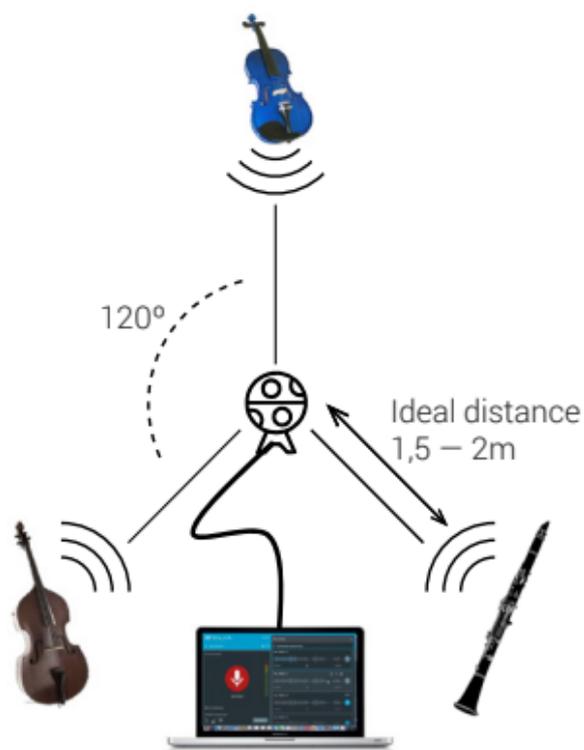


fig.1

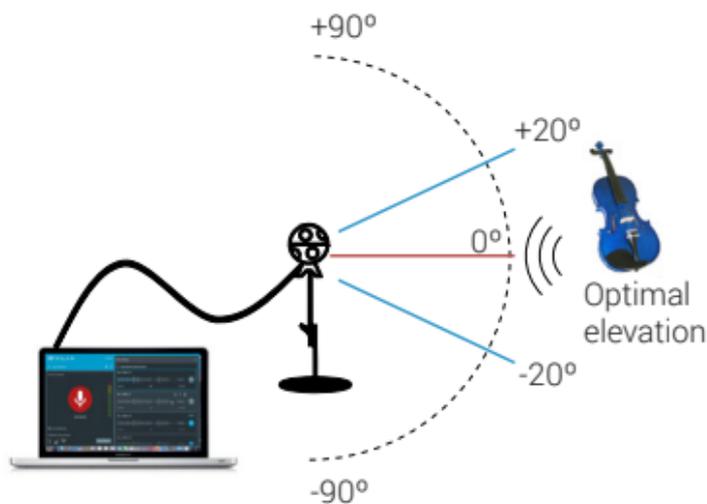


fig. 2

recordings. Signal distortion from the microphone can be monitored on the volume meter in ZYLIA Studio.

Do not place the ZYLIA microphone directly on the ground, it is recommended to put it 1,5m (4-5 ft) above the ground on a microphone stand.

Do not use the same amp/loudspeaker for two sound sources. You will not be able to separate the tracks from those sound sources (fig. 3).

