

Sonmol SMBT-2

Sonmol Digital Peak Flow Meter PEF FEV1 Tester Instruction Manual

Model: SMBT-2

1. PRODUCT OVERVIEW

The Sonmol Digital Peak Flow Meter is a portable electronic device designed for monitoring respiratory function by measuring Peak Expiratory Flow (PEF) and Forced Expiratory Volume in 1 second (FEV1). It is suitable for both adults and children and features an LCD display with a smart risk indicator system (red, yellow, green zones) to help users understand their lung function status.

This device utilizes a differential pressure sensor for ultra-precise measurements, adhering to US Department of Health and Human Services guidelines. Its compact design makes it convenient for daily use and monitoring.



Figure 1: Device Components. This image shows the Sonmol Digital Peak Flow Meter with its key parts labeled: Mouthpiece, Risk Indicator display, LCD Display, and Home Button.

Key Features:

- **PEF and FEV1 Measurement:** Accurately measures two critical respiratory parameters.
- **Digital LCD Display:** Provides clear, easy-to-read test results.
- **Smart Risk Indicator:** Features a color-coded system (Green, Yellow, Red) to indicate lung function status based on personal expected values.
- **Portable Design:** Compact and lightweight, powered by 2 AAA batteries for extended use.
- **Easy to Clean:** Designed with an open mouthpiece for simple cleaning and disinfection.

2. WHAT'S IN THE BOX

- 1 x Sonmol Digital Peak Flow Meter (Model: SMBT-2)

- 1 x User Manual (this document)
- *Note: 2 AAA batteries are required but not included.*

3. SETUP AND FIRST USE

3.1. Battery Installation

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

POCKET SPIROMETER WITH LONG LIFESPAN

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



Figure 2: Battery Installation. This image illustrates the device's power source, indicating it uses 2 AAA batteries for up to one year of daily use.

3.2. Setting Personal Expected Values (PEF)

To utilize the smart risk indicator (red, yellow, green zones), you must first set your personal expected PEF value. This value is typically determined by a healthcare professional or can be estimated using charts based on age, height, and gender. A QR code tool for calculating expected PEF values is mentioned in the product description, which you may scan for assistance.

1. Turn on the device by pressing the Home Button.
2. Navigate to the settings menu (refer to the device's on-screen prompts or a more detailed manual if available for specific button presses).
3. Enter your personal expected PEF value.
4. Confirm the setting.

Important: *The risk indicator will not display correctly without a properly set expected PEF value.*

4. OPERATING INSTRUCTIONS

4.1. Taking a Measurement

1. Ensure the device is clean and the mouthpiece is free of obstructions.
2. Sit or stand upright in a comfortable position.
3. Take a deep breath, filling your lungs completely.
4. Place your lips tightly around the mouthpiece, ensuring a good seal.
5. Exhale as hard and fast as you can into the mouthpiece in a single breath.
6. The device will display your PEF (L/min) and FEV1 (L) values on the LCD screen.
7. Repeat the measurement two more times. Record the highest of the three readings.

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.



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.



Figure 3: PEF and FEV1 Measurement. This image explains Peak Expiratory Flow (PEF) as the maximum speed of expiration and Forced Expiratory Volume in 1 second (FEV1) as the amount of air exhaled in one second, both displayed on the device.

4.2. Understanding the Risk Indicator

After each test, a triangular symbol will point to a colored section (green, yellow, or red) on the device's display, indicating your lung function control condition relative to your personal expected PEF value.

- **Green Zone ($\text{PEF} \geq 80\%$ of personal best):** Indicates good control of lung function.
- **Yellow Zone ($50\% \leq \text{PEF} < 80\%$ of personal best):** Indicates caution. Your peak flow reading suggests a need for attention or adjustment to your management plan. Consult your healthcare provider.
- **Red Zone ($\text{PEF} < 50\%$ of personal best):** Indicates a medical emergency. Seek immediate medical attention.

Note: The risk indicator will only function if your personal expected PEF value has been correctly set in the device.

