AyuDevices

User Manual

Version 0

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1. Introduction

• Intended use

The AyuLynk is an exceptional healthcare tool meticulously crafted to support and empower medical professionals in the vital task of listening and analyzing heart and lung sounds. Its primary aim is to bridge the gap between rural doctors and their urban counterparts, enabling seamless communication and collaboration.

Comprising a device seamlessly integrated with a stethoscope and the AyuShare App, AyuLynk is a comprehensive system designed to optimize efficiency and enhance patient care. By utilizing OTG technology, it facilitates sound amplification and audio transmission to iOS and Android smartphones and tablets through wire. This groundbreaking feature enables users to conveniently access, open, analyze and play back sounds through the AyuShare App, available on compatible devices.

AyuLynk enables healthcare providers to access saved sounds ensuring uninterrupted continuity of care. Furthermore, the app enables effortless sharing of recordings with other clinicians, fostering collaboration and promoting accurate diagnoses.
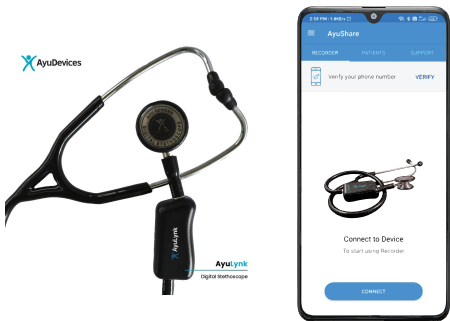
AyuLynk module is an electronic device used to amplify body sounds when used with the standard manual/conventional stethoscope. The AyuLynk module is intended to be used by health professionals in a clinical environment. The device is not intended for self-diagnosis.

Under certain conditions, the patient might be the intended operator.

Warning: Avoid using maintenance or servicing while the equiptment is in operation.

1. Introduction

- ## Device Description

Fully assembled digital stethoscope and mobile app

- ## Indications for use

AyuLynk is an advanced electronic stethoscope designed for healthcare professionals in clinical settings. It offers amplified sound, noise reduction, and seamless transmission of heart and lung auscultation data. Additionally, visual graphs greatly enhance the diagnostic process for doctors, making it significantly more effective and efficient.

With AyuLynk, healthcare professionals can elevate their auscultation capabilities, leading to improved patient care and enhanced healthcare practices.

2. Symbols & Cautions

- Symbols

	Instructions for use
	Do not dispose with household waste
	Emits Radio Frequency signal
	Humidity range
	Temperature range
	Manufacturer
	Manufacturing date
	Quantity
	MR Unsafe
	Direct Current
	"ON" / "OFF" (push - push)
	Refer to Instruction Manual / Booklet

2. Symbols & Cautions

- Symbols

Type B Applied Part

IP20

An IP20 rating indicates that the product is touchproof and resistant to dust or items larger than 12mm in size. However, it has no protection against liquids and will be damaged if it comes into touch with water sprays.

2. Symbols & Cautions

- Cautions

- **To reduce the risk of device interference**, keep AyuLynk at least 1 meter away from all RF emitters including Wifi routers and radios.

- **To reduce the risks associated with inaccurate data acquisition** store and operate this stethoscope only as instructed in this manual. It is highly recommended that the battery be recharged once LED indicator turns red. Recharge the battery using only the standard USB power cord with a USB wall charger.

- **DO NOT immerse the stethoscope in a liquid** or subject it to any sterilization processes other than those described in this manual.

- To reduce the **risks associated with very strong electromagnetic fields** avoid using the stethoscope near strong radio frequency (RF) signals or portable and/or mobile RF devices and/or specific RF emitters that are known sources of electromagnetic disturbance such as diathermy, electrocautery, RFID, security systems (e.g.,electromagnetic anti-theft systems, and metal detectors).

- **Please read, understand, and follow all safety information** contained in these instructions prior to using the AyuLynk. It is recommended that these instructions be retained for future reference.

- **To improve OTG connection,**use a standard data transfer cable and keep the cable steady to avoid disruption between AyuLynk and mobile device.

- **Device is not functional** while charging.

- **To ensure high quality sounds** location and position of AyuLynk placement should be taken into consideration when auscultating.

2. Symbols & Cautions

- Warnings

- No modification of this device is allowed.

- Do not modify this device without authorization of the manufacturer.

- If the device is modified, appropriate inspection and testing must be conducted to ensure continued safe use of device.

- Circuit diagram, component part list, description and other information that will assist service personal to repair the device will be made available on request to the service personal designated by Ayu Devices Pvt Ltd.