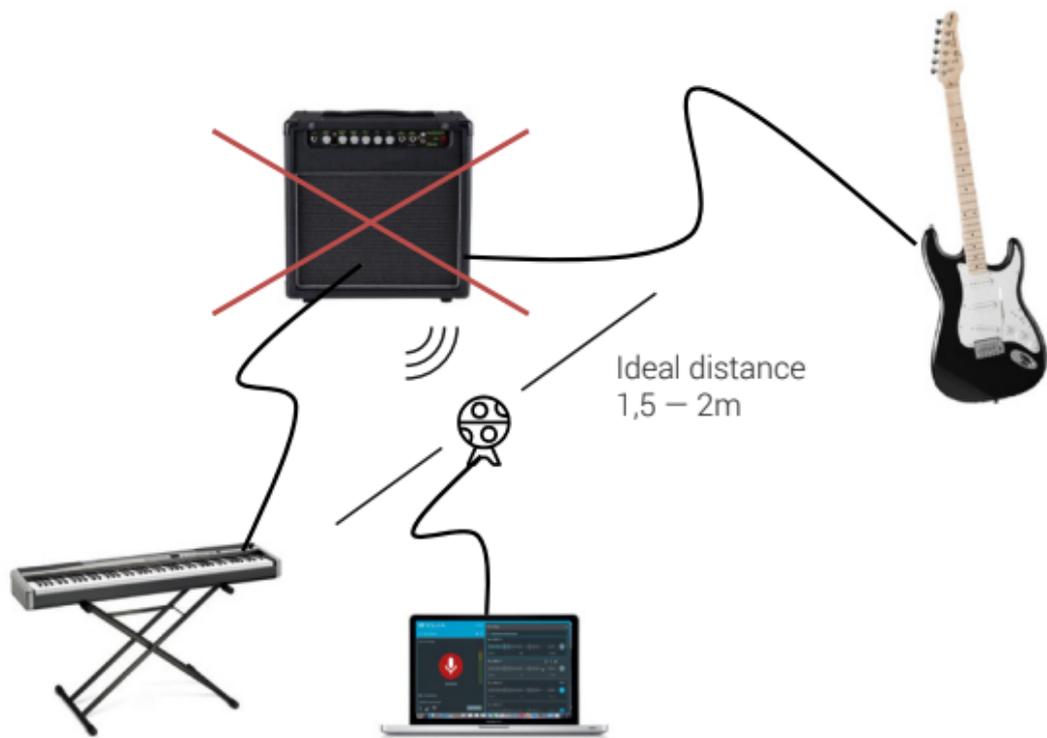


fig. 3

## System calibration

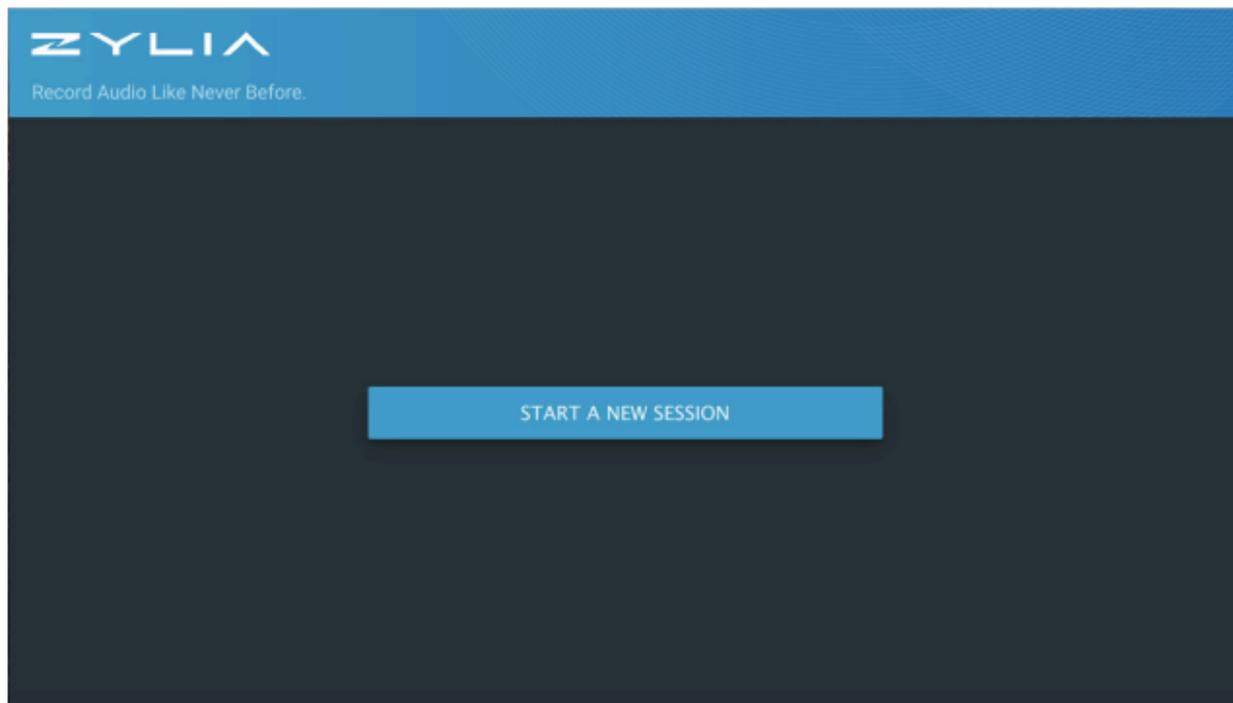
The calibration process is **required to identify the positions of the instruments**. Tracks are separated based on the location of instruments/sound sources in the space. If you want to obtain separated tracks after recording it is not recommended **to change the position of instruments during recording**.

It is recommended to perform calibration before every new rehearsal unless you always use identical instrument locations. If you change instrument location during your rehearsal, you will need to repeat calibration for sources that changed their position. The change of style played on certain instruments do not affect the calibration process.

In order to perform calibration follow these steps:

