Rad-X Product Manual

Rad-X Development Team

Content

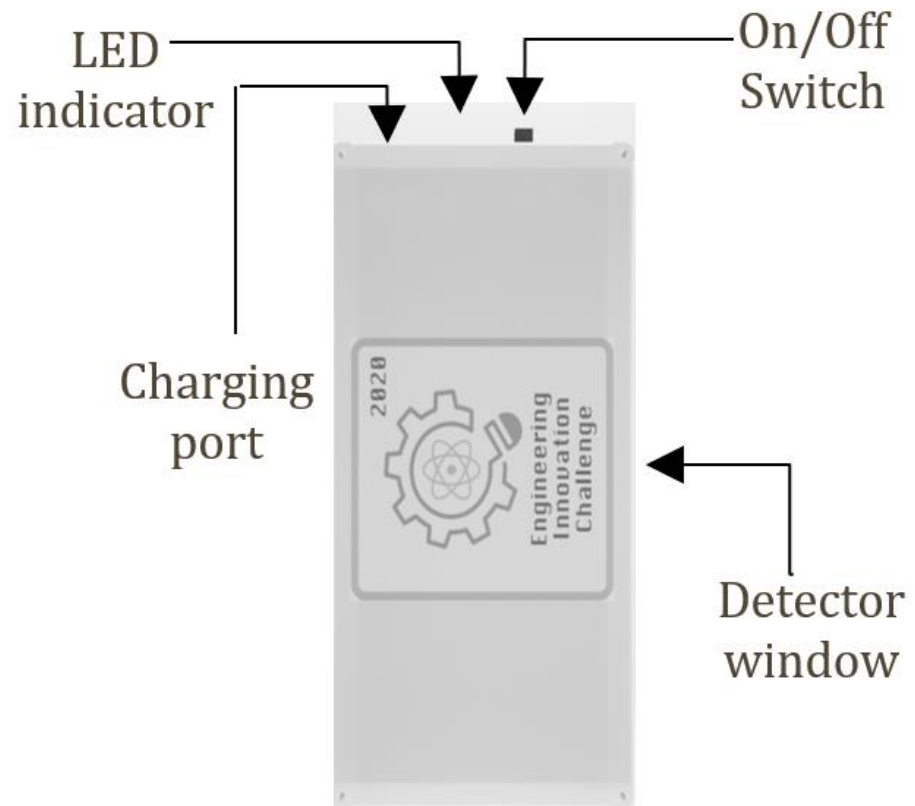| Section	Page
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Disclaimer

While the Rad-X team has tested the Rad-X GM-tube-based radiation detector ("the device") during development, the team cannot guarantee that it continues to perform as expected after distribution. Both the device and the data it provides are to be used strictly at the users' own risk and discretion. The Rad-X team assumes no liability for any loss, damage, or injury arising from the proper or improper use of the product or the data it provides. For your safety and well-being, stop utilizing the device in case of any anomalies. Contact the relevant organisation in case of such anomalies.
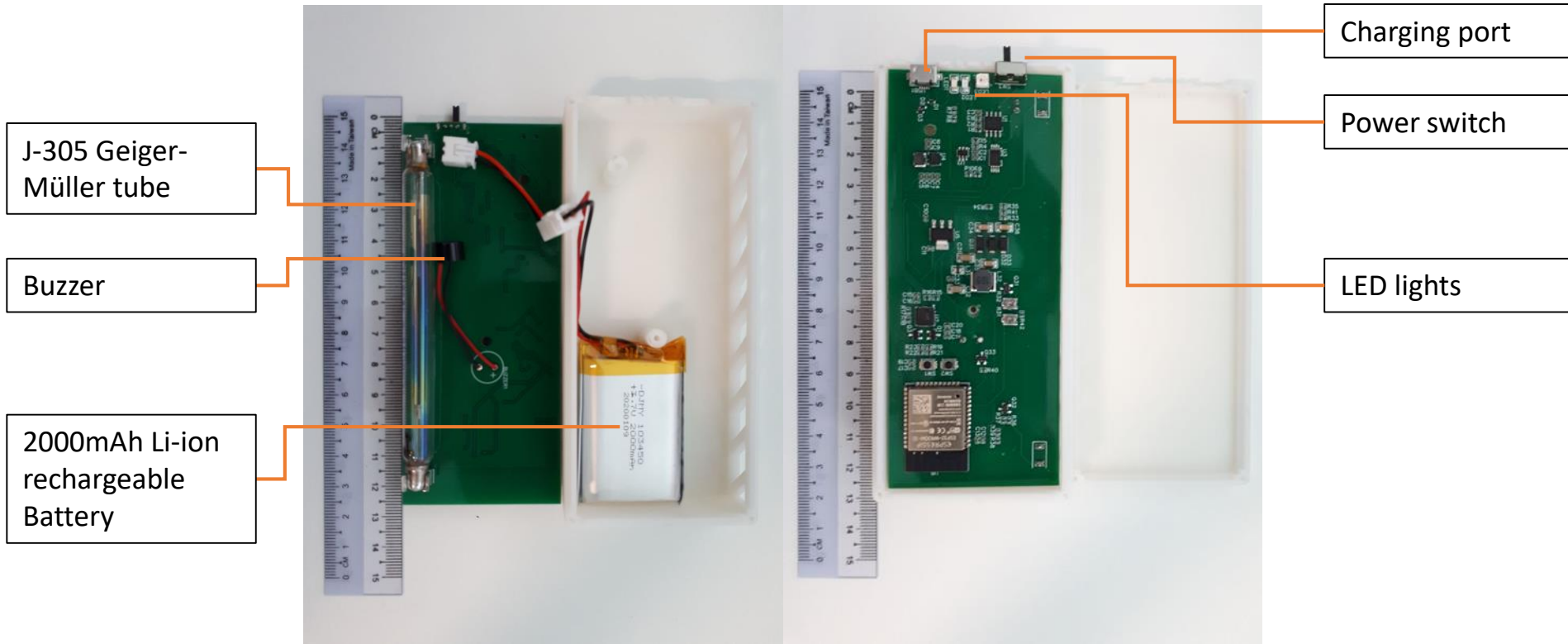
Safety Information

