

Exposing the Ozone Test Strip

Field Guide

Task

Begin the measurement of surface ozone concentration.

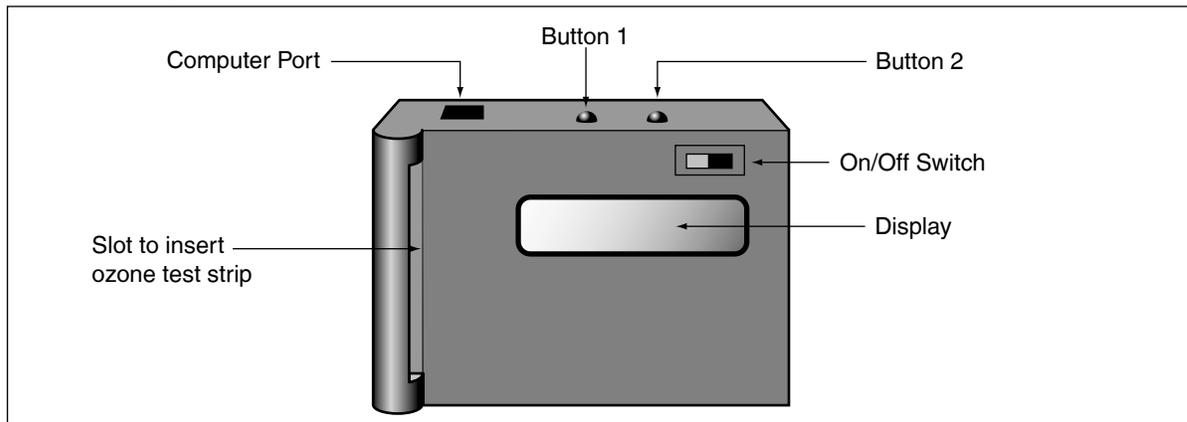
Record cloud conditions, current air temperature, wind direction, and relative humidity.

What You Need

- One Ozone Test Strip
- Plastic bag to carry the test strip to your site
- Ozone Test Strip Scanner
- Clipboard
- Ozone Data Sheet
- Pen or pencil
- Sling Psychrometer OR Digital Hygrometer
- Measuring Wind Direction Field Guide
- Cloud Cover Field Guide
- Cloud Type Field Guide
- Sling Psychrometer Field Guide OR Digital Hygrometer Field Guide
- GLOBE Cloud Chart
- Wind Direction Instrument
- Key to your instrument shelter
- A clock or watch accurate to the nearest minute

Note: If using the digital hygrometer to measure current relative humidity, it must be placed in the instrument shelter at least 30 minutes before calibrating and placing the unexposed ozone strip and gathering metadata.

Ozone Test Strip Scanner



In the Field or Classroom

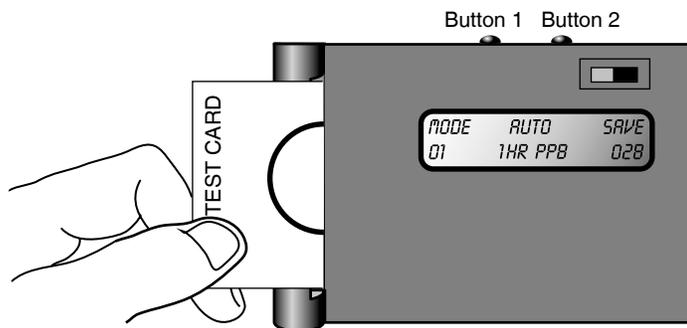
1. Fill out the top of the *Ozone Data Sheet*.
2. Remove a single ozone test strip from the plastic bag,
3. Record the date and starting time.

Calibrating the Scanner

4. Place the scanner on a steady surface out of direct sunlight, preferably inside your Instrument Shelter.
5. Turn on the scanner and you should see the following in the LCD readout. (Older scanners may display 170 for the number under SAVE and need to be recalibrated. Contact the GLOBE Help Desk for assistance.)



6. Place the unexposed ozone test strip into the scanner with the **chemical side facing toward the display**.



7. Press button 1 (left button) until you see SELECT> CALIB on the display.
8. Press button 2 (right button) and you will see 1 HR WHT = and fluctuating numbers. This is ok.
9. Press both buttons simultaneously to save unexposed strip reading.
10. Turn off the scanner, and remove the unexposed strip. (NOTE: turning off scanner before removing the strip will prevent accidentally changing the settings in the scanner)

In the Field

11. Place this ozone test strip in the clip on the monitoring station. Do not touch the chemical part of the strip at any time. (It is not harmful to you, but touching it may prevent you from getting an accurate measurement.) Record the time.
12. Determine cloud cover and cloud type following the *Cloud Cover* and *Cloud Type Protocols*.
13. Measure and record the current temperature on the thermometer in your instrument shelter (to the nearest 0.5° C).
14. Record the wind direction.
15. Measure and record the relative humidity using either a sling psychrometer or digital hygrometer.