1. Run ZYLIA Studio.

2. Click the START A NEW SESSION button.



3. Read carefully the instructions on the placement of sound sources around the microphone, then press the START button.

**ZYLIA**  
Calibration.

**Let's start calibration!**

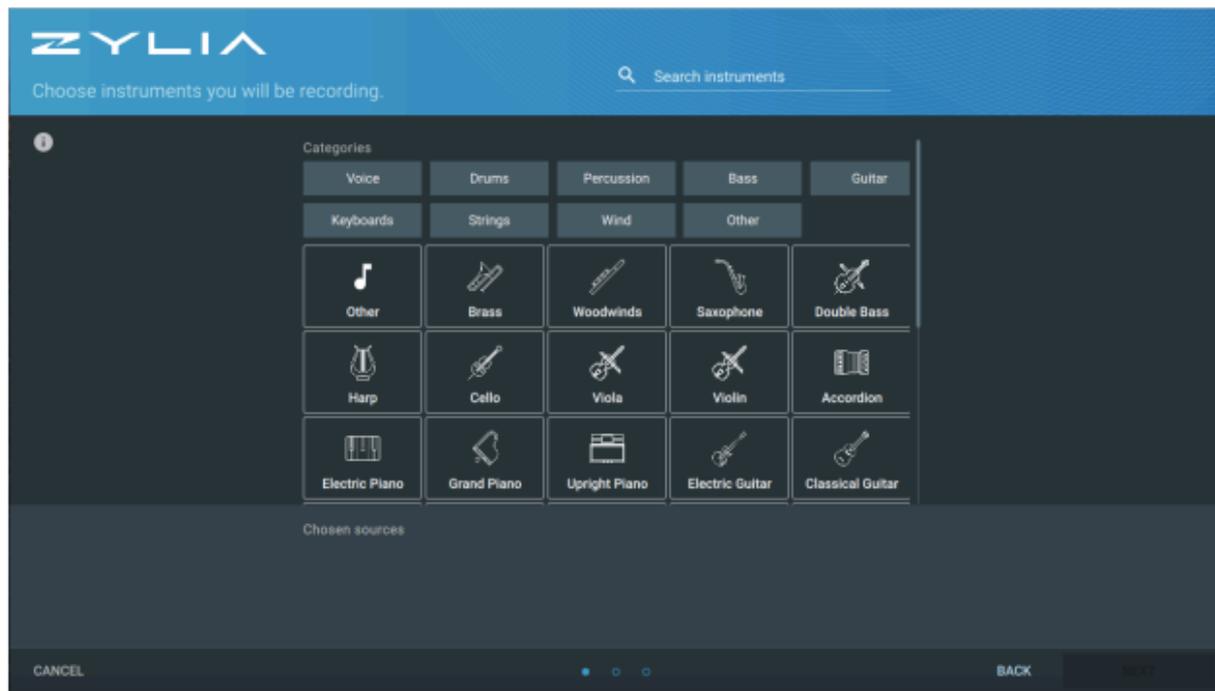
Calibration is a process of recording sound sources one after another. It will let us better separate tracks for you and increase their quality by locating positions of all instruments and voices.

Choose sound sources → Record each source → Check if everything's fine

Please, remember that location is the most important during calibration.  
Examples of correct positioning around the microphone:

CANCEL START

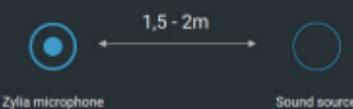
4. Choose the type of instruments/voices for calibration. You can rename each of the selected audio sources. Click the NEXT button.



5. Please read the instructions on the distance between a sound source and the microphone. Click the NEXT button.

**ZYLIA**  
How to record with Zylia microphone?

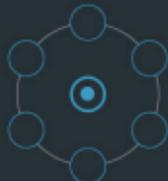
Optimal distance between the microphone and sound source



Zylia microphone      Sound source

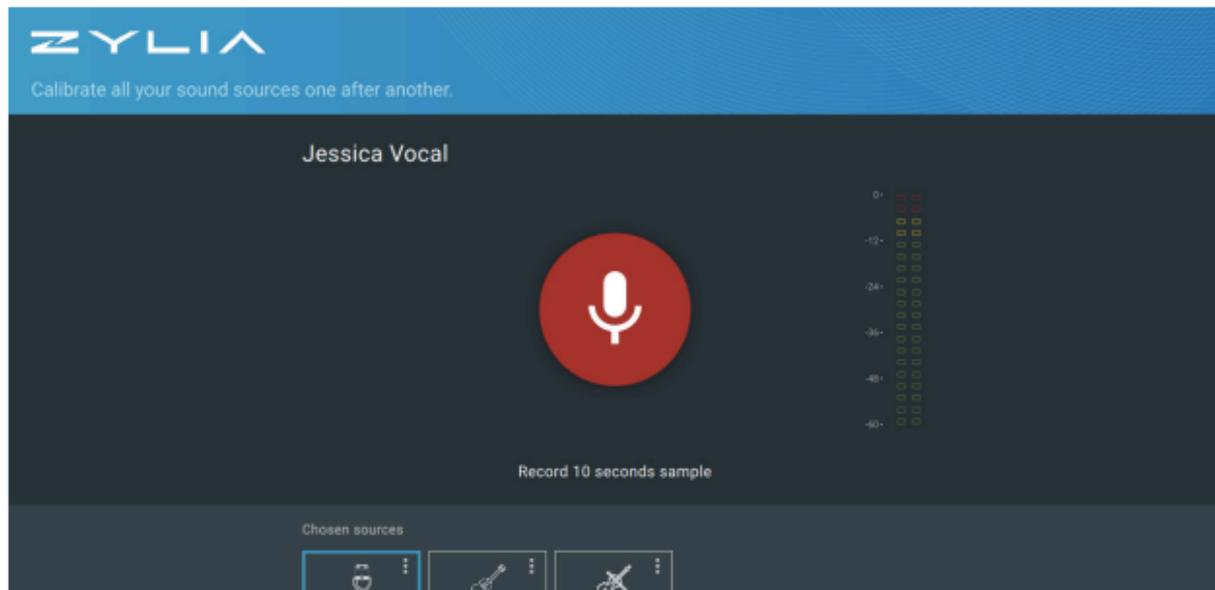
Sound sources must be located around the microphone keeping an approximately equal angle from each other and equal distance from the microphone. Instruments like drums and bass guitar can be located in longer distance from the microphone.

How sound sources should be located?

