

tVNS STIMULATOR

User Manual
& Warranty



INTRODUCTION

Thank you for purchasing a Vagus.net tVNS Stimulator. In this guide we will explain how to use and care for your device so that you get the best results from tVNS stimulation.

The vagus nerve travels from your brain to all your major organs. It plays a primary role in the control and regulation of a range of unconscious bodily functions, such as heart rate, digestion, sleep and immune response.

Recent studies have shown that directly stimulating the nerve via one of its branches in the ear can help increase vagal tone (the level of activity in the nerve) and slow the onset of age related changes, helping to maintain quality of life and promote healthy ageing.

Daily stimulation of the vagus nerve using micro electrical pulses has been shown to have a positive effect on health and wellbeing.

Usage Instructions

Identify a 15 minute period of your day where you can take the time to stimulate peacefully. Try to use the same schedule each day for at least 14 days in a row.

The stimulation may feel uncomfortable at first - like a scratch or prickling of the ear. This sensation is from the skin nerves and will decrease over time. But always stop using if it becomes painful. Most people find the sensation is reduced by using the included conductive paste. Use a thin film on both electrodes of the clip.

Try to set the stimulation intensity to a level just below the point of discomfort. You can adjust the intensity during the session.

Should you wish to measure the direct physiological effects of the stimulation use a blood pressure or heart rate variability monitor before and after the session. Effects will build up over time and fade if you discontinue usage.

Vagus Nerve Stimulation

Stimulating your vagus nerve increases the activity of the parasympathetic nervous system. This restores bodily homeostasis (nervous system balance), improving health, strength and wellbeing. With just 15 minutes per day of stimulation you should feel results after two weeks.

If you have medical conditions requiring treatment you should consult with your doctor or physician. This device is not intended for the treatment of medical conditions.



WARNING

Read instructions before use. Do not use during pregnancy, if you have implanted electrical devices or a heart rhythm problem. If you experience any irritation, itching or marking of the skin or any other adverse symptoms from using this device, discontinue use immediately.

DEVICE COMPONENTS

The following items are included



tVNS Stimulator

Portable discrete and lightweight tVNS Stimulator with joystick control



Auricular Electrode Clip

The sterling silver electrodes are designed to make a deep connection to your tragus



Conductive Paste

Conductive paste helps lower the resistance between the electrodes and skin



Recharging Cable

Connect to any 5V USB power source to safely recharge your tVNS Stimulator



Carry Case

Keep all items safe and together between sessions in the EVA carry case



Instruction Book

Learn all about your tVNS Stimulator by reading this Instruction book

- The electrodes on the clip will degrade with use depending on the intensity and impedance.
- Clean the electrode with hot water immediately after use to extend lifetime.
- Conductive paste can be replaced with salty water for those with sensitive skin
- Replacement parts can be purchased from the Vagus.net website

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tVNS Stimulator

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Additional Information

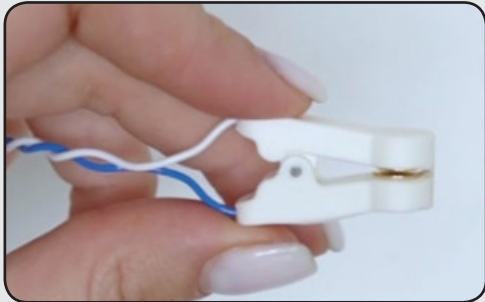
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QUICK START GUIDE



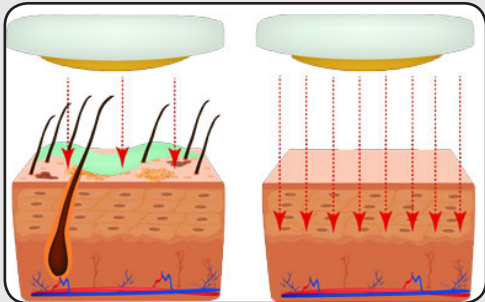
1. Charge the device

Using only the supplied recharge cable connect the device to a powered USB outlet. e.g. phone charger. It takes about 1 hour to fully charge the device from empty.



