



ZYLIA ZR-1 Portable Recorder

Reference manual

2022-03-29

v1.5

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Table of Contents

The contents of the box.....	4
Before you start.....	4
Overview.....	4
Usage instructions.....	5
Power supply options.....	5
Audio input.....	6
Audio output.....	6
Buttons and knobs.....	7
User data storage.....	8
SD card formatting.....	8
LED status indicators.....	9
Timecode synchronization.....	10
Remote control.....	10
Firmware update.....	13
Cleaning.....	13
Remarks.....	13
Registration.....	14
Technical specification.....	14
Safety and usage precautions.....	15
Conformity statements.....	16
USA.....	16
Canada.....	16
European Union.....	17
Warranty informational.....	17



The contents of the box

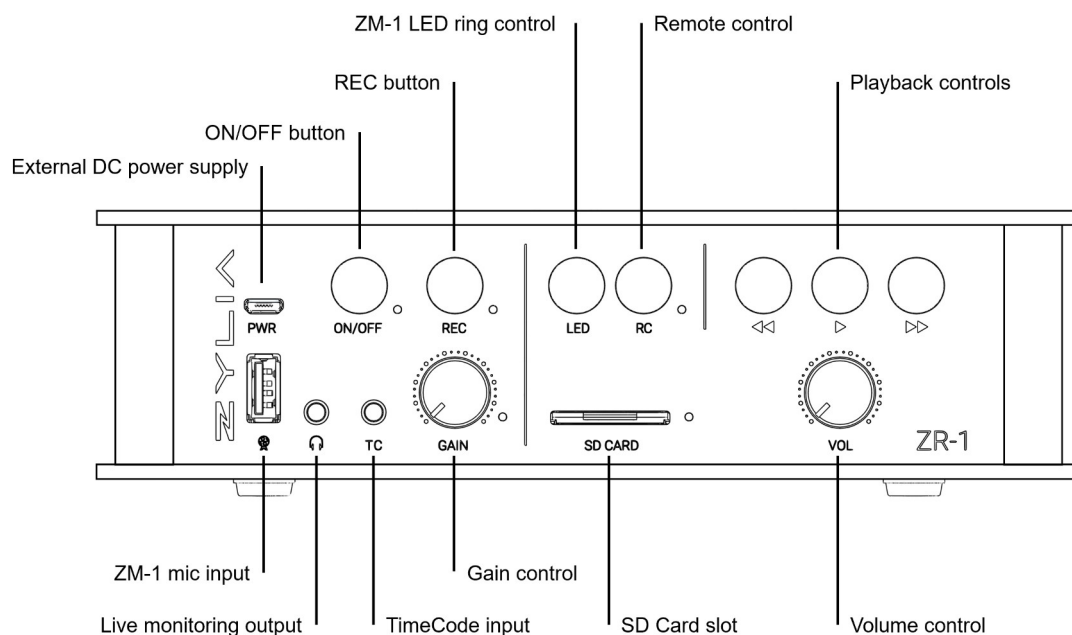
- ZYLIA ZR-1 recorder;
- printed manual - also available at <https://www.zylia.co/zylia-zr-1-firmware.html>
- not included - SD card and batteries.

Before you start

- buy 8 AA batteries (1.5 V) - our recommendation - rechargeable NiMH batteries, 2500 mAh or bigger;
- buy an SD card - cards compatible with SDXC specifications (class 10), at least 10 MB/s write speed, size up to 2 TB. We recommend a SanDisk;
- insert AA batteries into the battery pack in the ZYLIA ZR-1 recorder;
- insert SD card into ZYLIA ZR-1 recorder.

Overview

ZYLIA ZR-1 Portable Recorder is dedicated for use with **ZYLIA ZM-1**. ZYLIA ZR-1 writes the recordings to a SD card, so it's possible to work on them in your favourite Digital Audio Workstation (DAW). Thanks to ZYLIA ZR-1 the whole recording ecosystem becomes even more powerful and versatile for outdoor ambient recording and mobile 3D audio production.



Usage instructions

Power supply options

The ZR-1 device can be powered via:

1. Batteries – 8 x AA (1.5V) of the same type and brand. Do not mix old and new batteries. Rechargeable NiMH batteries are recommended.

Insert 8 AA batteries in a holder located under a lid at the top of the ZR-1.