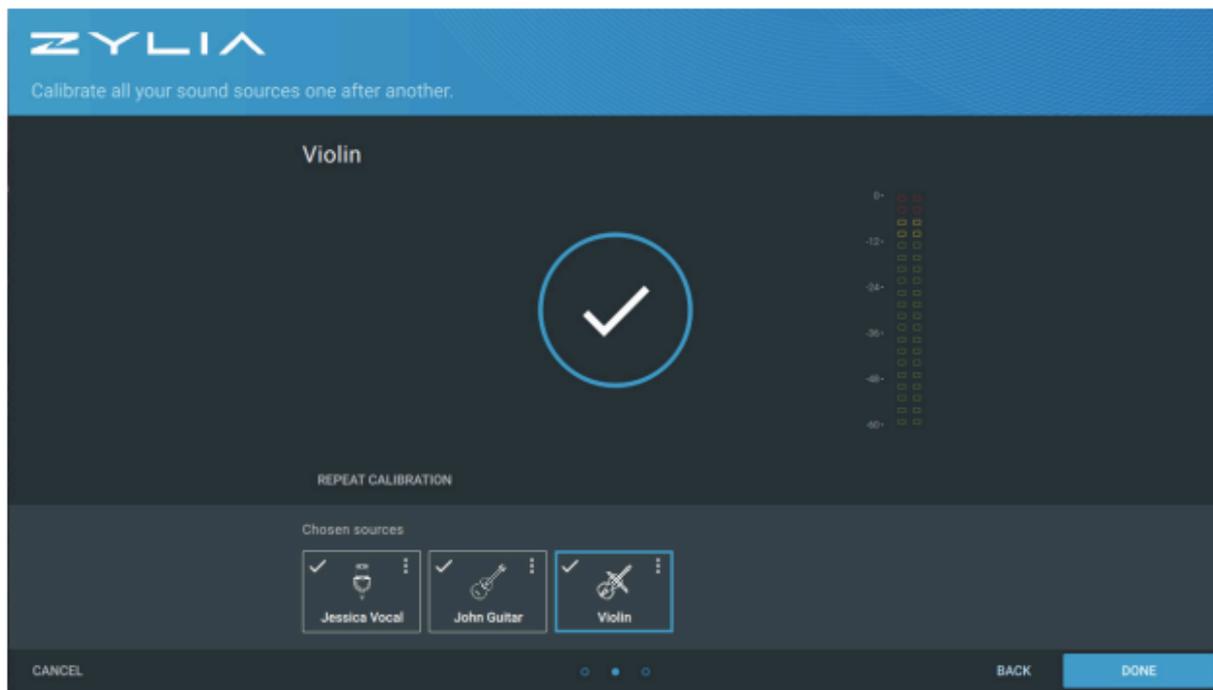


CANCEL      BACK      NEXT

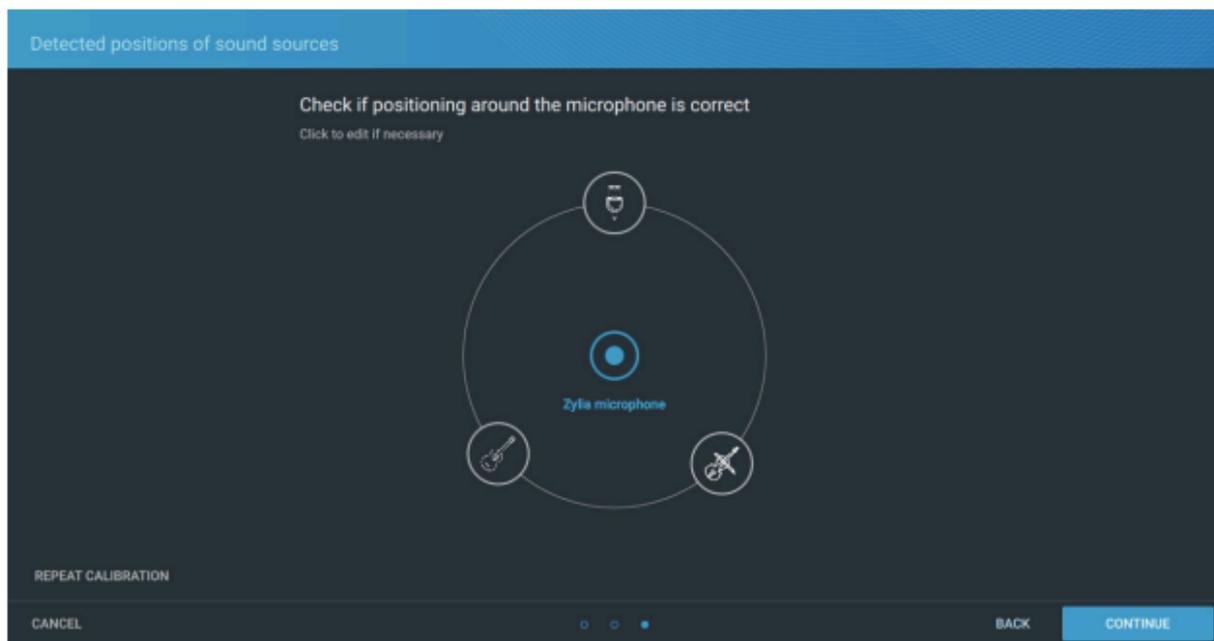
6. Each instrument must play a short sound sample which needs to be recorded. Based on that sample ZYLIA will identify the position of the instrument in the space around the microphone. Click on the red recording button to start calibration of each sound source.