2. Prepare the clip

Ensure both electrode surfaces are clean. For best results use either conductive paste or saline water on each electrode.



3. Prepare your tragus

Skin preparation is key to Vagus Nerve Stimulation success. You must ensure that your skin is clean and dry; the less hair the better.

TIP: Shave your tragus to ensure fine hairs are removed



4. Press to turn on

Press the blue button to turn on the device and when you see the timer icon the device is ready (as shown). You can change the session duration by pushing the blue joystick up or down to increase or decrease accordingly.

TIP: Start with 15 minutes per day.



5. Press to start

Once you are ready to begin press the blue button to start. The electrical current will slowly increase from zero until it reaches the target intensity that you select with the blue joystick. Use right to increase and left to decrease. You can pause by pressing the blue button.

YOUR STIMULATOR

The Vagus.net tVNS Stimulator is a controlled current device. To reach the target intensity it will adjust the output voltage 50,000 times per second based on the measured resistance. This ensures that a known “dosage” of electrical current stimulation is delivered and maximises safety.

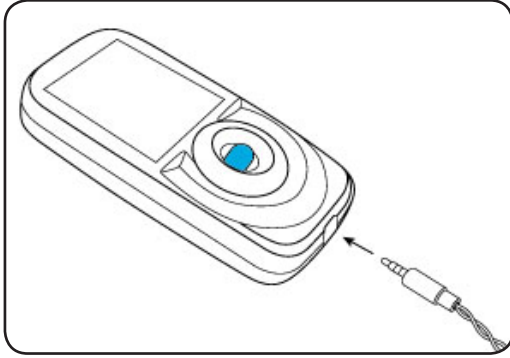
The default stimulation tone is a 30Hz biphasic square wave with a 250 μ s phase and a 50 μ s interphase. The duration and intensity level can be controlled to personal preference.

Additional stimulation Tones are available via the “Vagal Tones” mobile app.



USAGE INSTRUCTIONS

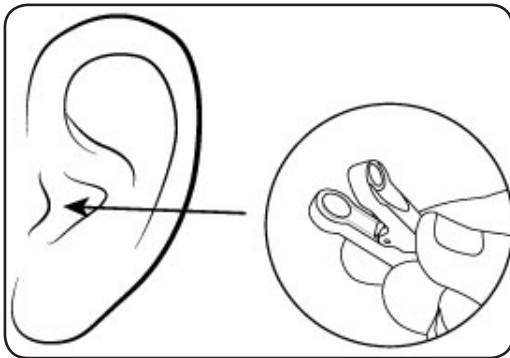
As simple as ABC



1. Insert Auricular Clip Jack

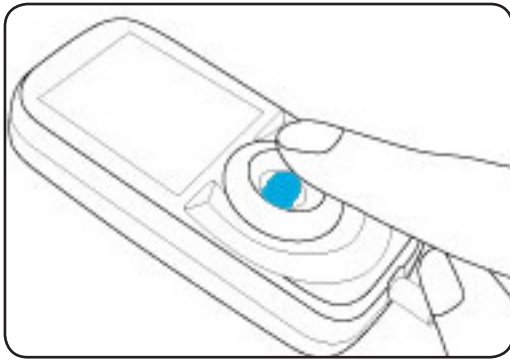
Connect the ear clip cable to the tVNS Stimulator by inserting the 2.5mm jack into the socket.

You will see a jack animation if it is not connected or fully inserted.



2. Connect Clip to Tragus

The clip is designed to make a firm but comfortable connection to your tragus. You need to ensure that both sides of your tragus are clean as the electricity must pass from one electrode to the other through your ear.



3. Start the Stimulation

When you are ready you can turn on the device by pressing the blue button. Once the timer is shown press the blue button to begin.

You will see an intensity gauge appear on the screen and the device will vibrate to confirm the session has started.