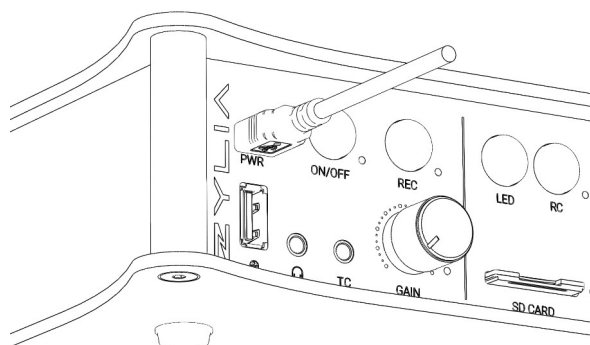
Caution: Observe the proper battery polarity orientation when installing batteries.

A set of 2500mAh rechargeable batteries should last for around 4 hours of operating time.

2. External power supply able to provide 5V at 2.5A DC:

- a) Power bank
- b) DC adapter

To run the ZR-1 device on an external power supply unit, connect the power supply to the micro-USB port on the front panel.



Note: The ZR-1 will not turn ON with external power supply only. A set of charged batteries should be inserted in the battery holder.

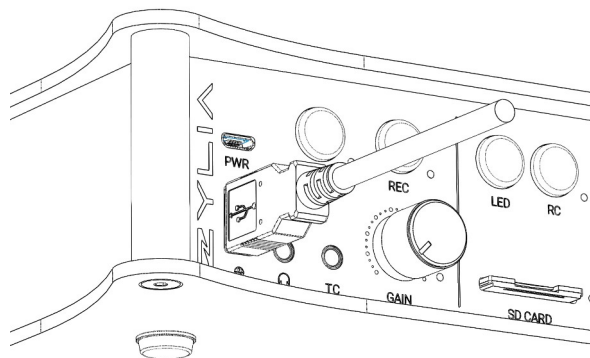
In case of using an external power supply, please make sure that it provides 5V at 2.5A DC. The PSU cable grade and thickness should be sufficient for running power under above conditions.



Audio input

The ZR-1 is designed to record audio from the ZYLIA ZM-1 microphone. Supported ZM-1 models include: 1C, 1D, 3E.

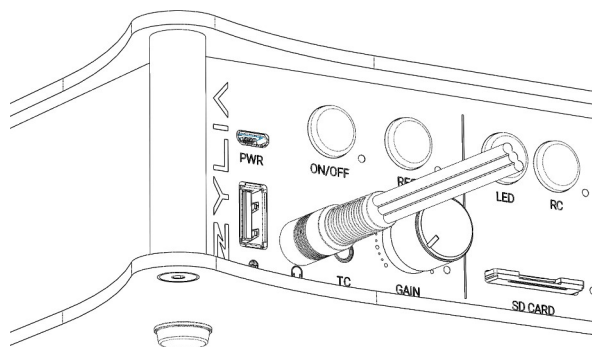
Connect your ZM-1 to USB socket in the lower left corner of ZR-1 front panel.



For recording, it is ideal to set the Gain knob at minimum to avoid clipping. Increasing or decreasing the gain does not affect tonal characteristics of the signal.

Audio output

The ZR-1 contains a 3.5mm jack socket. Connect your headphones to live monitor the sound from connected ZM-1 microphone.



Buttons and knobs

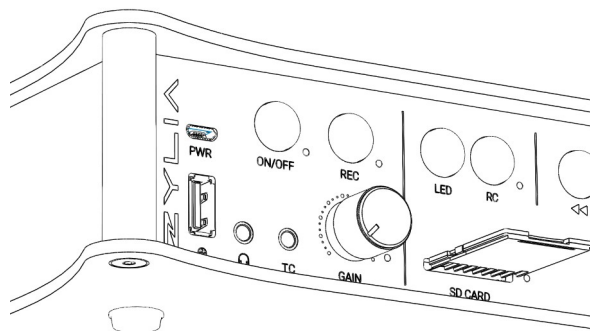
Button name	State of the device	Action	Result
ON/OFF	Turned off	Push and hold for 3 seconds	Device is being turned on
	Turned on, idle	Push and hold for 3 seconds	Device is being turned off
	Recording in progress	Push and hold for 3 seconds	Device stops recording and turns off
REC	Device turned on, idle	Push	Recording is started
	Recording in progress	Push	Recording is finished
LED	ZM-1 connected, LED Ring on	Push	The ZM-1 LED Ring is dimmed by 25% every time and turned off eventually
	ZM-1 connected, LED Ring off	Push	The ZM-1 LED Ring is turned on
RC	RC LED is off	Push	ZR-1 device becomes visible and ready to connect with Remote Control application
	RC LED is on	Push	ZR-1 disconnects from remote control application
	Device turned on	Push and hold for 3 seconds	Reset the device and restore the default password
Backward	No playback	Push	No event action
	Playback on	Push	Skip to the previous recording
	Playback on	Push & hold	Rewind – fast-backward
Play	Device turned on	Push	Play last recorded file
	Playing	Push	Pause played file
	Paused	Push	Continue playing the recorded file
	Recording in progress	Push	No event action
Forward	No playback	Push	No event action
	Playback on	Push	Skip to next recording
	Playback on	Push & hold	Fast-forward



User data storage

All recorded data is stored on SDXC card. MicroSDXC/microSDHC card can be used as well with a micro-to-SD adapter.

