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› Sonmol Digital Peak Flow Meter Spirometer User Manual

Sonmol SMPF-1

Sonmol Digital Peak Flow Meter Spirometer User Manual

Model: SMPF-1

1. INTRODUCTION

The Sonmol Digital Peak Flow Meter is a portable device designed to measure lung function, specifically Peak Expiratory Flow (PEF) and Forced Expiratory Volume in 1 second (FEV1). It is intended for home use by individuals with respiratory conditions such as asthma and COPD, as well as for general lung health monitoring.

This manual provides detailed instructions on how to set up, operate, and maintain your device, along with information on interpreting your readings.



Image: The Sonmol Digital Peak Flow Meter shown alongside its product packaging.

2. PRODUCT OVERVIEW AND COMPONENTS

Familiarize yourself with the different parts of your Sonmol Digital Peak Flow Meter:

- **Mouthpiece:** Where the user exhales into the device.
- **Display:** Shows PEF and FEV1 readings, risk indicator, and other information.

- **Risk Indicator:** A visual guide (green, yellow, red zones) to interpret lung function status.
- **Home Button:** Used to power on/off the device and initiate measurements.



Image: A diagram illustrating the key components of the Sonmol Digital Peak Flow Meter, including the mouthpiece, display, risk indicator, and home button.

3. SETUP

3.1 Battery Installation

The device is powered by 2 AAA batteries. Ensure batteries are installed correctly before first use.

1. Locate the battery compartment on the back of the device.
2. Open the battery compartment cover.
3. Insert 2 AAA batteries, observing the correct polarity (+/-) as indicated inside the compartment.
4. Close the battery compartment cover securely.

POCKET SPIROMETER WITH LONG LIFESPAN

This spirometer testing device is powered by 2 AAA batteries (battery included), providing up to one year of daily use.



Image: The Sonmol Digital Peak Flow Meter highlighting its battery-powered operation, indicating a long lifespan of up to one year with daily use on 2 AAA batteries.

4. OPERATING INSTRUCTIONS

4.1 Taking a Measurement

Follow these steps for accurate lung function measurement:

1. **Power On:** Press the Home Button. The device will display "go-" on the screen, indicating it is ready.
2. **Prepare:** Sit or stand upright. Take a deep breath, filling your lungs completely.
3. **Position:** Place the mouthpiece in your mouth, sealing your lips tightly around it. Ensure your tongue or teeth do not obstruct the mouthpiece. Do not cover the back of the mouthpiece with your hand.
4. **Start:** Blow out as hard and as fast as you can into the mouthpiece. Continue blowing until your lungs are empty.
5. **Read Result:** Wait for 2 beeps from the device before reading the displayed PEF and FEV1 values.
6. **Re-measurement:** To take another measurement, press the Home Button again and repeat steps 2-5.

7. **Power Off:** When finished, press and hold the Home Button to turn off the device.

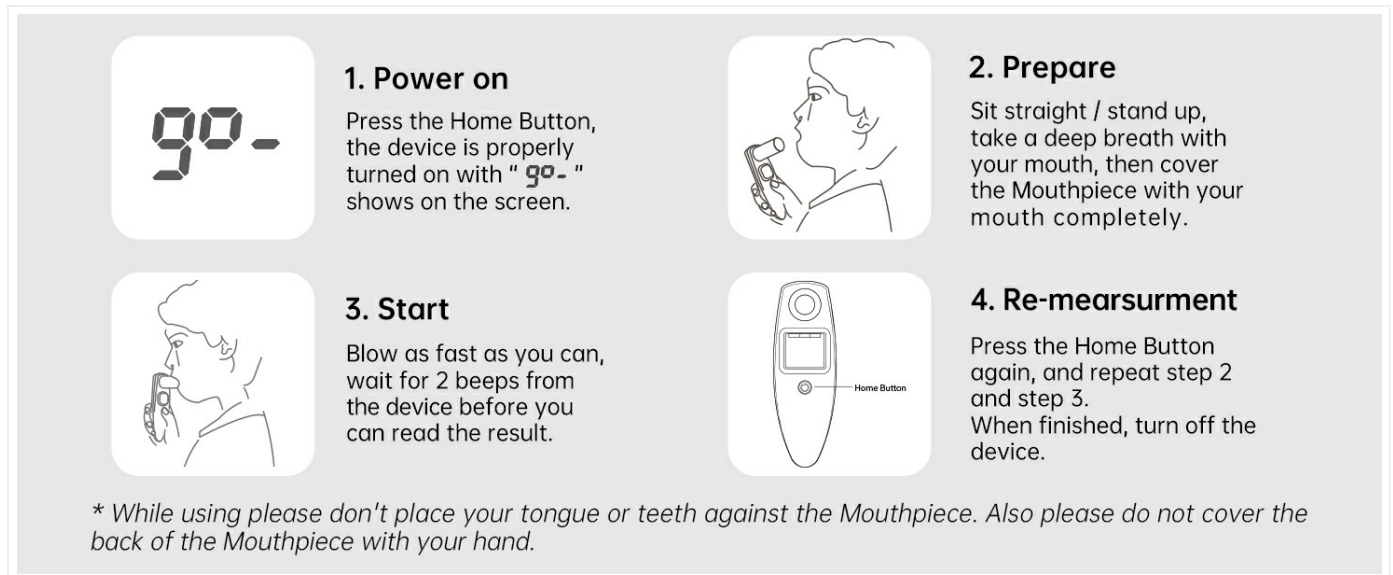


Image: A visual guide demonstrating the four key steps for using the Sonmol Digital Peak Flow Meter: Power on, Prepare, Start, and Re-measurement.

