

STRESS*Eraser*



User Guide

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2. Introduction

The Stress Eraser is a portable battery-operated biofeedback device that measures stress levels via fingertip pulse. You can use it anywhere, as long as you are sitting without distraction, to help you relax deeply.

Usage is simple. While sitting, power on the unit and insert the index finger of your left hand into the slot at the top left. By sensing your finger pulse, the display shows a curving line, a sine wave, that resembles your quality of breathing. Using the triangle at the top of the display as a cue, you begin to exhale. The graphed line will drop. When the line reaches the bottom of the curve, you begin to inhale as the line begins to rise. Optionally, you can listen to an audio beep, which corresponds to the triangles and the peaks of the sine wave. This lets you close your eyes and relax even more deeply.

With each breathe, Stress Eraser displays a series of dots that correlates to the level of relaxation. Over time, watch as the sine wave gets smoother faster, indicating that you have learned to relax more quickly and deeply.

This 2.5" x 4.75" unit comes with its own case and fits easily into any purse. The unit requires two "AAA" batteries and may provide measurements for up to one month, depending on frequency of use.

3. Warnings

- Use StressEraser when and where you are undistracted.
- Do not use StressEraser while engaging in other activities such as driving, walking, operating machinery, using appliances or other situations where attention is required for your safety.
- Use StressEraser only for its intended purpose.
- StressEraser is not intended for use in water or harsh environments.
- StressEraser is not intended for use by infants or children.

4. Glossary of terms

Biofeedback - a method, often involving technology, which allows a person to become more aware and in control of bodily functions that occur automatically, such as heart rate.

Infrared - a high frequency wave similar to a light wave and capable of detecting motion.

Interface - the front face of StressEraser with which you will interact during relaxation sessions.

Graph - the mathematical representation of relaxation points earned during a session, which are displayed on x and y axes as a sine wave.

Point - a calculation which StressEraser devised to convey the quality of relaxation via the breathing and pulse. Each breath may earn from zero to one point, with zero indicating the least relaxation. Points are recorded in the upper right and under the sine wave.

Pulse - movement and change of blood flow, which relates to change in the breathing and heart rates.

Sensor - the infrared eye which measures pulse rate via your finger.

Session - the total time spent relaxing with StressEraser. The recommended minimum session length is 30 points.

Sine wave - an alternating wave with peaks and troughs.

5. Technical Description

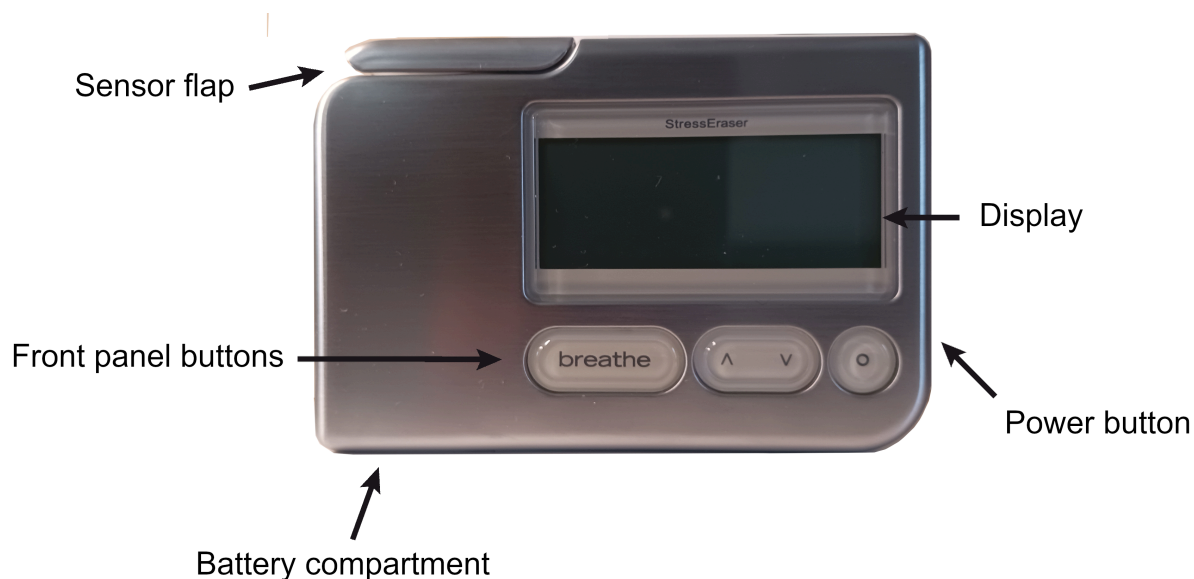


Figure 5.1: StressEraser

Weight: 4.6 ounces (less than a cell phone)