ZR-1 operates on FAT32 file system. Memory card should be formatted to FAT32.



Please observe the **Lock** switch on the left side of the SD card. Make sure the **Lock** switch is slid up (unlock position). You will not be able to record or listen to the contents of the memory card if it is locked. SD CARD LED is lit red, if the card is write protected.

If the lock switch is loose and moves easily it is likely the switch is sliding to the locked position as the card is placed in the ZR-1's slot. In this case the card or adapter will need to be replaced.

SD card formatting

By default, Windows computers cannot format drives bigger than 32GB capacity to FAT32 file system.

To format a partition bigger than 32GB as FAT32 you will need to use a third-party formatting tool.

For an updated solution for SD card formatting for different Operating Systems, please consult <https://www.zylia.co/support.html> or contact support@zylia.pl



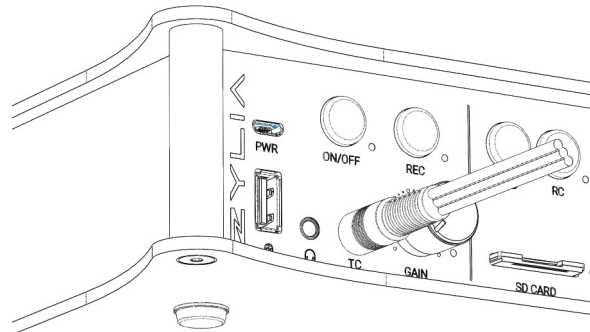
LED status indicators

Name of indicator	Color, behavior	Description of the status
ON/OFF	Continuous green	Device is fully turned ON, the operating system is booted, ZR-1 is ready to use.
	Continuous purple	Device is shutting down or upgrade is in process.
	None (off)	ZR-1 is OFF, the system is not booted, ZR-1 is ready to be powered on and booted (provided that the batteries are inserted or external power supply is connected).
REC	Continuous red	Audio is being recorded to SD card.
	Blinking red	SD card is busy; a user should wait before starting a new recording or removing SD card.
	None (off)	The device is ready to record
GAIN	Blinking in red occasionally	Input signal is too high and it's clipping, a user should adjust the gain.
	Blinking in red regularly	ZM-1 is disconnected
	None (off)	ZM-1 is connected and gain level is fine.
RC (remote control)	Continuous blue	Device is accessible via Wi-Fi and ready to connect with remote control application.
	None (off)	Remote connection is disabled. ZR-1 is not accessible via Wi-Fi.
SD CARD	None (off)	SD card contains enough space to continue recording.
	Blinking red	Space on the card ends, if the user is recording he/she should stop recording and replace the SD card.
	Continuous red	<ul style="list-style-type: none"> a) There is no SD card plugged into ZR-1. b) Error with SD card. c) SD card is not detected, please check if SD card is formatted to FAT32 format d) No more space on SD card to start next recordings.



Timecode synchronization

ZR-1 supports Timecode synchronization using signal generated by an external device. Connect the Timecode generator with a mini-jack cable to a TC socket on ZR-1 front panel. Timecode signal is recorded along with the signal captured by the ZM-1 and stored in a separate file with filename containing "TC".



Remote control

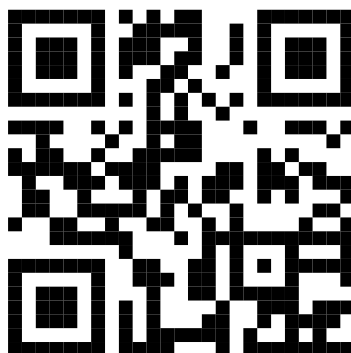
ZR-1 Portable Recorder can be controlled remotely through a web application on Wi-Fi enabled devices such as a smartphone, a tablet or a computer. Any device with a web browser and wireless network interface can act as a ZR-1 remote controller.

To enable connection with ZR-1 press the RC button on the front panel. RC LED will light up in blue signalling the device is ready for connection. To establish a connection between the devices, Turn on Wi-Fi on your controlling device and look for a network with a name containing ZYLIA ZR-1 and the serial number.