3. Installation to Existing Stethoscope

• Step One

Hold the chest piece of your stethoscope in one hand and Carefully insert the chest piece into the AyuLynk connecting tube provided with the Kit.

• Step Two

Attach the AyuLynk Digital Stethoscope to the other end of the AyuLynk connecting tube.

• Step Three

Attach the Binaural of the stethoscope to the other end of the AyuLynk device and assembly of the AyuLynk digital stethoscope is now complete

*This is not required for pre-assembled digital stethoscope

3. Installation to Pre-assembled Stethoscope

• Step One

In pre-assembled digital stethoscope, the chest piece, connecting tube, and AyuLynk module are already assembled as depicted in the illustration on the left side.

• Step Two

Attach the Binaural of the stethoscope to the other end of the AyuLynk device and assembly of the AyuLynk digital stethoscope is now complete

4. Operation

- AyuLynk Modes and LED states

- Device Status

    🟢 AyuLynk is on

    🔴 AyuLynk is low on Battery

- During Charge

    🔵 Charging

    🟢 Charging Full

4. Operation

- AyuLynk Working processes

- ### Power On/Off (Turn on/Shut down procedure)

To turn on the AyuLynk device, click on the power button. The LED will turn on once the device is turned on. If you wish to power off the device, simply click the power button again, and the device will turn off.

- ### Test the Volume level

AyuLynk's sound level can be amplified higher than that of an acoustic stethoscope. Utilize the scroll wheel on the device to adjust the volume level, increasing or decreasing it as needed.

- ### Charge Battery

To charge the battery in AyuLynk, insert the included micro USB cable into the USB port on the device, and plug the other end into a USB wall charger. The LED will turn solid Blue to indicate that it is charging. Once the device is fully charged, the LED will change to solid green. In continuous usage mode, the fully charged battery should last for at least 8 hours.
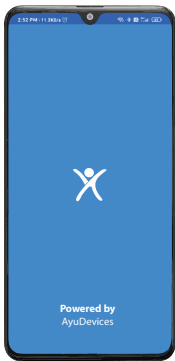
- ### AyuShare App

Download the AyuShare app, available on the App Store® and Google Play store and follow the on-screen instructions to connect to AyuLynk (as shown on the next two pages).
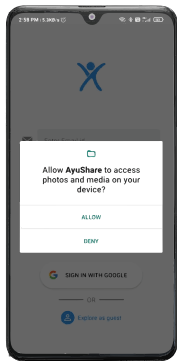
OTG must be enabled in the mobile or tab's settings in order to use AyuLynk with the AyuShare App. Update to the latest version of the AyuShare App.
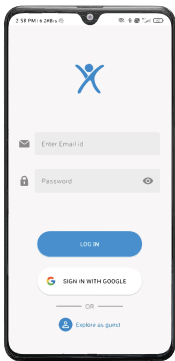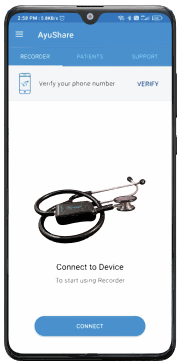
4. Operation

- Connection with AyuShare App

Access:
Launch AyuShare app on your Phone

Allow:
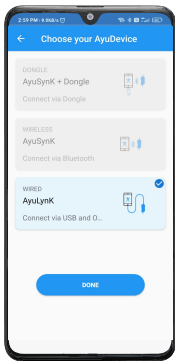Click on allow for necessary permissions

Log in:
At the login page, Click on "Sign in with Google"

Connect:
Now you are at Homepage,
Click on "Connect" and Pair to wired or bluetooth headphones when connecting to ayushare
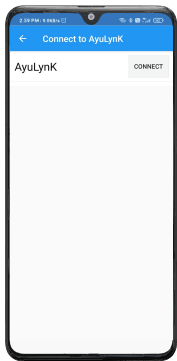
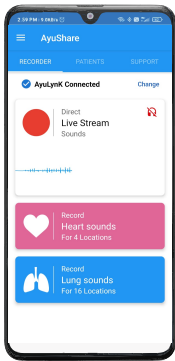# 4. Operation

- Connection with AyuShare App

Choose:
In next step choose third option
"AyuLynK- Connect via OTG" and
Click Done

Select:
Any active AyuLynk device will be available
to connect on next page. Select your Device
and Click "Connect"

Connected:
Now your mobile and AyuLynk has
been successfully connected.

4. Operation

AyuLynk package includes

- Smart Stethoscope Module with Chest piece
- Connecting tubes
- Binaural
- USB Cable
- Wired Earphone
- OTG – B & C type
- Thank you card
- E-Manual

The compatible hardware and software platforms are listed below.

