



Bio-Tuner
BT7

Serving your Wellness Needs

A CONSUMER PRODUCT

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INTRODUCTION

Thank you for allowing us to be a part of your health team. The Bio-Tuner is a consumer product designed to complement a healthy lifestyle.

This unit outputs a modified rectilinear waveform to produce over 500 harmonic frequencies in each pulse.

Please understand that results will vary. Healthy lifestyle choices are important.

Please read this manual carefully. We encourage you to become better informed about the use of harmonics.

To learn more about the Bio-Tuner we invite you to visit www.sotainstruments.com

The SOTA Bio-Tuner is designed to give you many years of trouble-free use.

COMPLETE UNIT INCLUDES

- One (1) Bio-Tuner Unit
- One (1) Headset
- Three (3) pair of Cotton Covers
- One (1) Arm Clip and Band
- One (1) 9-Volt Alkaline Battery

OPERATIONAL CAUTIONS

As with all electrical products do not use:

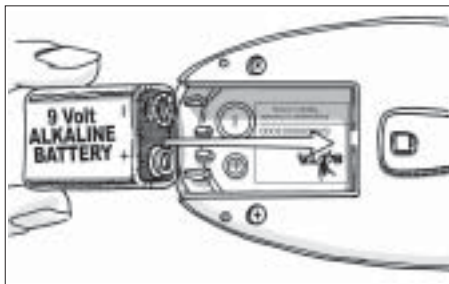
- a. Near water
- b. When driving a car or
- c. When operating heavy equipment

GETTING STARTED

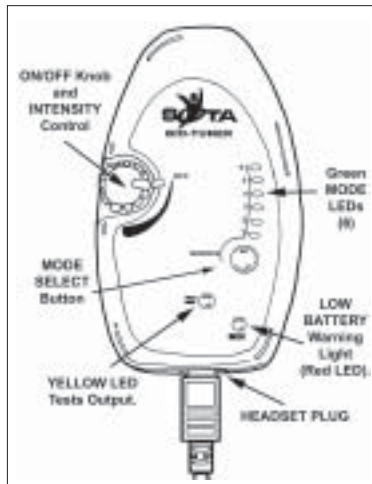
1. Place the 9-Volt Alkaline battery in the unit.
 - a. Slide off the lid on the lower back of the unit.
 - b. Position the 9-Volt Alkaline battery so the the positive (+) and negative (-) terminals line up as in the diagram.

Note: the smaller circle on the battery matches the smaller circle in the case.
... the larger battery circle matches the larger circle in the case.

- c. Slide the 9-Volt Alkaline battery into the case and push down. Slide the cover back onto the unit.



2. Turn the unit ON by rotating the switch clockwise.
3. All the lights will flash once to indicate the unit is ready for use. If the lights do not come on, the battery may not be placed correctly.
4. When the unit is turned on it always starts in Mode 1.
5. The green light for Mode 1 will remain on indicating the timing sequence has begun.
6. Turn the unit OFF by rotating the Thumbwheel Switch fully until it just clicks. Important: Do not force the ON-OFF Thumbwheel Switch past its natural stopping point.

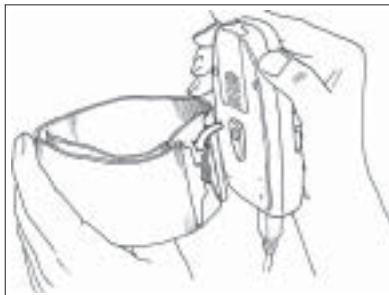


HOW TO USE THE BIO-TUNER



1. Clean behind the ears to eliminate skin oils. This will allow for better conductivity.
2. Place one cotton cover over each headset electrode. Wet the cotton covers with water.
3. Position the electrodes in the hollow behind the ears.
4. Plug the headset cord into the unit with the flat side of the plug face up. When the plug is positioned correctly, it will slide in gently. Do not force.

5. Slide the clip on the back of the Bio-Tuner into the holding clip on the Arm Clip and Band.
6. Slide the Arm Clip and Band with the unit attached up the arm to a comfortable position.
Tighten the Arm Clip and Band to fit snugly and comfortably.
Option: If preferred, the unit can be placed in a pocket.



7. Turn the unit ON and gradually turn up the intensity until the current is felt. The intensity should not be uncomfortable. It should be a rather pleasant buzzing sensation. See 'How It Should Feel' on page 8.

8. The yellow light is a test to show the unit and headset are working. If the current is felt, the unit and headset are working. If not felt, see TROUBLE SHOOTING on page 11. Note: The yellow light only comes on when the unit is turned up high enough.



9. The unit will operate in Mode 1 unless another mode is chosen.

10. Change from one mode to another by pushing the mode switch. The green light indicates which mode is selected. See 'Output of Six Modes' on page 9.

11. The timer will automatically cycle the unit into Sleep Mode after 20 minutes. The yellow light will turn off. The green mode light will flash every 2 seconds.

While in Sleep Mode the battery is still being used.

12. When the unit is in Sleep Mode, there are 3 choices:

- a. Push the mode button once to reset for another 20 minutes, or
- b. Choose another mode, or

7 c. Turn the unit off.

