TrailGuard

By Electrosquad

Trail Guard is your ultimate portable companion for outdoor adventures, designed specifically for the traveling community. Whether you're hiking through remote trails, camping in the wilderness, or exploring new environments, Trail Guard ensures that the air you breathe and the water you drink are safe and of high quality. This compact and portable device combines advanced sensors to monitor both air and water quality, providing real-time data to help you make informed decisions on the go.

Key Features

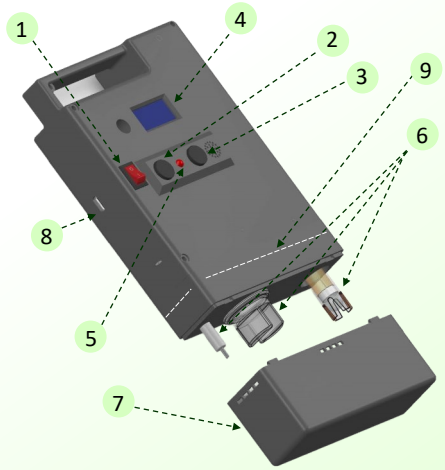
Comprehensive Monitoring: Tracks dust, temperature, humidity, gas levels, turbidity, TDS, and pH.

Portable: Lightweight and easy to carry for outdoor activities.

User-Friendly: Clear display with intuitive buttons and alarms for hazards.

Rechargeable Battery: Provides long-lasting power for extended use.

Critical Condition Alarm: Alerts with sound and light when dangerous conditions are detected.



1. Power ON/OFF Switch
2. Navigation Button - *To navigate to the desired quality parameter & to power on the display*
3. Select Button - *To select the desired quality parameter*
4. Display
5. Indicator Light
6. Water Quality Sensors
7. Container Cap - *To gather water for measure water quality*
8. Charging Port
9. Submerge Level

Technical Specifications

Power Supply: Rechargeable Lithium-Ion Battery
Measurement Range:
Dust Sensor: *PM2.5 (0-500 µg/m³)*
MQ2 Gas Sensor: *CO_2, CO, Methane, Butane, LPG(0-1000 ppm)*
Temperature: *-10°C to 50°C*
Humidity: *10-90% RH*
Turbidity: *0-3000 NTU*
TDS: *0-500 ppm*
pH: *0-14*
Display: *OLED display*
Buttons: *Two control buttons for navigation and settings*
Operating Temperature: -10°C to 50°C

Operating instruction

Measuring Air Quality

To measure air quality, place the device in the environment to be tested, ensuring the air intake is unobstructed for accurate dust readings. Position the device where gas presence is to be detected, and monitor the display for gas concentration levels. The temperature and humidity sensor continuously measures ambient conditions, with readings automatically updated on the display.

Measuring Water Quality

To measure water quality, submerge the turbidity, TDS, and pH sensors in the water sample, ensuring they are fully immersed. Wait for the readings to stabilize on the display for accurate measurements. Container cap can be used to gather the sample water.

Charging the Battery

Use the micro USB cable to charge the device. Charge for up to 1.5 hours to reach full capacity.

Safety Instructions

Handle the device with care and avoid exposing it to harsh environments beyond its operational limits.
Ensure the sensors are properly maintained for accurate readings.

Don't submerge the device below the submerge level line.

Support

Service and Repair

For service and repair, contact authorized service centers.

Contact Details

Support Email: trailguard@gmail.com
Phone: +94-75 520 8418

Appendix

Glossary of Terms

TDS: *Total Dissolved Solids, a measure of the combined content of all inorganic and organic substances in water.*
pH: *A measure of how acidic or basic water is.*
PM2.5: *Particulate matter that is 2.5 micrometers or smaller in diameter.*

Regulatory Standards

Sri Lanka national air and water quality standards & WHO standards

Environmental Considerations

Dispose of the device and its components according to local environmental regulations.