Follow the warnings below to prevent incidents such as fire or explosions, injuries, or damage to the device

➢ Do not turn on the device and leave it unattended

➢ Do not expose the device to physical impact or damage

➢ Do not expose the device to water

➢ If any part of the device is broken, smokes, or emits a burning odor, stop using the device immediately

➢ Do not allow children or animals to chew or suck the device

➢ Do not use your device in a hot environment or near fire

➢ Comply with all safety warnings and regulations regarding mobile device usage while operating a vehicle

➢ Do not operate the device if a long continuous beep persists

➢ Please handle the device carefully as it contains fragile components

LED indicator

On/Off Switch

Charging port

Detector window

Engineering Innovation Challenge
2020

Rad-X device components

J-305 Geiger-Müller tube

Buzzer

2000mAh Li-ion rechargeable Battery

Charging port

Power switch

LED lights

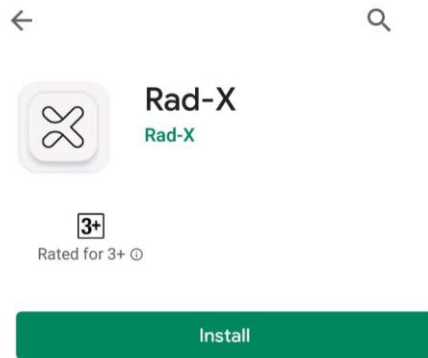Singapore Nuclear Research and Safety Initiative

➢ Charge the Rad-X radiation detector with <u>microUSB</u> charger.

   ➢ A red LED light indicates the charging process is underway.
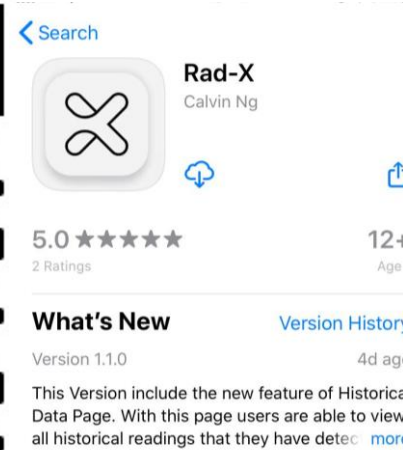
   ➢ A blue LED light indicates that charging is completed.
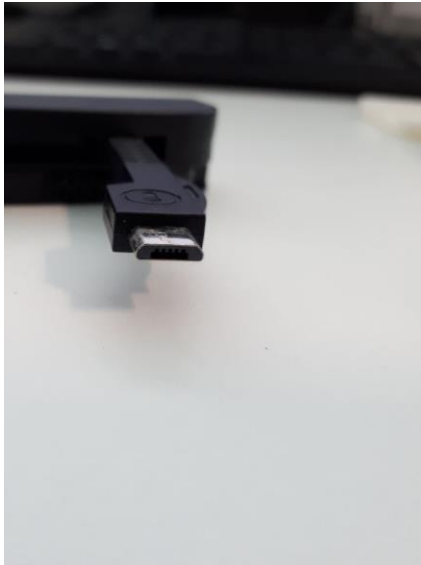
How to use Rad-X