4.2 Understanding PEF and FEV1

The device measures two primary lung function parameters:

- **PEF (Peak Expiratory Flow):** This is the maximum speed of exhalation, measured in Liters per minute (L/min). It indicates the airflow through the bronchi and the degree of obstruction in the airway.
- **FEV1 (Forced Expiratory Volume in 1 second):** This calculates the amount of air a person can force out of their lungs in 1 second, measured in Liters (L). It is an indicator of the reversibility of airway obstruction and a primary indicator of impaired lung function.

MEASURING PEF & FEV1

PEF

Peak Expiratory Flow, also called Peak Expiratory Flow Rate (PEFR), is a person's maximum speed of expiration, as measured with a Peak Flow Meter. It measures the airflow through the bronchi of the lungs and shows the degree of obstruction in the airway.

▲
PEF
369 L/min
FEV1
1.98 L

FEV1

Forced Expiratory Volume, calculates the amount of air that a person can force out of their lungs in 1 second. It is an indicator of the reversibility of airway obstruction and the primary indicator of impaired lung function.



Image: A visual explanation of PEF (Peak Expiratory Flow) and FEV1 (Forced Expiratory Volume in 1 second) as displayed on the Sonmol Digital Peak Flow Meter.

4.3 Smart Risk Indicator

The device features a Smart Risk Indicator that provides a quick visual assessment of your lung function control condition. A triangular symbol on the display points to one of three colored sections: Green, Yellow, or Red.

- **Green Zone (PEF $\geq$ 80% of personal best):** Indicates that lung function management is under good control.
- **Yellow Zone (50% $\leq$ PEF < 80% of personal best):** Indicates caution; your peak flow reading suggests a need for attention.
- **Red Zone (PEF < 50% of personal best):** Indicates a medical emergency; seek immediate medical attention.

Note: No red, yellow, or green Risk Indicators will be displayed on the device without properly setting your expected (personal best) PEF value. Consult your healthcare provider to establish your personal best PEF.

SMART RISK INDICATOR

Each test result will be accompanied by a triangular symbol “▲” pointing to the red, yellow, or green sections, which provides insights into your lung function control condition

The “▲” point to different colors indicates different control results:

Green

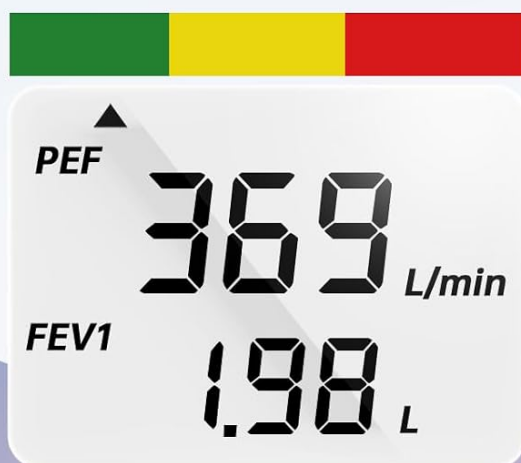
PEF% $\geq 80\%$, a peak flow reading in the green zone indicates that the lung function management is under good control.

Yellow

$50\% \leq \text{PEF\%} < 80\%$, your peak flow reading indicates caution.

Red

PEF% $< 50\%$, your peak flow reading indicates a medical emergency.



*** No red, yellow, or green Risk Indicators will be displayed on the device without properly setting the expected value.**

Image: A detailed explanation of the Green, Yellow, and Red zones of the Smart Risk Indicator, showing how they correspond to PEF percentages and what each color signifies for lung function control.

5. DATA MANAGEMENT

The Sonmol Digital Peak Flow Meter offers two options for recording and tracking your measurements:

5.1 Manual Peak Flow Diary

You can manually record your PEF and FEV1 readings in a physical peak flow diary. This allows for a visual trend analysis over time.

5.2 ePEF App (Manual Record & Online Sharing)

The Sonmol ePEF App is available to help you better track your asthma control and lung function. Please note that this peak flow meter does not have Bluetooth functionality. Data must be manually entered into the app from the device's display.