• Compatible Stethoscope

AyuLynk is designed to be compatible with other stethoscope brands and models, but there are no performance guarantees when using other stethoscope brands or models.

• Data Connection

In order to transmit sounds to the AyuShare App, the stethoscope and device must be connected via OTG, and in order to fully use certain functions, the mobile device must be connected to the internet via cellular data connection or Wi-Fi.

• System Requirements

The mobile app software can be used on iPhone with iOS 12.0 and higher. The mobile app software can also be used with Android devices with Android 9.0 and above.

• Adapter specification requirement:

Use standard adapter with 5v ,1amp

5. Cleaning

• Cleaning and Disinfecting Procedure

The AyuLynk stethoscope should be disinfected between each use. Infection control guidelines from the Centers for Disease Control and Prevention (CDC) state that reusable medical equipment, such as stethoscopes, must undergo disinfection between patients. Standard stethoscope hygiene practices apply to the AyuLynk device.

NOTE: DO NOT immerse the device in any liquid or subject it to any high-pressure/autoclave sterilization processes.

To prevent staining of stethoscope binaural, avoid contact with pens, markers, newsprint, or other printed material. It is good practice to wear your stethoscope over a collar whenever possible.

6. Troubleshooting and Maintenance

- For Help and Assistance

Please contact Ayu Devices if you need assistance or any product related concerns.

For more information please visit:
https://www.ayusynk.ai/

Direct Contact: contact@ayudevices.com

Purchase and Sales enquiry
Phone: +91 8047191146

After sales service
Call Support: +91 8047191855
Whatsapp Support: +91 8073972906

7. Technical Specification

Stethoscope Type	Electronic/Digital
Power Source	Secondary Rechargeable battery (Li-Poly)
Battery Life	Approx. 8 hrs. of continuous use on a single charge
Charging Time	Max 2 hours.
Audio Output	Built-in speaker
Amplification	Adjustable volume levels for enhanced sound amplification (upto 60X)
Frequency Range	Typically between 20 Hz and 20,000 Hz
Sound Recording	Capable of recording and storing auscultation sounds for later playback or analysis
Filter Options	Heart and lung filters to emphasize specific sound frequencies.
OTG Connectivity	Enables wired connection to a smartphone, tablet, or computer for data transfer and remote monitoring.
Software Compatibility	Compatible with dedicated AyuShare app (Android & iOS)
Noise Reduction	Advanced noise reduction algorithms in app to minimize ambient noise interference
Diaphragm and Bell Modes	Switchable modes for capturing different types of body sounds (high-frequency and low-frequency sounds)
Material	Durable and lightweight construction (stainless steel, high-grade biodegradable plastic material)
Accessories	1 binaural, 2 Connectors, 1 USB cable,1 Wired earphones.
Weight	80g

7. Technical Specification

Temperature	Temperature between -10°C to 40°C
Humidity	Humidity between 30% to 90% RH
Connectivity Specification	OTG support
Transport/storage	
Device type	Internally powered device
Mode of operation	Continuous
Battery	3.7 V Nominal Voltage, 500mAh Li- Polymer battery

8. Warranty

Ayu Devices provide limited warranty on Device and accessories.

Device
(AyuLynk)

Warranty Period

12 Months

Additional Information: Type of Service - Repair service carried at Ayu Devices service centre.

Accessories
(Others)

Warranty Period

6 Months

Applicable accessory: Binaural, Connectors, USB cable, Wired earphones.

9. Disposal

• Electronic waste

Please do not dispose it as household waste treat it as E-Waste.

Compliance with Local Regulations: Laws and regulations regarding Electronics waste disposal may vary depending on your location.

It is essential to familiarize yourself with local regulations and guidelines to ensure compliance with proper waste management practices

 Do not dispose with household waste.

10. Manufacturing and Regulatory Information

Manufactured by: Ayu Devices Pvt. Ltd.
CM-06, 4th Floor, KReSIT Building,
Near Gulmohar Cafe, Main Gate
road, IIT Bombay, Powai
Mumbai Maharashtra 400076

Service Centre: Ayu Devices Pvt. Ltd.
CM-06, 4th Floor, KReSIT Building,
Near Gulmohar Cafe, Main Gate
road, IIT Bombay, Powai
Mumbai Maharashtra 400076

Made in India

Supported by
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Technology Innovation Centre
BIRAC: Biotechnology Industry Research Assistance
Council
DBT: Department of Biotechnology
DST: Depatment of Science and Technology