Download the app

Android

iOS

How to use Rad-X

Turn on Location and Bluetooth and run the app. Log in with your team's assigned username / password.
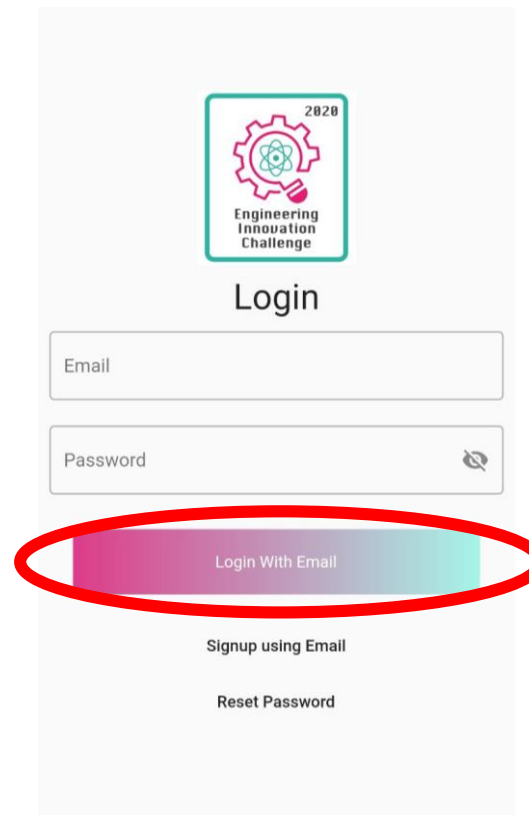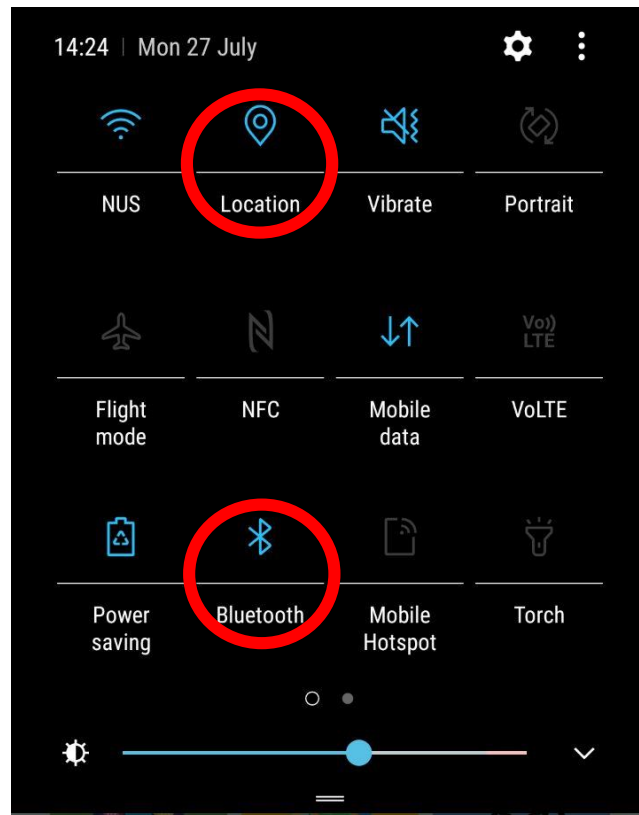
How to use Rad-X

If this is your first login, please verify your email via the link sent to the email address.