Example network name: "ZYLIA ZR-1 ZR10R01201010000".

Connect to the network using a default password: zyliazr1.

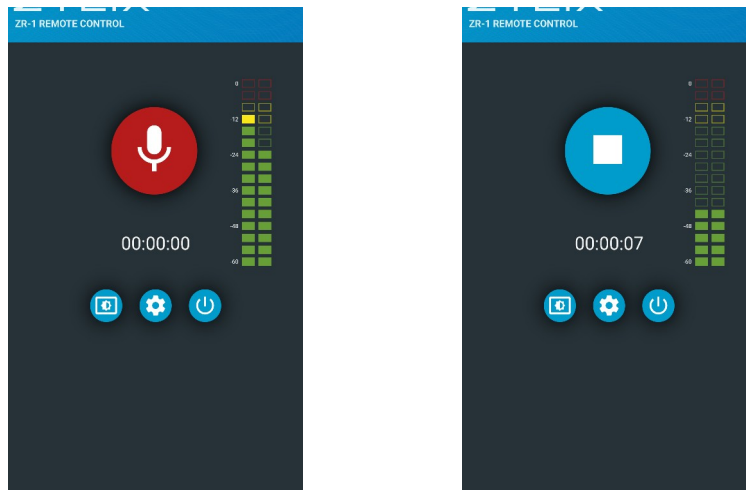
To open the ZR-1 Remote Control web application open up your browser and type in the following address: 10.254.239.1 or scan the QR code:



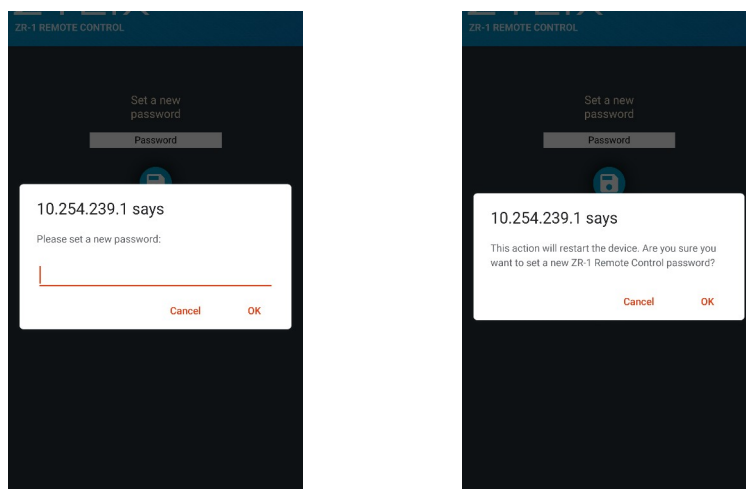
You can find the QR code on the sticker located on the bottom of the device



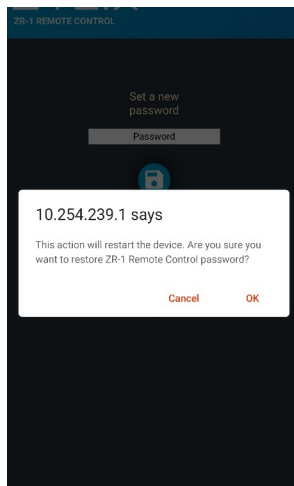
ZYLIA ZR-1 REMOTE CONTROL looks similar on different devices and has the following options:



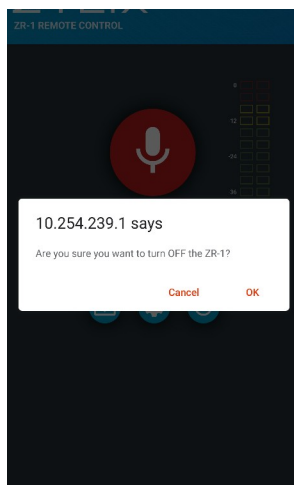
1. Recording button - just like the hardware button, press it to start recording and press it again to stop
2. VU meter - shows the input signal level captured by the top left and right capsules (channels 5 and 8)
3. Timer – shows the recording time
4. LED Ring dimming button - just like the hardware button. The ZM-1 LED Ring is dimmed by 25% every time the button is tapped and turned off eventually
5. Settings - tap it to change or restore the network password
 - 5.1. To change the password, type in a new password in the text box and save it by tapping the floppy disk icon. Confirm the changes in the dialog box.



5.2. To restore the password, press the icon with the counter-clockwise arrow and confirm the changes in the dialog box. If you forget the password and cannot access the Remote Control, press and hold the RC button while the device is on. This will restart the device and restore the default password: zyliazr1.



