

Neumafit Gen2 User Manual

FCC ID : 2BLHG-NMF-NG2-F25

1. System Configuration

This device is a completely wireless, all-in-one system consisting of hardware (Respiratory Measurement Unit), software (App), and single-use consumables.

Component	Function Description	Handling Precautions
Respiratory Measurement Unit	Breath flow/gas analysis & Bluetooth transmission	Do NOT wash with water (Non-waterproof)
Neumafit App	Device control, data reception, and FatMax analysis	Installed on smartphone
Disposable Mask	Facial mask for breath collection	Single-use only (Do not reuse)

2. Power & Connection

2.1 Power On

1. Touch and hold the touch area on the surface of the **Respiratory Measurement Unit** for **3 seconds**.
2. The status LED will light up, indicating the device is ready for immediate use. (No warm-up time required).

2.2 App Launch & Bluetooth Pairing

1. Turn on the Bluetooth function on your smartphone.
 2. Launch the '**Neumafit**' App and log in.
 3. Select [**Connect Device**] on the main screen of the App.
 4. Select the detected **Respiratory Measurement Unit** to pair. Once connected, the App will display a 'Connected' status at the top.
-

3. Assembly & Wearing

[WARNING] The **Respiratory Measurement Unit** is a precision electronic device. Ensure that no moisture or foreign substances enter the internal components.

3.1 Assembly

1. Open the packaging of a new **Disposable Mask**.
2. Align the connector of the **Respiratory Measurement Unit** with the **opening located on the SIDE** of the mask and push it in.
3. Ensure the **Respiratory Measurement Unit** is fully inserted into the side hole of the mask.
 - *Note: There is no "click" sound during assembly. Visually check to ensure there are no gaps between the unit's edge and the mask opening, and verify it is securely fixed.*

3.2 Wearing

1. Input the subject's physical information (**Body Weight** is mandatory) into the **Neumafit App**.
2. Place the mask with the attached **Respiratory Measurement Unit** onto the subject's face (covering nose and mouth).

- *Note: Position the mask carefully to prevent it from sagging to one side due to the weight of the unit.*
 - 3. Adjust the headgear (straps) to apply appropriate pressure, ensuring no air leaks around the edges of the mask.
-

4. FatMax Measurement Protocol

4.1 Start Measurement & Data Reception

1. When the subject is ready, press the **[Start Measurement]** button on the **Neumafit App**.
2. **Resting Phase:** Collect breath data for the initial 2 minutes while the subject is in a comfortable standing position.
3. **Exercise Phase:** Perform the exercise according to the protocol provided by the App (incremental increase in intensity).
4. **Real-time Monitoring:** Breath data analyzed by the **Respiratory Measurement Unit** is transmitted to the App in real-time and displayed as graphs.

4.2 Termination Criteria

1. When the **FatMax Zone** is identified or the RER (Respiratory Exchange Ratio) reaches **1.0 or higher**.
2. If the subject cannot continue the exercise.
3. In the above situations, press the **[Stop]** button on the App to complete the measurement.

4.3 Review Results

- Immediately after termination, check the **FatMax Zone** (maximal fat oxidation heart rate zone) and the energy metabolism report on the App screen.
-

5. Maintenance & Shutdown

5.1 Disassembly & Disposal

1. After the measurement is complete, remove the mask from the subject.
2. Carefully pull the **Respiratory Measurement Unit** out of the **side hole** of the mask.
3. **Immediately discard the used Disposable Mask.** (Reuse is strictly prohibited to prevent cross-contamination).

5.2 Cleaning the Respiratory Measurement Unit

[CAUTION] Do NOT wash with water.

The Respiratory Measurement Unit is not waterproof. Submerging it in water or rinsing it under running water will cause damage to internal circuits and sensors.

1. Gently wipe the exterior of the **Respiratory Measurement Unit** with an alcohol swab or disinfectant wipe.
2. Store the unit in a well-ventilated, dry place, ensuring no liquid enters the internal air passages.

5.3 Power Off

1. Disconnect or close the **Neumafit App**.
 2. Touch and hold the touch area on the **Respiratory Measurement Unit** for **5 seconds**.
 3. The LED will turn off, indicating that the power is completely shut down.
-

6. Specifications

Item	Details
Product Name	Neumafit
Form Factor	Mask-attached (Side-mount) Wireless Metabolic Analyzer
Communication	Bluetooth Low Energy (BLE)
Dedicated App	Neumafit App
Power Control	Capacitive Touch (ON: 3s / OFF: 5s)
Waterproof Rating	Non-waterproof (Do not wash)
Consumables	Disposable Mask (Single-use)
Power Source	Internal Lithium Battery (Rechargeable)

FCC Compliance Statement

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

FCC Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 5mm between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.