How to use Rad-X

Turn on the Rad-X device and go to the Bluetooth page. Press the Search button and allow all permissions.
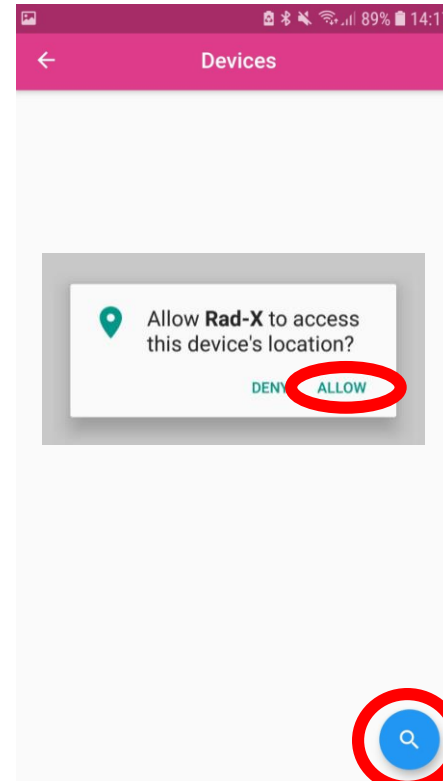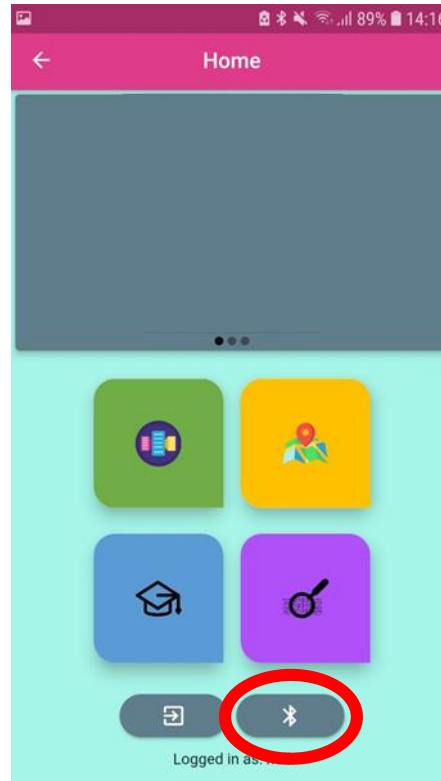
How to use Rad-X

Select your Rad-X device. Once paired, go to the Measurements page. The green LED should light up on the device.
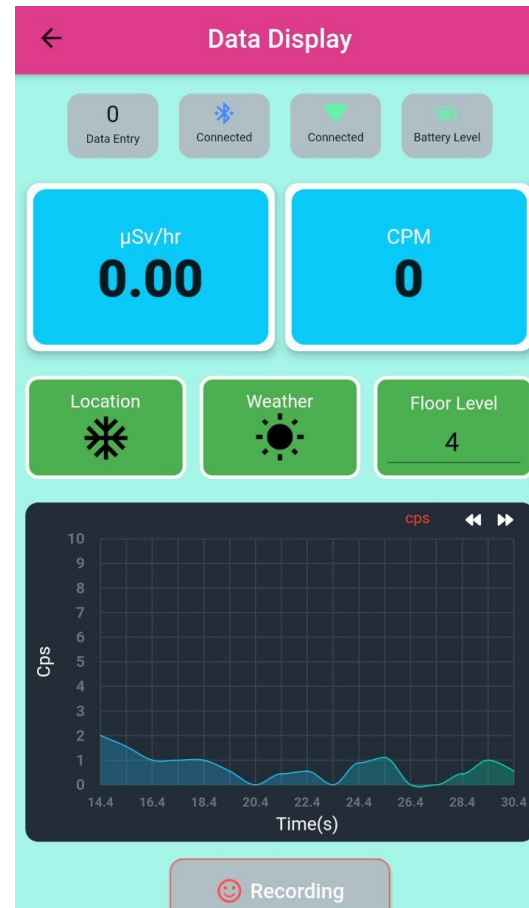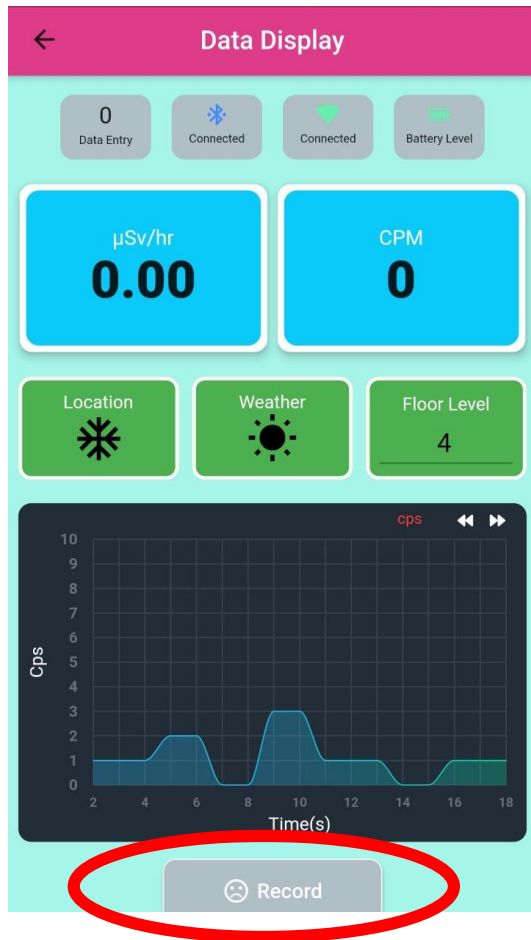
How to use Rad-X