4. Adjust the Intensity

Once the session has started the current will slowly increase. If it is your first time you should use left or right on the blue joystick to find a comfort level. Future sessions will automatically remember your previous intensity setting. When the session is over the device will ramp down (gradually reduce the current) and turn off automatically.

COMMON PROBLEMS

You are a living biological system and as such your electrical properties vary constantly. The resistance in your skin can change with temperature, stress and time of day.

The maximum stimulation intensity is limited by the total sum of the resistance measured in the electrodes, skin, and tragus. The device will not output more than 60V to reach 4mA of current.

Overcoming Electrical Resistance

- **Clip Preparation**

Adding a conductive substance to the surface of the electrode will change the electrolysis process. The supplied conductive paste will reduce the tingling sensation caused by nerve endings in the skin. Saline is an effective substitute for sensitive skin. If the metal surface becomes tarnished and cannot be cleaned, you may need to replace with a new ear clip.

- **Ear Preparation Guidance**

It is important to remove any and all possible sources of electrical resistance from the area of tragus under the clip electrodes. Common causes of resistance include; hair, make-up, dirt, and dry skin. It is also important to ensure that the clip makes a deep firm connection with the tragus. Press down on the clip end to ensure it is firmly in place.

Xerosis of the skin is a common age related condition that can greatly increase the skin electrical resistance. Please treat the xerosis before continuing with tVNS.

- **Cleaning Guide**

It is important to clean both the clip and your ear. Ensure the inside area of the tragus is also free from earwax. Wash the clip in warm water after use to remove any build-up.

- **Device Factory Reset**

With the device turned on, press and hold the blue button for six seconds. This will reset the device to factory settings.

Alert	Description
861	The impedance test has failed because your ear clip is not connected or the resistance in your setup is above 65kΩ. Check your setup and reduce the resistance.
862	Electrical resistance is very high and intensity is limited. See tips for lowering resistance.
863	Resistance is preventing maximum stimulation intensity. See tips for lowering resistance.
864	The earclip has developed a fault and must be replaced
865	Low battery. Connect official charging cable to device and 5V power supply.

SPECIFICATIONS

tVNS Stimulator Specifications

Size	58mm x 28mm x 16mm
Weight	21g
Battery	3.7V, 190mAh Lithium Polymer Rechargeable Battery Pack
Waveform	<ul style="list-style-type: none">• Symmetric biphasic waveform• 30Hz Frequency• 250μs phase duration• 50 μs inter-phase interval• Max current 4mA• Max voltage 65V

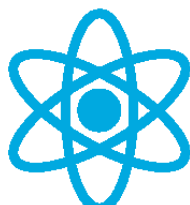
Care & Maintenance (expected service life)

It is important to keep the electrodes of the ear clip clean. Use warm water and soap to ensure paste and dirt is removed after each session.

It is possible that the electrodes will degrade over time. They can be improved with a light polish to return the surface finish.

The Stimulator contains a moisture sensor and should be kept away from water at all times. It is not possible to replace the internal Li-Polymer battery. The expected service life is five hundred recharge cycles.

RESEARCH EDITION



The Research Edition can be identified by the presence of an atom icon on the startup screen.

The research edition allows the frequency, phase, phase offset, voltage, session and current values to be individually adjusted.

Control via the api or the official app.

Full details: <https://vagus.net/api>
<https://vagus.net/app>

WARRANTY & GUARANTEE

Vagus.net warrants the tVNS Stimulator (the “Product”), and only the Product, against defects in materials and workmanship under normal use for a period of twelve (12) months commencing on the date of original purchase by the original purchaser (the Warranty Period). This warranty does not cover damage caused by misuse, accident, abuse, natural and/or external causes (i.e. fire, earthquake, flood, etc.), use other than as intended and described in the Product instruction manual, finishes, normal wear and tear, tampering, unreasonable use, service performed by unauthorized service agents, or loss or damage to the battery. Vagus.net does not warrant that the operation of the Product will be uninterrupted or error-free.