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

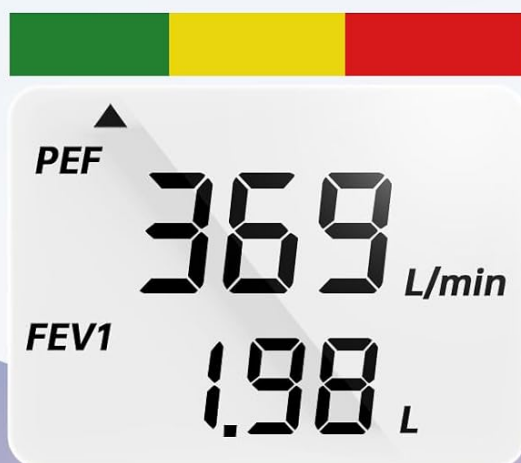
PEF% $\geq 80\%$, a peak flow reading in the green zone indicates that the lung function management is under good control.

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.**

Figure 4: Smart Risk Indicator. This image details the meaning of the green, yellow, and red zones for the PEF risk indicator, guiding users on their lung function status.

4.3. Recording Measurements

The Sonmol Digital Peak Flow Meter does not have Bluetooth functionality and cannot automatically sync data. You must manually record your readings.

- **Peak Flow Diary:** Use a physical peak flow diary to log your daily PEF and FEV1 readings, along with the corresponding risk indicator.
- **ePEF App:** A free 'ePEF' app is available for manual record-keeping and online sharing. Download the app and manually input your readings.

TWO RECORDING OPTIONS



Peak Flow Diary

Name: _____
Date: Year _____ Month _____

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

Peak Flow Scale	Risk Indicator	01	02	03	04	05	06	07	08	09	10	11
	John's Yours	AM PM	AM PM	AM PM	AM PM	AM PM	AM PM	AM PM	AM PM	AM PM	AM PM	AM PM
750												
700												
650												
600												
550												
500												
450												
400												
350												
300												

Peak Flow Diary (Manual Entry)



ePEF App (Manual Record & Online Sharing)



No Bluetooth – Data must be recorded manually

Figure 5: Recording Options. This image presents two methods for recording measurements: a traditional Peak Flow Diary for manual entry and the 'ePEF' app, also requiring manual data input as there is no Bluetooth connectivity.

5. MAINTENANCE AND CLEANING

5.1. Cleaning the Device

Regular cleaning of the mouthpiece is essential for hygiene and accurate readings. The device features an open mouthpiece design for easy cleaning.

1. Remove the mouthpiece from the main unit.
2. Wash the mouthpiece with warm water and mild soap.
3. Rinse thoroughly with clean water.
4. Allow the mouthpiece to air dry completely before reattaching it to the device.
5. Wipe the main body of the device with a soft, damp cloth. Do not immerse the main unit in water.

Caution: Do not use abrasive cleaners or solvents on any part of the device.

5.2. Battery Replacement

When the battery indicator on the display shows low power, replace the two AAA batteries following the instructions in Section 3.1. Timely battery replacement ensures consistent performance and accuracy.

6. TROUBLESHOOTING

Problem	Possible Cause	Solution
Device does not turn on.	Batteries are dead or incorrectly installed.	Check battery polarity and replace with new AAA batteries if necessary.
Readings are inconsistent or inaccurate.	Improper breathing technique; Mouthpiece obstruction; Device malfunction.	Ensure correct breathing technique (deep breath, forceful exhale). Clean the mouthpiece. If problem persists, contact support.
Risk indicator (red, yellow, green) is not displayed.	Personal expected PEF value not set.	Set your personal expected PEF value in the device settings (refer to Section 3.2).
Cannot sync data to phone/app.	This model does not have Bluetooth.	Data must be recorded manually using a peak flow diary or the ePEF app (manual entry). Consider an upgraded Bluetooth model if auto-sync is desired.

**Need Auto-Sync?
Find this upgraded Bluetooth
model in our shop!**



Figure 6: Bluetooth Functionality. This image clarifies that the current model does not have auto-sync capabilities and suggests an upgraded Bluetooth model for users who require this feature.

7. SPECIFICATIONS

Model:	SMBT-2
Manufacturer:	Somnol
Product Dimensions:	5.59 x 4.06 x 15.24 cm
Product Weight:	122 g
Power Source:	2 x AAA Batteries (not included)
Measured Parameters:	PEF (Peak Expiratory Flow), FEV1 (Forced Expiratory Volume in 1 second)

Display:	LCD with Risk Indicator (Green, Yellow, Red zones)
Connectivity:	None (Manual data recording required)

8. WARRANTY AND SUPPORT

Specific warranty information is not provided in the product details. Please refer to the packaging or contact Sonmol customer support for warranty details and technical assistance.

For further inquiries or support, please visit the official Sonmol website or contact their customer service department.

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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