Double-tap the Location and Weather icons and select the appropriate options. Key in the Floor Level with the numeric keypad.
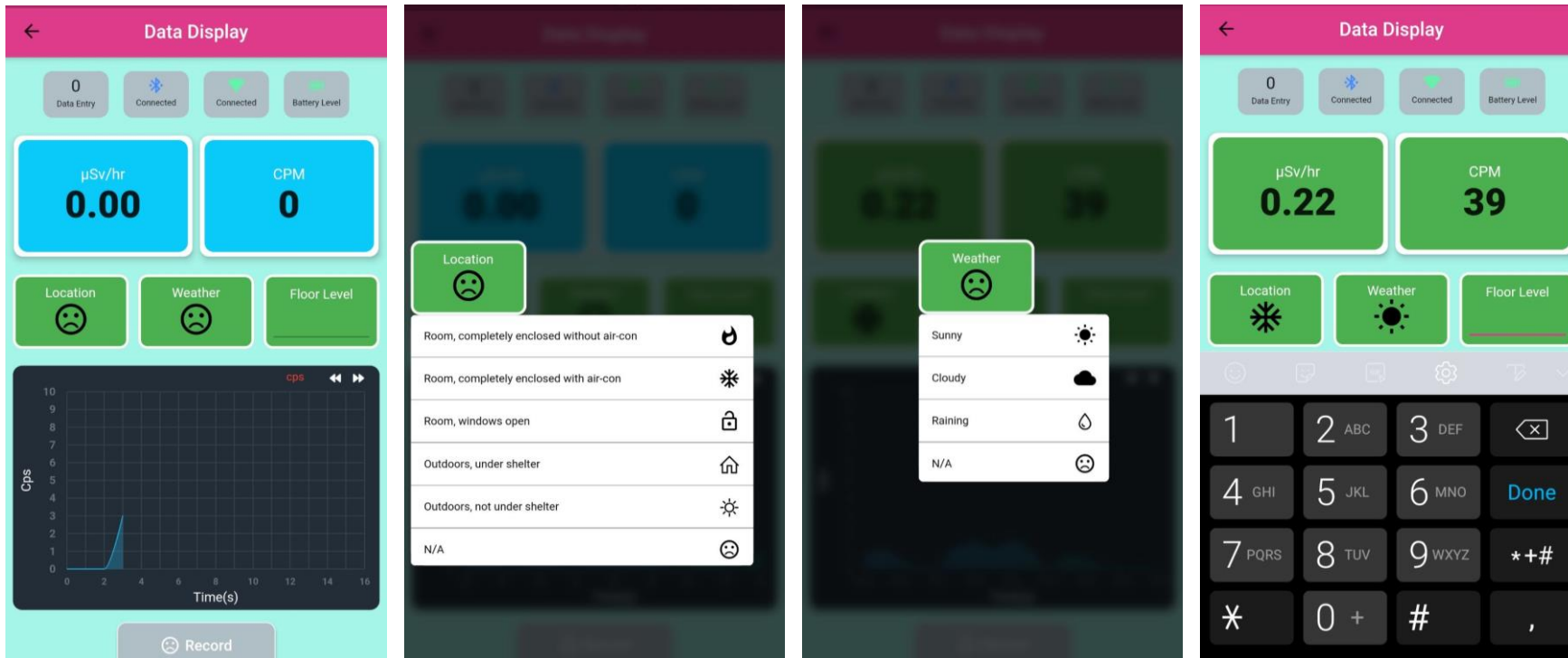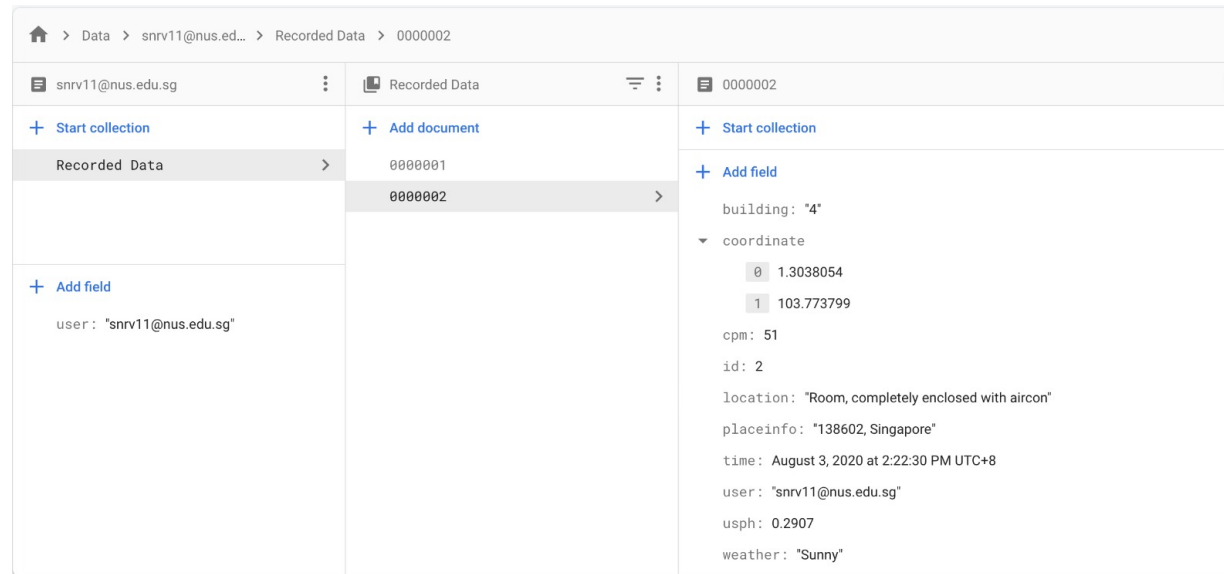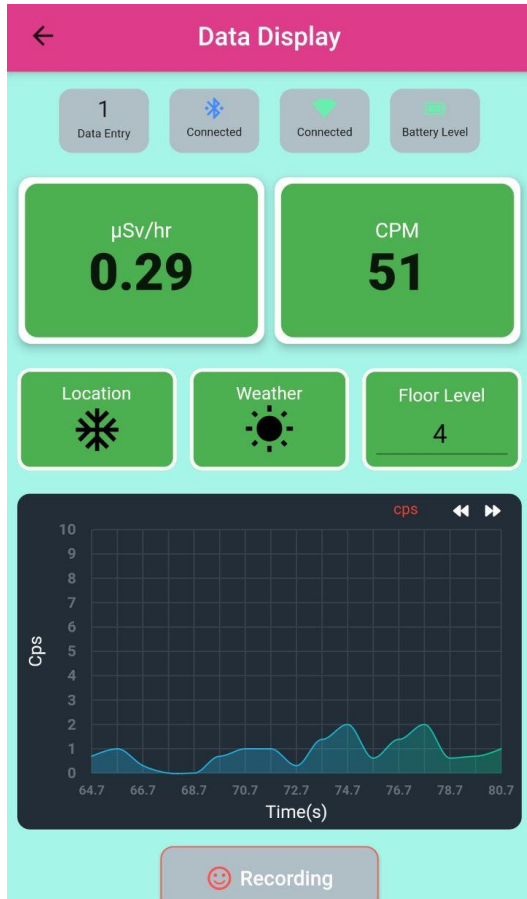
How to use Rad-X