HOW IT SHOULD FEEL:

- The sensation should be a rather pleasant buzzing. If it feels prickly or unpleasant, check the following:
 - a. Clean the skin area to reduce skin oils—even natural skin oils can create a stinging sensation.
 - b. Ensure the cotton covers are clean and moist, or add more conductive gel.
- It is common to feel a sensation more on one side.
- With repeated use, the buzzing sensation may not be felt as much. The intensity may be turned up if desired. A conductive gel can also be added to the electrode covers to better feel the current.

TYPICAL USE:

Length of session: Limit each session to a **maximum** of 40 minutes. (Two timed 20 minute cycles.) Early research indicated that if used longer than 40 minutes at a session, the benefits were reduced.

Drink plenty of water: It is important to drink several glasses of water daily while using the Bio-Tuner.

Length of use: It may take up to four weeks before feeling any benefits.

Maintenance schedule: Ongoing use may be beneficial. Suggestions for a maintenance schedule are 30 days every few months or a few days each month.

OUTPUT OF SIX MODES

The 6 different modes simply offer a choice to experiment as to what feels or works best. In all modes, the base frequency of 1,000 Hz pulse-modulated by 111.11 Hz is present.

MODE 1-3 (550uS pulse width)

Mode 1: 1,000 Hz modulated by 111.11 Hz, 550uS Pulse Width
Output = Continuous

Mode 2: 1,000 Hz modulated by 111.11 Hz, 550uS Pulse Width
Output = 1 Second ON, 1 Second OFF

Mode 3: 1,000 Hz modulated by 111.11 Hz, 550uS Pulse Width
Output = Amplitude Modulated by 7.83 Hz Schumann (Earth) Sine Wave

MODE 4-6 (220uS pulse width)

Mode 4: 1,000 Hz modulated by 111.11 Hz, 220uS Pulse Width
Output = Continuous

Mode 5: 1,000 Hz modulated by 111.11 Hz, 220uS Pulse Width
Output = 1 Second ON, 1 Second OFF

Mode 6: 1,000 Hz modulated by 111.11 Hz, 220uS Pulse Width
Output = Amplitude Modulated by 7.83 Hz Schumann (Earth) Sine Wave

ELECTRICAL SPECIFICATIONS

POWER REQUIREMENTS:

One 9-Volt Alkaline battery.

Note: An Alkaline battery must be used for the unit to work properly.

OUTPUT SPECIFICATIONS:

- Maximum $<1.5\text{mA}$ Peak ~ 40 Volts Peak-Peak into typical 4k ohm load. Minimum $<\sim 10$ microamperes, 10 Volt Peak-Peak at lowest setting. Output impedance $\sim 20\text{k}$ ohm.
- Modified rectilinear wave with rapid rise time (under 1 μS). There are over 500 harmonic frequencies delivered in each pulse as observed on a frequency domain (not time domain) spectrum analyzer.
- 1,000 Hz Squarewave (+/- 1%) pulse-modulated by 111.11 Hz (+/- 1%) Squarewave. Waveforms are Quartz Crystal-Controlled for precise frequency output.
- Pulses are Bi-Phasic (AC) with no direct current (DC) or offset bias. Output is transformer coupled so that no DC can appear at electrodes. The algebraic sum of positive and negative-going pulses is zero.

SUMMARY OF LIGHTS:

GREEN lights: Indicate which mode is selected.

RED light: Indicates the battery is low and will soon need replacing.

YELLOW light: A test to show the unit and headset are working.

TROUBLE SHOOTING

If the green mode light does not come on, replace the 9-Volt Alkaline battery and turn the unit ON. If the problem persists, first check to be sure the battery has been placed correctly. For repair information, see page 12.

If the current is not felt when the headset is in place with the intensity on maximum, ensure the cotton covers are clean and damp. The cotton covers should be washed or replaced when soiled.

If the yellow light does not come on when the headset electrodes are touched together, check the headset as follows:

1. Ensure the electrodes are clean:
 - a. Pull the rubber electrodes off the headset to clean any corrosion that may have built up on the metal.
 - b. Clean the inside of the rubber electrodes with a toothpick or similar object.
2. Plug the headset cord into the unit.
3. Turn the unit ON to maximum intensity and touch the electrodes together. The yellow light should come on.

If the yellow light still does not come on, see page 12 for repair information.

CAUTIONS

Do not use in the following situations as safety has not been explored:

- In the case of pregnancy, nursing or trying to get pregnant.
- With a pacemaker or other active implanted device.
- With seizures or psychotic conditions.

WARRANTY

SOTA Instruments Inc. continually strives to manufacture the highest quality, most reliable units possible.

SOTA Instruments Inc. reserves the right to update, modify, revise, alter, or otherwise change or make changes to the Bio-Tuner without notification.

The Bio-Tuner is covered by a 3 (three) year parts and labor warranty on all internally mounted components. Please keep proof of purchase. Warranty is void if the failure is due to abuse or negligence.

Warranty and Repairs:

For repair, please contact your supplier for return instructions. Or, for information about your closest repair depot, contact:

repairs@sotainstruments.com

Tel: 1-250-770-2023

Fax: 1-250-770-1999

The BT7 is designed and engineered in Canada. Made in China.