Limitation of remedies

- Under this Limited Warranty, Vagus.net liability and customer’s exclusive remedy under the foregoing paragraph will be limited to replacement or repair of the Product by Vagus.net or its authorized service centers. A replacement Product or part assumes the remaining warranty of the original Product or ninety (90) days from the date of replacement or repair, whichever is longer. To obtain warranty service, contact help@vagus.net For your security, please return your Product with an insured carrier (e.g., FedEx, UPS, USPS Parcel Post) and retain your receipt. Vagus.net is not responsible for items damaged or lost in transit. Other than for the reason of hardware defects, the return freight cost responsibility belongs solely to the customer.

Limitation of damages

- In no event will Vagus.net or any of its affiliated or subsidiary companies be responsible for any special, incidental, or consequential damages resulting from the use of this Product, or based on any breach of warranty, breach of contract, negligence, tort, or any other legal theory. Such damages may include, without limitation: loss of savings or revenue; loss of profit; loss of use; the claims of third parties, including without limitation retailers; any cost of any substitute equipment or services. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation may not apply to you. The warranty gives specific legal rights, and you may have other legal rights, which vary from state to state or country to country. This Limited Warranty is valid only in the United States and Europe for Products sold in the United States and Europe. Resellers, agents, or employees of Vagus.net are not authorized to make any modification, extension, or addition to this Limited Warranty.

FCC



- FCC warning 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. This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. End users must follow the specific operating instructions for satisfying RF exposure compliance. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. Changes or modifications not expressly approved by the party responsible for compliance could void the user’s authority to operate the equipment.

FREQUENTLY ASKED QUESTIONS

The most frequently asked questions relate to problems caused by high resistance, see page 8.

If you have a question not answered here please email help@vagus.net

FAQs

- **Can I use on my right tragus?** Out of an abundance of caution it is recommended you do not use the right ear due to the path of the right branch of the vagus nerve.
- **Can I use for more than 15 minutes?** Yes, it is safe to stimulate for longer durations.
- **It hurts when I increase the intensity?** You should not exceed your comfort level and you will find that your skin grows accustomed to the sensation with time.
- **I cannot feel anything?** This is normal, especially if you are using paste. Most people prefer to feel little or nothing. But if you want to feel more, try without paste; either with just water or completely dry.
- **I cannot increase the intensity?** This means your resistance is too high. See page 8.
- **The needle moves by itself?** This means the resistance is changing. See page 8.
- **What is the best time of day to use?** This is personal and varies. Read more on our blog.
- **Can I use a different recharge cable?** No. Other charging cables will damage your device.
- **Do I need to use paste?** No; but most find it helps with stimulation resistance and comfort.
- **Is this just tENS?** No, tENS uses a controlled voltage whereas tVNS requires a controlled current. See the website for more details.
- **How do I return for refund?** Contact us via email with your order number: help@vagus.net
- **How can I clean the clip?** The clip can safely be washed in warm water with soap to remove any conductive residue or dirt.

WARNING: DO NOT USE TVNS STIMULATION:

- If you use a pacemaker
- During pregnancy
- If you experience any irritation, itching or marking of the skin or any other adverse symptoms during or after the stimulation
- If you suffer from heart rhythm problems
- While driving
- Close to oxygen or inflammable liquids
- No product or advice is solely intended to replace current medication, diagnose or cure any conditions
- Please consult your doctor if you are concerned about the applicability of this product in relation to your own condition or if you are taking medication.

Technical support

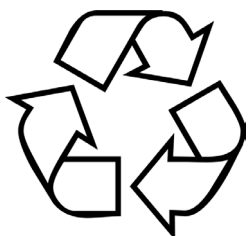
More information is available on the website: <https://vagus.net/>

Email help@vagus.net if you have any questions or concerns.

When contacting support please state the letter shown on the start screen above the man in the box image.



Equipment providing body floating protection against electric shock.



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