Dimensions: 2.5”H x 3.75”W x .75”D

Requires: 2 AAA batteries

Materials used: plastic

Parts

Battery compartment - on the left underside of the unit. To open the compartment, slide the tab out to the left before pulling it down. Insert the batteries as shown below:



Figure 5.2: StressEraser with battery compartment open. Image courtesy of StressEraser Quick Start Guide.

Display - Shows the progress of the current session.

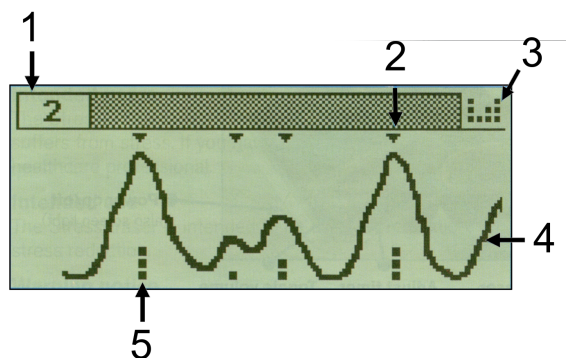


Figure 5.3: StressEraser display while in operation. Image courtesy of StressEraser Owner's Manual. Image has been modified from the original.

1. Points achieved in the current session.
2. Triangle marking the start of the exhale.
3. Tracker reflecting the wave quality of the current session (corresponds to number 5).
4. Sine wave reflecting the finger pulse.
5. Points reflecting the quality of the breath, where 3 is the most relaxed.

Front panel buttons - on the unit face. Unit must be powered on to use these. They control settings and options. See Figure 5.1.

1. Left button - has the word "breathe".
 - Press to change the breath timing (default is 5 seconds in, 5 out).
 - Press simultaneously with the right button to display a menu from where you can:
 - ▶ set display contrast
 - ▶ set date and time
 - ▶ see history of past sessions
 - ▶ check the serial number or firmware version.



Figure 5.4: Left button with "breathe" on the front panel of StressEraser.

2. Middle button - has up/down arrows.

- Press to progress the cursor through settings and options.
- During “Set up”, press to increase or decrease the values for date and time.



Figure 5.5: Middle button with arrows on the front panel of StressEraser.

3. Right button - has a circle. .

- During setup or while accessing the menu, press to select or accept and move to the next step or screen.
- During normal use, press to adjust the sound level. The 3 settings are “Off”, “Low” and “High”.
- Press simultaneously with the left (“breath”) button to display a menu. See 1b.



Figure 5.6: Right button with circle on the front panel of StressEraser.

Power button - on the right side side of the unit. It toggles the unit on/off when pressed repeatedly. See Figure 5.1.

Sensor flap - at the top left, attached by a hinge. When the index finger of your left hand is inserted, the sensor will detect your finger pulse, which gets relayed to the display as a graph showing your level of relaxation. See Figure 5.1.

Using StressEraser

Insert the AAA batteries (see Figure 7.2) and power on the unit (see Figure 7.1). After entering the date and time information, the display will show a message instructing you to insert your finger. Insert your left index finger under the sensor flap and relax, breathing a little slower and deeper than usual. The display will draw a curved line (a sine wave) that corresponds to your breathing (see Figure 7.3). Begin to exhale when the triangle appears at the top of the display. Continue to breathe in and out steadily and gently. If the sine wave doesn't quite match your breathing, adjust it using the “breathe” button. You can also enable audio beeps to signal the point of exhalation, which will allow you to close your eyes. Aim for 30 points.

6. Instructions

1. Open the battery compartment, located on the bottom of the unit, by first sliding the compartment door to the left and then opening the door downward.



Figure 6.1: StressEraser with opened battery compartment

2. Insert the batteries. Note the polarities, which are marked on the image below.



Figure 6.2: Battery polarity

3. Press the power button, located on the right side of the unit.



Figure 6.3: StressEraser side view, power button location.