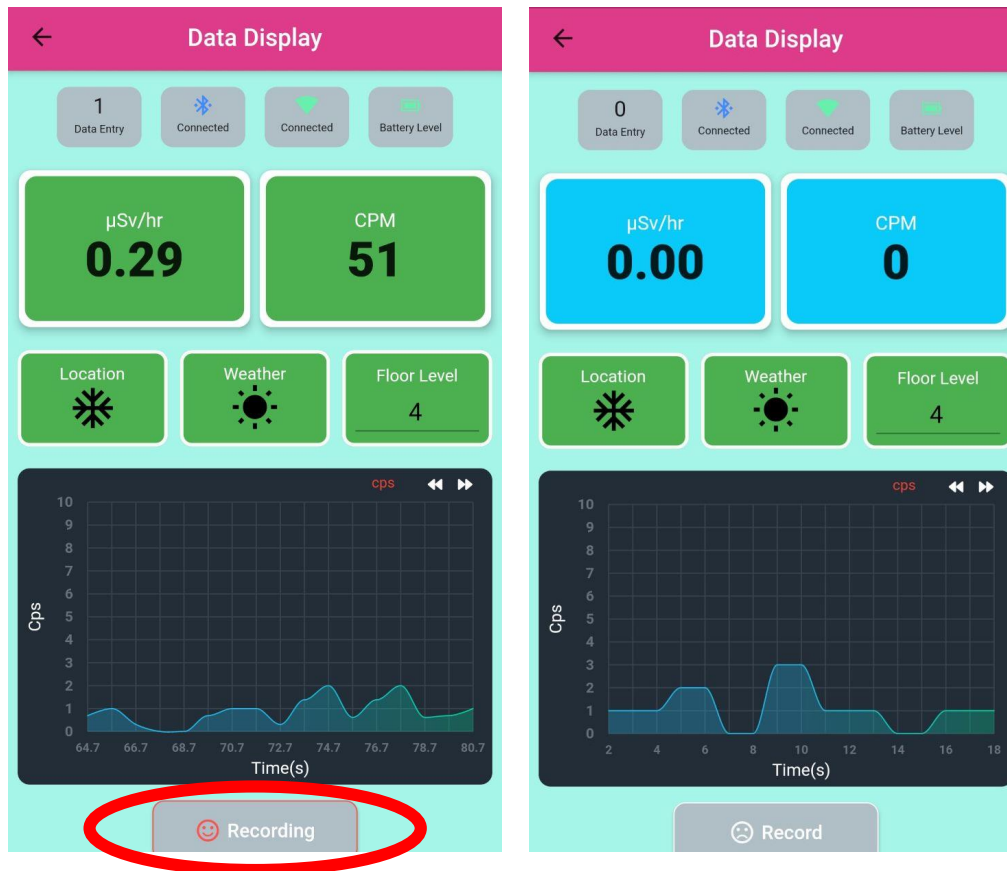Press "Record" to connect to the server.