7. All calibrated instruments will be marked with a check mark. Click on the DONE button to proceed.

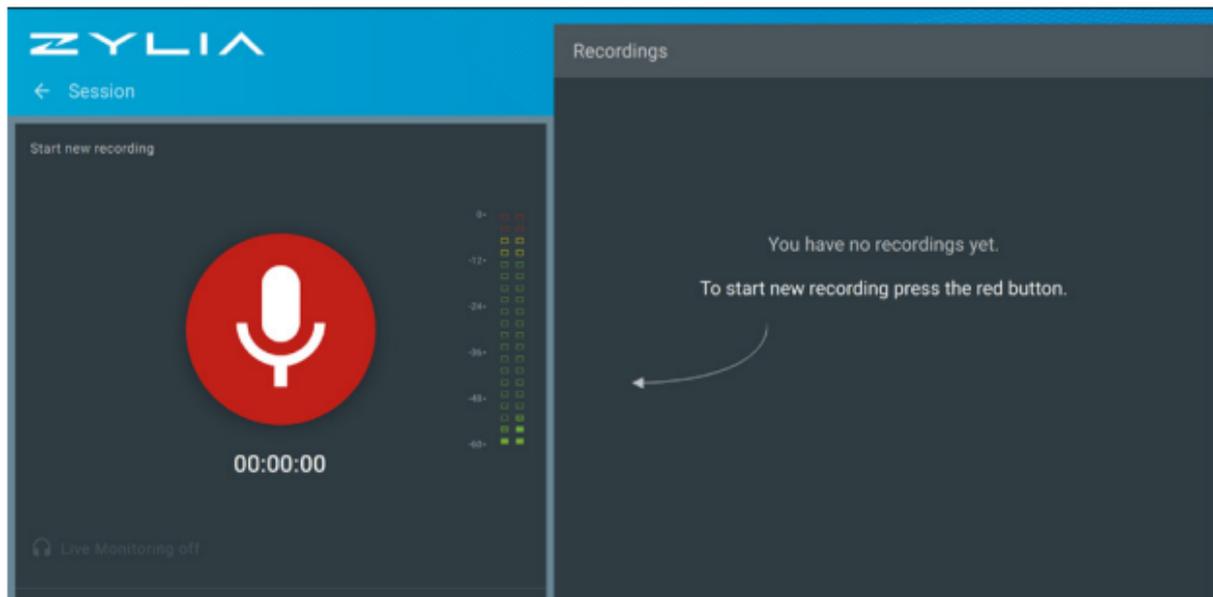


8. The result of the calibration process will be visible in a graphic form. If the position of a given instrument is not correct you can perform a recalibration. If each instrument (sound source) is placed correctly, press the CONTINUE button.



# Recording

1. Press the recording icon in the left panel to record your music. Follow the volume meter to control the level of recorded sound.



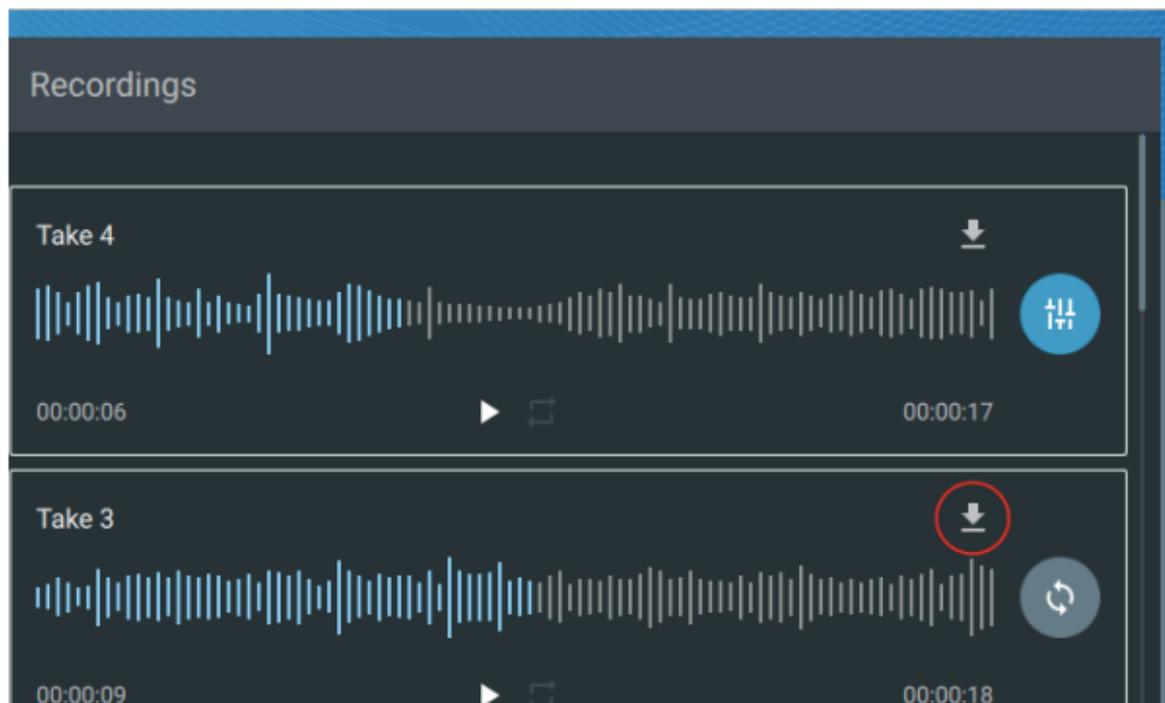
2. Recorded tracks will appear in the right panel.

