

ATD



by AntiTremor.org

User manual

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Introduction

ATD or **AntiTremorDevice**, was developed by engineer Finn Rasmussen who has been diagnosed with Parkinson disease with tremors. He did not believe that there were no real options of minimizing the tremors he was experiencing. After long term research and conversations with chief medical doctors he concluded that outside mechanical exultation would remove or dramatically reduce the tremors and grant the patients a better every day experience. Many users experiences on top of this a "Phantom-effect" where the effect of the usage of ATD will last after the unit has been turned off.

This manual is intended to guide a user through the usage of the ATD both in functionality on the wrist but also in using the accompanying program for fine-tuning the ATD.

Security

- Do not disassemble the ATD

- Keep the unit in a dry location when not in use
- Do not expose the unit to temperatures over 40°C
- The ATD should be removed before showering and swimming
- Do not expose the unit to violence
- Do not expose the unit to strong chemicals such as gasoline, cleaning detergents, alcohol, bug spray as they might ruin the seal and thereby unit.
- The ATD can be cleaned by using a moist cloth eventually with mild soap to remove tough stains.
- The unit must never be fully discharged and must be recharged minimum each 3 month
- Use the accompanying cable when charging. Avoid straining the cable during charging.

Important before starting use

- It is important to charge the ATD before use. The battery might be depleted, disallowing the ATD to start.
- Best effect is achieved when the ATD is strapped as tight around the wrist as possible without it being uncomfortable. A loose ATD might make more noise, as the pins holding the strap might rattle.
- The programs stored in the ATD are based on user test. This also goes for frequency and power of the tremor. In 9 out of 10 standard setup will actively reduce tremor. Not until after a few days of use, programs with less effect will be noticeable.

Function

The ATD is shaped as a wrist watch. It is mounted around the wrist in a tight fashion, ensuring a solid transfer of the motion pattern to the arm. Keep it as tight as possible for best results. Furthermore, a loose watch will be noisier due to the pins securing the wrist-band to the watch.

The ATD has 7 built in motion patterns. Each pattern is activated in turn, the change occurring automatically after a period of time. This ensures the brain is not “programmed” to accept the ATD and thereby reducing the effect. The patterns can also be changed manually.

The ATD can alter the strength of the tremor patterns. It has been set to a level, which has provided with the best effect on a number of test-persons. This however is highly individual.

NOTE: If the strength is increased, the need for power is increased as well. Obviously this will reduce the amount of

hours of operation between recharging. Increasing the strength will also increase the noise emitted from the unit.

NOTE: This function has been removed from newer models as it has caused accidentally increased strength and thus louder more noise emitted. The strength can now only be adjusted by us.

The ATD has the ability to change the frequency of the individual tremor patterns. This can help to adapt to the individual needs of a patient. On the unit, there are three different frequencies to choose from, but the accompanying program allows for fine-tuning of the frequency.

The ATD allows for a snooze function. This will enable the ATD to run for 30 minutes before automatically switching off. This can be of help, if tremors are impeding the ability to fall asleep.

The ATD draws energy from a rechargeable battery. When the battery needs to be recharged, the diode will start to flash red.

Use is limited to approximately one hour. Once the battery level drops further, the unit will automatically shut down. Any attempt to restart will cause it to stop again until recharged.

When the unit is turned off, it will enter a sleep mode to reduce power consumption. It will wake up, when one of the buttons are pushed.

Usage

Program button (PRG)

Status light

On/Off button

USB port



When the ATD is not running, a push on any of the two buttons will start it.

When running:

- A push on (PRG) will change program

- A push > 2 seconds on (PRG) will change frequency (3 levels)
- A push > 2 seconds on (ON/OFF) will turn ATD off
- If both buttons are held in > 2 seconds, the snooze function is activated.

The Status light can assume three different colours: Blue, red and purple.

- Running: Light is turned off (the shaking indicates operation)
- If charging: Status light blinks purple
- If done charging: Light is constant blue
- If snooze is activated, it blinks red and blue
- If it needs to be charged it blinks red

Charging

Insert the accompanying cable. Connect to a USB port on a computer or to another USB charger (cell phone etc.).

The ATD will now flash purple. When the unit is done charging, it will turn constant blue.

NOTE: If the ATD is in sleep mode when connected to a charger it will not flash. It will still be charging. To turn on the flashing, turn the unit on and back off.

Datasheet

Dimensions	46 x 36 x 9.5 mm (without strap)
Weight	23 gram
Battery type	3.7 volt, 230mAh Lithium Polymer
Battery life	I use: approximately 10 hours (at standard setup) I sleep: app. 3 month
Charger	Use standard USB charger (computer usb port, Samsung phone charger etc.)
Charging plug	Micro-USB
Charge time	Ca 2 timer
Programs	7
Frequency levels	3 (240 in PC program)
Force levels	25 in PC program

