



Automated Soil Flux Chamber

Console

SF-3500 Series Multi-channel Soil Gas Flux Measurement System

To address the spatiotemporal variability of soil gas flux, LICA has developed a new multi-channel, automatic soil gas flux measurement system, the SF-3500. The SF-3500 can be connected to various greenhouse gas analyzers and stable isotope analyzers to measure the fluxes of multiple gases in soil. It can also enable the sequential switching of multiple flux chambers for measurement, allowing for long-term and continuous monitoring of multi-point soil gas flux. It can connect numerous analyzers to measure multi-parameter flux synchronously, thereby reducing the system error associated with multi-system measurements. In addition, an LCD touchscreen and an Android mobile phone app are added for control and display, eliminating the need for computer settings and a separate display. The SF-3500 remote control and data transmission functions make instrument maintenance easier and simpler, making it more suitable for long-term field measurements. After long-term testing and verification, the SF-3500 demonstrates improved accuracy and stability, making it an ideal choice for prolonged field use.



SF-3500 Automated Multi-channel Soil Carbon Flux Measurement System

Main Features

It can be used in conjunction with various gas analyzers. In addition to CO₂, it can also measure gas fluxes such as N₂O, CH₄, and NH₃, as well as isotope gas fluxes like ¹³CO₂, ¹²C¹⁸O¹⁶O, and ¹⁵N¹⁴NO.

It can simultaneously connect multiple types of analyzers to perform multi-parameter flux synchronous measurements, thereby eliminating errors in multi-system measurement systems.

LCD touch screen, Android mobile phone APP control and display, no computer required.

Automatically calculate gas flux, no need for post-data processing.

Remote control and data transmission functions make instrument maintenance easier and simpler, and more suitable for long-term field measurements.

Specification

SF-3500 Multiplexer

Number of Chamber Interfaces: 9 or 18

Storage Media: SD Card

Communication Interface: Bluetooth, WIFI

Operation Condition: Temperature -20~45°C

Humidity: 0~95% RH(No condensation)

SC-22 Automated Soil Flux Chamber

Measurement Area: 298.5 (cm²)

Fixed volume of air chamber: 3341 (cm³)

Cable length: 1.5m

Pump: 3.5L/min

Operation temperature: -20~45°C

Air pressure: Measurement range: 15~115kPa

Measurement accuracy: ±1.5%

Temperature: Measurement range: -25~85°C

Measurement accuracy: ±0.5°C

Dimensions: 245 mm (L) x 245 mm (W) x 590 mm (H)



Soil flux monitoring in farmland ecosystems



Experimental Site of Nanjing Agricultural University CO₂, CH₄, N₂O Assimilation Chamber Flux System



Hubei Experiment Site of Peking University CO₂, CH₄, N₂O Assimilation Chamber Flux System



Jiangxi Academy of Agricultural Sciences CO₂, CH₄, N₂O Assimilation Chamber Flux System

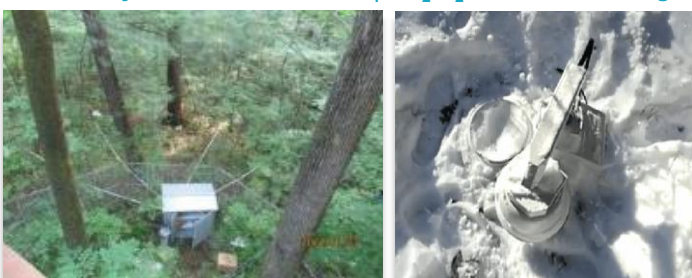
Soil Flux Monitoring of Forest Ecosystem



Greater Khingan Range National Forest Ecological
Soil Flux Measurement System



Dinghushan National Wild Ecological Station, Chinese
Academy of Sciences, soil $\text{CH}_4/\text{CO}_2/\text{N}_2\text{O}$ Flux Monitoring



Changbai Mountain National Field Ecological Station
Chinese Academy of Sciences Soil $\text{CH}_4/\text{CO}_2/\text{N}_2\text{O}$ Flux



Banna Botanical Garden Shenyang Applied Ecology Institute
Chinese Academy of Science Soil NO_x Flux System

Soil Flux Monitoring of Grassland Ecosystem



Institute of Geographic Sciences and Natural Resources,
Chinese Academy of Sciences, Hong-Yuan Field
Ecological Station, $\text{N}_2\text{O}/\text{CO}_2/\text{CH}_4$ Soil Flux Monitoring



Ergun Ecological Station, Shenyang Institute of Ecology

Soil flux monitoring in wetland ecosystems



Zoige Wetland Ecosystem by Wetland Research Institute
Chinese Academy of Forestry $\text{CH}_4/\text{CO}_2/\text{H}_2\text{O}$ Soil Flux System



Chengdu Institute of Mountain Hazards and Environment, CAS
Soil CO_2/CH_4 Flux System