How to use Rad-X
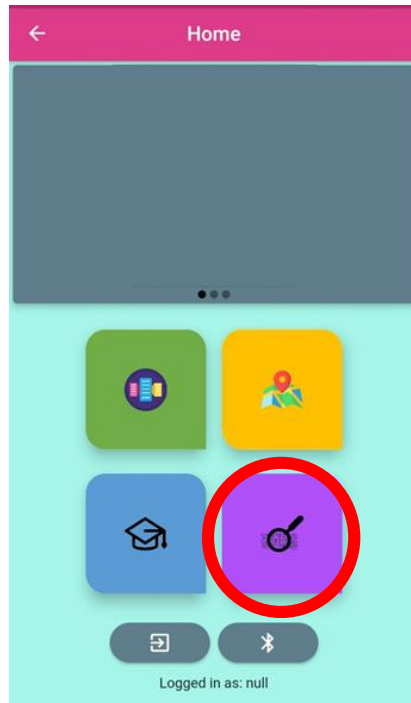
The app will upload the recorded data every minute.

How to use Rad-X

Press "Stop Record" to end the connection to the server. Exit the application and turn off the Rad-X device when no longer in use.
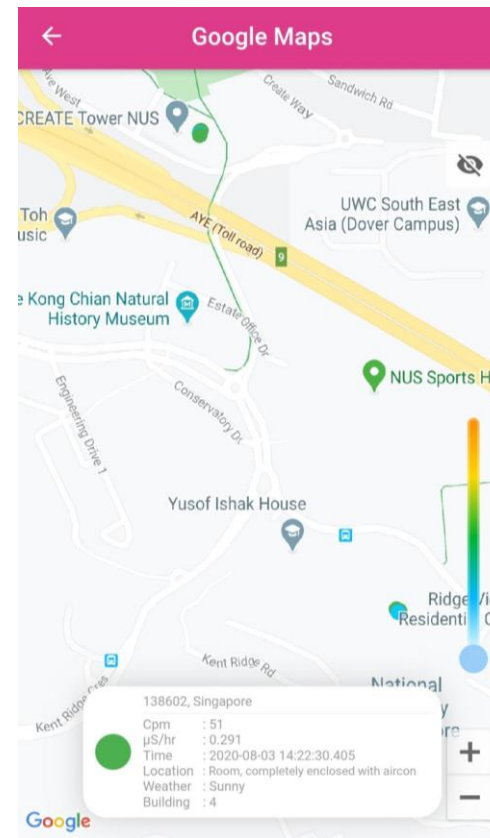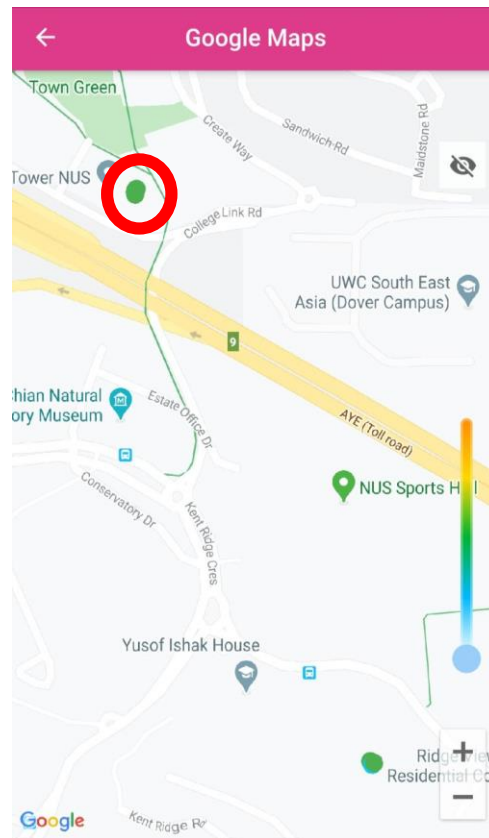
How to use Rad-X