6. Turn Off - turns off the ZR-1 after confirmation in the dialog box.



7. ZYLIA logo – press it to return to the main screen or refresh the page



Firmware update

The ZR-1 firmware can be updated with specially prepared files provided by ZYLIA. To perform the firmware update, the user is required to upload the provided update files to a USB flash drive. The procedure is as follows:

1. *Download the bin from the link provided by ZYLIA.*
2. *Upload the provided file to a USB flash drive with FAT32 file system and at least 4GB of free space.*
3. *It is recommended that during the update procedure the ZR-1 should be connected to the external power adapter supplying 5V at 2.5A. The device should be turned off.*
4. *Remove the SD Card from the slot and connect the USB flash drive to the ZR-1 USB socket.*
5. *Turn on the device while simultaneous pressing and holding PLAY and REC buttons. Release the buttons after around 5 seconds and wait until REC, SD CARD and GAIN LEDs light up. After the three LEDs turn off, ON/OFF LED will change the color to purple indicating that the firmware update process has started.*
6. *The process may last around 5 minutes. When the update ends, the ZR-1 will power off by itself.*
7. Turn your ZR-1 recorder on. ZR-1 will restart to complete the configuration and will be ready for use.

Cleaning

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

Remarks

Do not eject the SD card during playback. If the SD card is ejected while ZR-1 is playing a recording, the system will crash if Forward or Backward button is pressed.

While fast-forwarding or back-warding, other actions are queued and delayed until the button is released and normal playback is continued.



Registration

Before using the ZYLIA ZR-1 recorder for the first time, register the device at:

<http://www.zylia.co/register.html>

Use the serial number located on the device and provide your contact information.

By registering, you can access technical support and activate your warranty. Registering also keeps you informed of all the latest software updates and ZYLIA products.

Technical specification

Dimensions: 206 x 196 x 58 mm

Weight: 880 g

Data storage: cards compatible with SDXC specifications (class 10), size up to 2 TB

Supply voltage: 5V DC

Supported power sources: batteries – 8 x AA (1.5 V); external power supply via micro USB socket – 5V, 2.5 A.

Current consumption: max. 1.44 A

Number of microphones that can be connected to the ZR-1 device: 1

Type of microphone that can be connected to the ZR-1 device: ZM-1 models 1C, 1D, 3E

Supported audio files formats: WAVE, Wave64

Recording quality: 48kHz/24-bit

Supported synchronization system: Timecode



Safety and usage precautions

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

To reduce fire or shock hazard, do not expose the unit to rain, moisture or high temperatures. Do not use near heaters or other heat sources.

Always turn the power off before connecting any cables.

Do not apply excessive force to plugs when they are connected to the ZR-1 device.

In case of using batteries:

Always use commercially-available 1.5 V dry cell batteries.

Carefully study warning indications on batteries before use.

Always keep the battery cover closed during use.

Install batteries with correct +/- orientations.

Do not use new and old batteries together. Do not use batteries of different brands or types together.

Remove the batteries when the device will not be used for a long time.

In case of using external power supply:

Always use a DC power source (DC wall adapter or power bank) specified for this product: 5V, 2.5 A. Carefully study the warning indicators of the DC power supply before use.

Disconnect the DC adapter from the outlet when the unit will not be used for a long time and whenever there is lightning.

If static electricity or electromagnetism causes data transfer failure, restart the device.

Do not open the case or make alterations.

All repairs may be performed only by authorized service. The user is not allowed to repair the device on his own.



Conformity statements

USA

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.

This equipment 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.

Canada

The device complies with Innovation, Science and Economic Development Canada (ISED) compliance requirements ICES-003.

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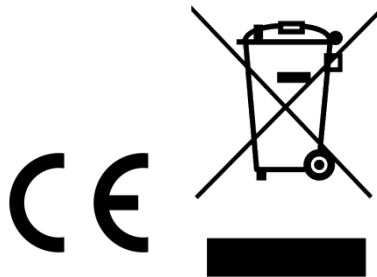


European Union

This device is classified as an electronic equipment.

Do not throw to household waste when discarded.

Check local regulations for electric equipment disposal.



Warranty informational

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;
- defects or damage caused by misuse, accident (including, without limitation, collision, fire and the spillage of food or liquid), neglect, abuse, alteration, 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;
- damage caused by using the product outside the permitted or intended uses described by ZYLIA;
- any non-ZYLIA hardware products or any software, even if packaged or sold with ZYLIA products.
- 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 errorfree. 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.

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