4. Set the date and time.
 - Press the middle button with the arrows to adjust the highlighted setting.
 - Press the right button with the circle to accept the setting and progress to the next.
 - When all settings have been entered, the right button will exit setup and display a prompt to insert your finger.



Figure 6.4: StressEraser set up screen.

5. Make sure you are sitting where you will not be distracted. Begin the session by inserting your left index finger under the sensor flap.



Figure 6.5: Holding the StressEraser.

6. Breathe in and out a little slower than usual and allow yourself to relax. The display will track your level of relaxation and progress. See the details listed below the image.

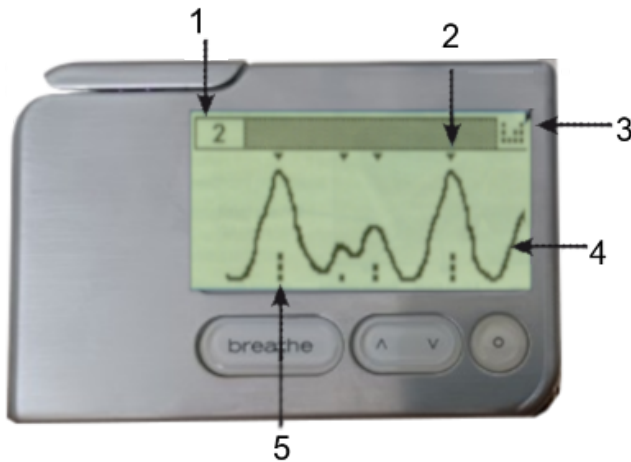


Figure 6.6: StressEraser session in progress. Image courtesy of StressEraser owner manual. Image has been modified from the original.

- Look to the top left number for points accrued in the current session. See number 1 in the above image.
 - Notice the triangle when checking your breath length and synchronizing your out-breath. See number 2, above.
 - Check the record of your session here. Three dots signifies highest quality. One is the lowest. One session of the recommended 30-points will expand across the top. See number 3, above.
 - Estimate your level of relaxation by the smoothness of the sine wave. See number 4, above.
 - Notice the specific quality of the breath as it happens. Each breath also gets entered into the record (shown by number 3 in the image). See number 5, above.
7. Adjust the sound level (optional). Press the right button (with the circle) on the front panel to set the sound level to low, high, or off. See Figure 7.1.
8. Turn the light on (optional). Press and hold the power button (see Figure 6.3) while the unit is powered to toggle the light on and off. Using StressEraser in the dark can reduce distraction, allowing you to relax deeper.

9. Adjust the breathing rate (optional). If you feel yourself forcing your breath to match StressEraser, press the “breathe” button (see below) to adjust the breathing rate. To access this setting, the unit must be powered on and your finger must be inserted into the unit.

- Use the middle button with the arrows to shift from the default setting of 5.
- Use the up arrow to move to the lower numbers, which will shorten the breath.
- Use the down arrow to move to the higher numbers, which will lengthen the breath.
- When done, press the left button with “breathe” to close the breath settings.



Figure 6.7: Adjusting the breathing rate.

10. Check your progress by comparing previous sessions.
 - a. Open the menu by pressing the left (“breathe”) and right (circle) buttons simultaneously. See image below.
 - b. Use the down arrow on the middle button to move the cursor to “History”. Enter “History” by pressing the right button with the circle.



Figure 6.8: Menu opened with cursor on “History”.

- c. Scroll through the recorded sessions using the middle button with the arrows.

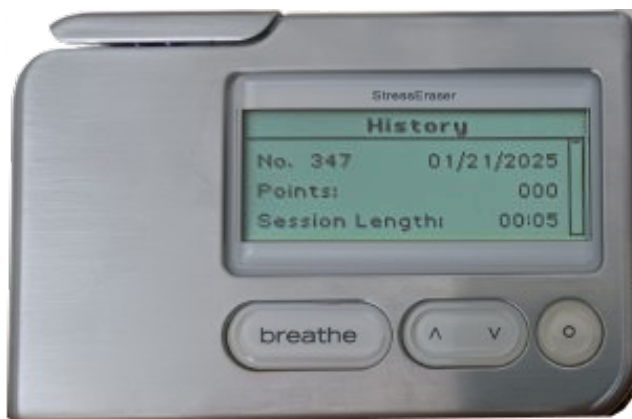


Figure 6.9: Session history screen.