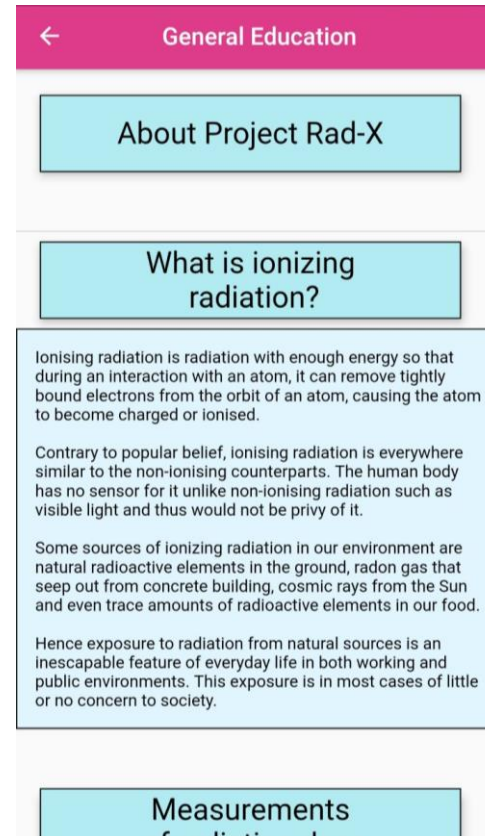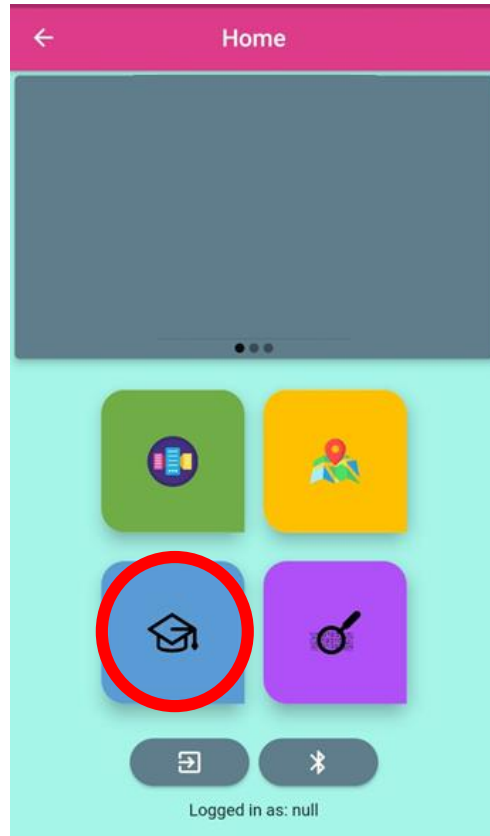Past measurements may be accessed via the Historical Measurements page.

How to use Rad-X

Measurements collected nationwide may be viewed via the Maps page. Tap the data point to view details.

How to use Rad-X

More information regarding radiation in general may be found in the Education page.

FAQ

Problem	Possible cause	Solution
The device does not turn on.	IC chip is in sleep mode.	Charge the device for a few seconds.
Application stuck at loading screen.	Bluetooth / Location services are not turned on.	Turn on Bluetooth / Location.
Device emits a continuous beep that does not stop.	Issue with automatic voltage calibration.	Turn the device off for a few minutes and turn it on again.
Device always shows zero counts.	If the device LED is blue instead of green: Bluetooth connection error.	Leave the Measurements page, unlink and re-link the device, and enter the Measurements page again.

Contact Information

For help and enquiries, contact us at:

Singapore Nuclear Research and Safety Initiative

Email: snrv11@nus.edu.sg