The screenshot displays the ZYLIA software interface. The top left corner features the ZYLIA logo and the session name "Jam Session Tuesday Morning". The main left panel is titled "Start new recording" and contains a large red microphone icon with a white microphone symbol inside. Below the icon is a digital display showing "00:00:00". To the right of the icon is a vertical level meter with a scale from 0 to -60. Below the meter, there is a "Live Monitoring off" indicator and a "Calibration (3 sound sources)" section with icons for a microphone, guitar, and drums, and a "RECALIBRATE" button.

The right panel is titled "Recordings" and lists four recorded takes:

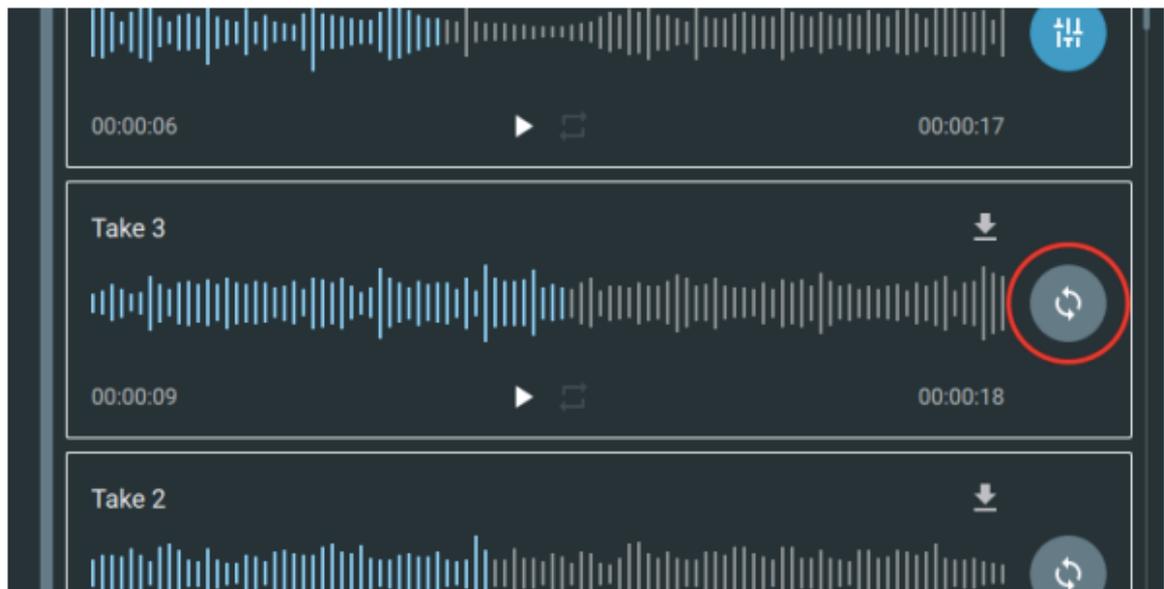
- Take 4:** Shows a waveform, a play button, a square button, and a duration of 00:00:06 to 00:00:17. A download icon is in the top right, and a blue button with a microphone icon is in the bottom right.
- Take 3:** Shows a waveform, a play button, a square button, and a duration of 00:00:09 to 00:00:18. A download icon is in the top right, and a refresh icon is in the bottom right.
- Take 2:** Shows a waveform, a play button, a square button, and a duration of 00:00:08 to 00:00:18. A download icon is in the top right, and a refresh icon is in the bottom right.
- Take 1:** Shows a waveform, a play button, a square button, and a duration of 00:00:08 to 00:00:18. A download icon is in the top right, and a blue button with a microphone icon is in the bottom right.

3. You can download a stereo WAVE file by clicking on the DOWNLOAD ARROW button.



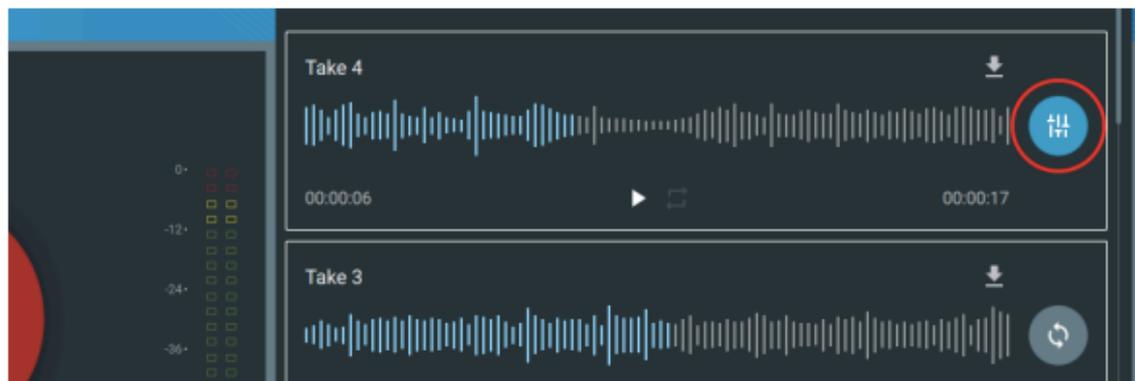
## Sound source separation

If you choose to separate instruments tracks press the SEPARATE button in the right panel. The status of the separation process will be updated accordingly to the progress.