TWO RECORDING OPTIONS



Peak Flow Diary

Name: _____
Date: Year _____ Month _____

Controller Medication: _____
Dosage: _____
Fast-Acting Medication: _____
Dosage: _____



Peak Flow Diary (Manual Entry)



ePEF App (Manual Record & Online Sharing)



No Bluetooth – Data must be recorded manually

Image: An illustration showing two methods for recording data: a traditional paper Peak Flow Diary and the ePEF App, emphasizing that data entry into the app is manual as the device lacks Bluetooth connectivity.

6. MAINTENANCE

6.1 Cleaning

- Regularly clean the mouthpiece with warm, soapy water. Rinse thoroughly and allow it to air dry completely before reattaching to the device.
- Wipe the main body of the device with a soft, damp cloth. Do not immerse the device in water or use abrasive cleaners.

6.2 Storage

- Store the device in a clean, dry place away from direct sunlight and extreme temperatures.
- If the device will not be used for an extended period, remove the batteries to prevent leakage.

7. TROUBLESHOOTING

Problem	Possible Cause	Solution
Device does not power on.	Batteries are dead or incorrectly installed.	Replace batteries with new AAA batteries, ensuring correct polarity.
Inaccurate or inconsistent readings.	Improper technique (e.g., not blowing hard/fast enough, tongue obstruction, air leakage).	Review "Operating Instructions" (Section 4.1) and ensure correct technique. Ensure mouthpiece is clean and unobstructed.
Risk Indicator not displayed.	Expected PEF value not set.	The device requires a personal best PEF value to be set for the risk indicator to function. Consult your healthcare provider.

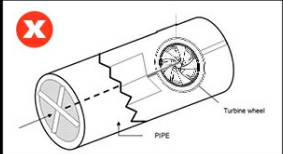
8. SPECIFICATIONS

Parameter	Detail
Model Number	SMPF-1
Product Dimensions	1.97 x 2.48 x 6.3 inches
Item Weight	1.83 ounces (0.11 Pounds)
Power Source	2 x AAA batteries
Measurement Parameters	PEF (Peak Expiratory Flow), FEV1 (Forced Expiratory Volume in 1 second)
Measurement Principle	Differential pressure transducer
Specific Uses	Asthma, COPD, CHF, Parkinson, general lung function monitoring
Manufacturer	Sonmol

GREATER PRECISION AND HIGHER REPEATABILITY

Our peak flow meter uses a differential pressure sensor, which calculates the variance by comparing the pressure at two points, thus providing accurate pressure measurements.

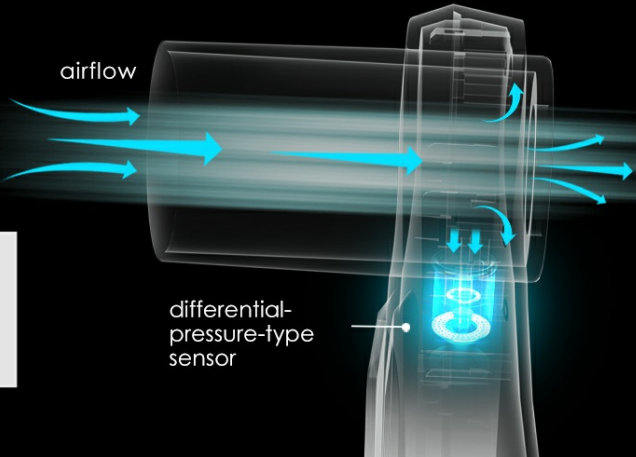
There is no involvement of mechanical motion or turbine rotation during measurements. Consequently, there is no measurement loss associated with friction or mechanical wear. This results in greater precision and higher repeatability of test outcomes.



Turbine Peak Flow Meter



Mechanical Peak Flow Meter



airflow

differential-pressure-type sensor

Image: A technical diagram explaining the differential pressure sensor, which provides greater precision and higher repeatability in measurements by comparing pressure at two points, unlike mechanical or turbine-based meters.

9. IMPORTANT SAFETY INFORMATION AND LEGAL DISCLAIMER

9.1 Indications

This device is indicated for individuals with conditions such as asthma, COPD (Chronic Obstructive Pulmonary Disease), CHF (Congestive Heart Failure), and Parkinson's disease, for monitoring lung function.

9.2 Legal Disclaimer

Statements regarding dietary supplements have not been evaluated by the FDA and are not intended to diagnose, treat, cure, or prevent any disease or health condition. This device is a medical monitoring tool and should be used in consultation with a healthcare professional. Do not use this device as a substitute for professional medical advice, diagnosis, or treatment.

10. WARRANTY AND SUPPORT

10.1 Warranty Information

For specific warranty details, please refer to the warranty card included with your product or contact Sonmol customer support. Typically, Sonmol products come with a limited warranty covering manufacturing defects.

10.2 Customer Support

If you have any questions, require assistance, or need to report an issue with your Sonmol Digital Peak Flow Meter, please contact Sonmol customer support. You can find contact information on the official Sonmol website or through the retailer where you purchased the device.

Visit the official Sonmol store for more information:[Sonmol Store on Amazon](#)

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question