7. Diagrams

7.1 StressEraser components

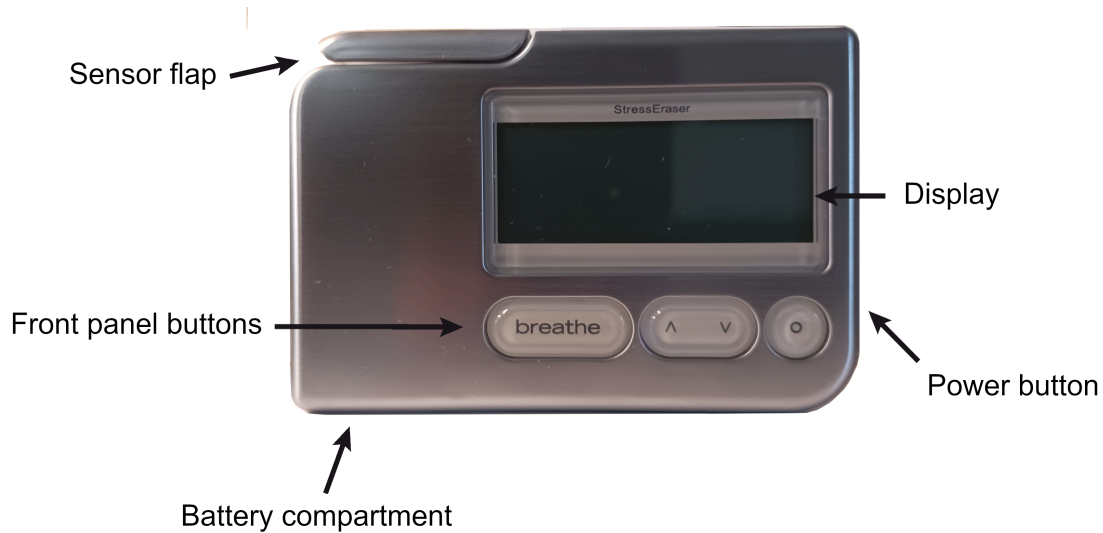


Figure 7.1: StressEraser components

7.2 Battery compartment open showing battery orientation



Figure 7.2: StressEraser with battery compartment open. Image courtesy of StressEraser Quick Start Guide.

7.3 StressEraser screen during an active session

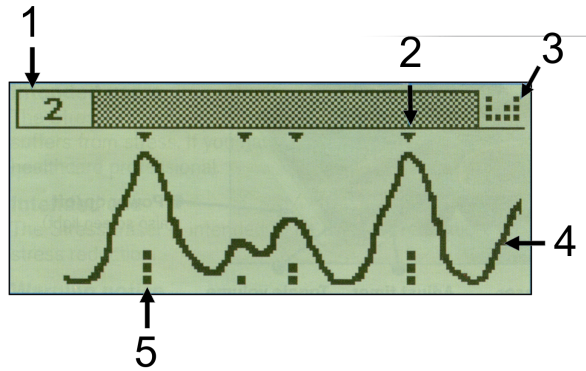


Figure 7.3: StressEraser display while in operation. Image courtesy of StressEraser Owner's Manual. Image has been modified from the original.

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2. Triangle marking the start of the exhale.
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8. Troubleshooting

To use any of the buttons on the front face of the StressEraser, you must first power the unit on. See Figure 7.1.

If the unit won't turn on, check that the batteries are new and that they are inserted properly. See Figure 7.2.

Error messages

Error messages will occasionally show related to your finger position, your level of stillness or your location. They are listed below.

- **Sensor Error** - Check that your finger is seated straight and evenly in the sensor area.

If the error message continues to show,

- ▶ check that your hands are clean and moisturizer free.
 - ▶ make sure that your hands are warm.
 - ▶ try using your middle finger.
 - ▶ remove any nail polish or decals.
 - ▶ try new batteries.
- **Don't squeeze. Rest your finger lightly** - Make sure that the unit is resting easily in your hand so that your finger doesn't need to squeeze to hold it.
 - **Keep finger still and avoid sunlight** - Remain still in an environment where light remains constant.

Other error messages

- **Low battery** - Change the batteries.