## Mixing

After separation you can go to the mixing panel. Click the MIXER icon.



In the Mixer Panel (see on the next page) you will see a master mix – at the top, and separated tracks of instruments – at the bottom. You can freely change the volume and panning of tracks. You can mute (M) or leave solo (S) track. All changes will appear in the master mix. You can also change the volume of the master mix.

ZYLIA

← Take 1

EXPORT TRACKS



00:00:10



00:00:17



John Guitar

S  
M

+36

-36

L R



Violin

S  
M

+36

-36

L R



Jessica Vocal

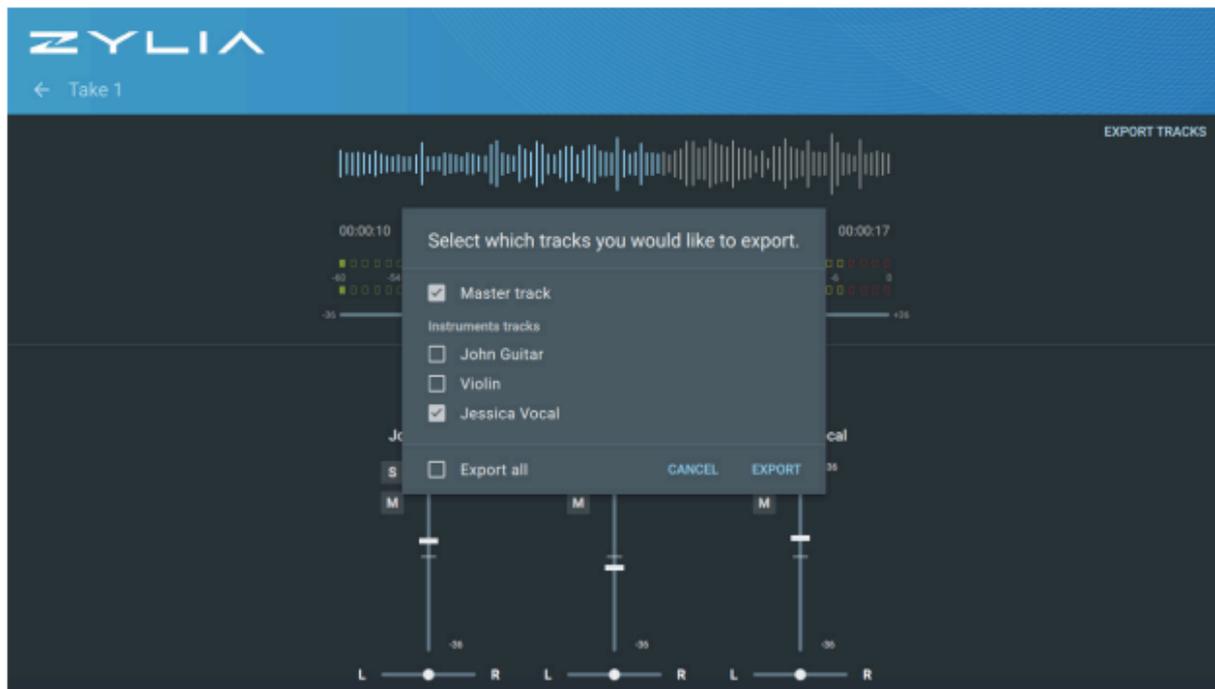
S  
M

+36

-36

L R

After mixing you can download a master mix or separated tracks using the EXPORT TRACKS button.



# Sessions management

You can manage your sessions in the left panel.

The screenshot displays the ZYLIA interface, which is divided into two main sections. The left section, titled "My sessions", features a blue header with the ZYLIA logo and a "START NEW SESSION" button. Below this, there is a list of sessions:

Session Name	Date	Tracks
Session Tuesday Morning	2017-03-16	23 tracks
Session Tuesday Evening	2017-03-16	5 tracks

The right section, titled "Recordings", shows a list of audio takes with their respective waveforms and playback controls:

Take	Duration	Actions
Take 4	00:00:06	Download, Play, Stop, Share
Take 3	00:00:09	Download, Play, Stop, Refresh
Take 2	00:00:08	Download, Play, Stop, Refresh
Take 1		Download

Using the recording system

## Use and care

Avoid rough handling, disassembling, physical shock, or impact such as dropping, hammering, or stepping on the product. Be particularly careful with the microphone patches.

### Recording

- Before you start recording, run a calibration and trial recording to make sure that the microphone is working correctly.
- The microphone is not dust-proof, nor splash-proof, or water-proof.
- If moisture condensation occurs, remove it before using the microphone.
- Do not shake or strike the microphone. It may cause a malfunction and you may not be able to record sound.
- You can use any Audio Digital Workstation (DAW) software for recording with

ZYLIA ZM-1 microphone. The microphone is visible in the operating system as a normal audio input device. When running the DAW select the correct input device from the menu. Set the number of channels to 19.

**Do not use/store the microphone in the following places:**

- In extremely hot, cold or humid places.
- Storing under direct sunlight or near a heater.
- In a location subject to rocking vibrations.
- In a location that generates strong radio waves, emits radiation or is a strongly magnetic place.
- In sandy or dusty places.

## Warning on copyright

Music, performances and other materials may be copyrighted. Unauthorized recording of such materials may be contrary to the provisions of the copyright laws.

## No warranty in case of damaged content or recording failure

ZYLIA cannot provide a guarantee in the case of failure to record or loss or damage of recorded content due to a malfunction of the microphone or recording software, etc.

## Cleaning

Clean the surface of microphone with a soft dry cloth. To prevent damage to the finish or casing do not expose the microphone to chemical products.

## Troubleshooting

### *No light on the microphone*

Your device is disconnected from a power supply (USB) or the microphone driver is not installed in the system.

No light on the microphone may also be caused by using a USB cable which is too long. You should only use the USB cable provided with ZYLIA Portable Recording Studio.

### *ZYLIA ZM-1 is not present in the system as an input device*

You need to check the software driver installation, and if necessary reinstall the driver.

### *No microphone available in ZYLIA Studio*

Unplug the microphone from the computer and close all instances of ZYLIA Studio. Plug in the microphone one more time and run ZYLIA Studio.



### *Signal clipping*

In order to avoid signal clipping when recording very loud sound sources, it is recommended to put the ZYLIA microphone further away from such sources: 2-4 meters (6 - 13 ft). The appropriate distance can be tested by the user during test recordings. The input signal level can be monitored on the volume meter in ZYLIA Studio.

### *Processing and separation of tracks takes very long to complete*

Processing of a recorded file can take some time if the recording is very long. It is recommended to split your recordings into short fragments, individual songs. A single recording should not be longer than one hour. The processing time depends also on the CPU capabilities of your computer.

### *There is no sound in one of the channels*

When recording to DAW, if you notice that there is no sound in one of the 19 channels,

then one of the microphone capsules might be damaged. Please, contact ZYLIA Support.



Technical specifications

## Microphone

- ZYLIA ZM-1 is a spherical microphone array designed for multi-track audio recording
- 19 microphone capsules
- Durable casing
- LED ring status indicator
- 48 KHz / 24 bit recording
- USB connectivity

## General

- Number of simultaneously recorded tracks / sources: Unlimited

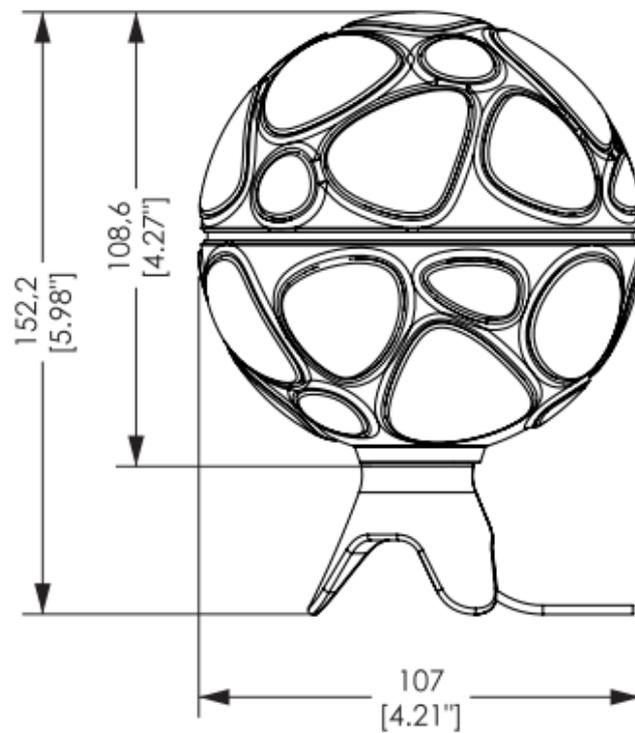
- Automatic separation of recorded sound sources
- Automatic removal of background noises
- A/D conversion: 24 bits, 44.1 / 48 kHz
- Gain adjustment: -12dB to +32dB (0.5dB step)

## Physical

- Storage - Mac or PC through USB
- Connection and power supply - USB 2.0
- Input - 19 raw audio channels or unlimited number of virtual microphone channels
- Output - Micro USB 2.0
- Weight: 470 grams (16.6 ounces)



## Size



## Data type

- Quantization - 16/24 bit
- Sampling frequency - 44.1 / 48 kHz
- RAW - WAVE / PCM

## ZYLIA Studio

- ZYLIA Studio is a dedicated application which enables to record and process every tune created by a band
- Desktop application for MAC, Linux and Windows
- Create, mix and store your recordings
- Extract individual instruments into separate tracks
- Create a balanced recording by mixing individual instruments



- Produce stereo tracks in WAV
- Export tracks into any DAW software

### **Recording time:**

- It is recommended to keep your recordings short.

### **Recording formats:**

- WAVE files

Design and specifications are subject to change without notice.

In case of any technical problems please check our on-line support center at [www.zylia.co/support](http://www.zylia.co/support). If you cannot find the answer to your question please contact [support@zylia.pl](mailto:support@zylia.pl).

Additional information on this product and answers to frequently asked questions can be found at [www.zylia.co](http://www.zylia.co). Check this site frequently for the latest tips and tutorials on recording using ZYLIA equipment.

The most up to date version of this manual is available on-line at [www.zylia.co/support](http://www.zylia.co/support).





