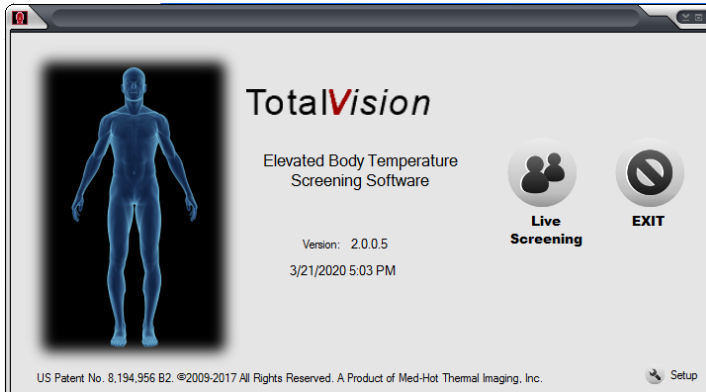# Human Temperature Calibration Method

Instructions and Information with Screen Shots
Med-Hot Elevated Body Temperature Measurement Software V 2.0.0.5

TotalVision

Elevated Body Temperature
Screening Software

Version: 2.0.0.5

3/21/2020 5:03 PM

Live Screening   EXIT

US Patent No. 8,194,956 B2. ©2009-2017 All Rights Reserved. A Product of Med-Hot Thermal Imaging, Inc.   Setup

Function
Med-Hot Elevated Body Temperature Measurement (EBT) screening allows a quick, non-contact review of an individual's facial temperature variations. Because ambient temperature and time of day can affect body temperature, we initially set a **calibrated** temperature with at least 2 healthy people in the same environment. Everyone is then compared to this baseline control group. When a relatively elevated temperature is detected, a visible and an optional audio alarm will alert the user.

Strategy
Prepare for viewing and temperature comparison by:
- Capturing temperature data of the environment
- Capturing temperature data of 5-10 separate individuals – or more if required
- Compare all others to the average temperature data captured in steps 1-3

Preparation
- Decide on unit tolerance for temperature difference to determine necessity for core temperature measurement. Choice can be in tenths of a degree, i.e. 1.5° or 2.0°

- Decide if the audio alarm is acceptable. Consideration should be given to using headphones to avoid alarming those being screened.

- Test core temperature on two or more individuals to determine if they are each eligible to be in the accepted temperature range as "calibrated" choices.

   - Forehead must be clear of covering, including hair or anything that would block the skin
   - No glasses (ultimate measurement is between the eyes)
   - Mouth is closed (hot region)

Note:
It is imperative that the individuals chosen for the baseline calibration be **coming from and standing in the exact environment** as those who will be screened. In fact, they should be one of those who are waiting to be screened. The thermal environmental data is part of the algorithm**.**

Not following this instruction can result in false positive or negative notifications.

Control group: Check each person's basal temperature first to confirm their temperature is not elevated because everyone will be compared to <u>them</u>.

Protecting Privacy

This system is specifically designed to pre-screen individuals with measured temperatures that exceed others in the same environment. Images can be recognizable; therefore, the software is designed **NOT** to save and store images.

Decisions for secondary screening are to be made on the spot. The software temporarily captures the last five images with temperatures above the determined threshold. As long the 5 images are in the tray, they can be opened for more detailed viewing.

1. Type the management-determined **Alarm** notification **temperature difference** in the box. This is the difference between **calibrated** temperature and the **alarm** temperature. **Click OK to set it.**
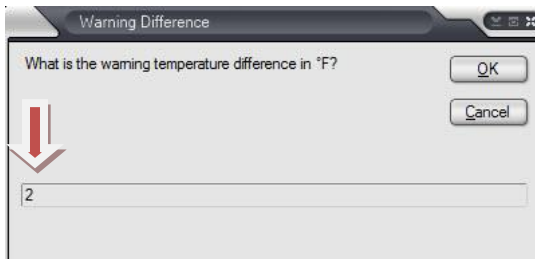

2. **HUMAN BASELINE CALIBRATION**

   Measuring the ambient temperature
   The purpose of this step is to introduce the ambient temperature to the calibration process without anyone in the frame.
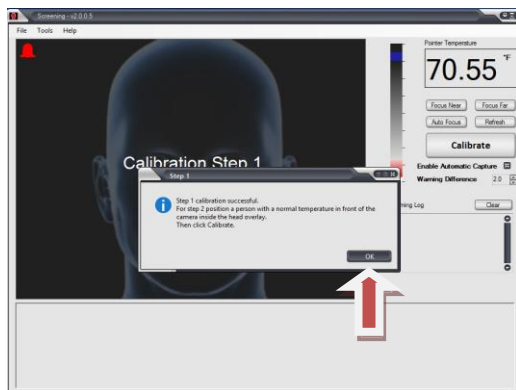
Focus the camera to a person at the imaging distance. We recommend the distance be within 10 feet (as seen below) with the MAX307 640X480 array camera. However, the closer the better.
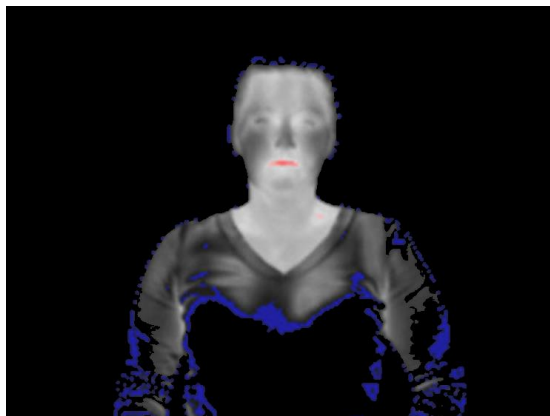
The focus procedure is primary as the camera cannot read temperatures accurately from an un-focused image.

Calibration Instructions
1. Position person's face inside the mask
2. Click the Auto Focus button so the face is in focus
3. Click Calibrate

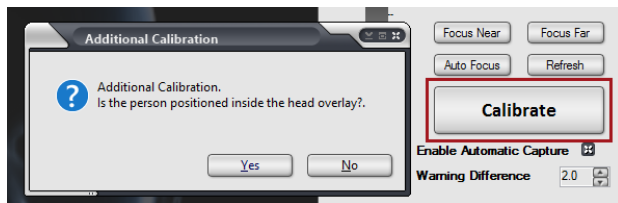**The focusing step: This is out of focus**

This is in focus- better detail


Baseline Calibration Steps:
Follow on-screen instructions to complete the Human Baseline Calibration Method

For additional individual calibrations: Click the CALIBRATE button and repeat as many times as instructed by management.

Calibrations should be updated during the day or possibly between shifts, as environment and normal body fluctuations change.

3. Automatic capture of images registering over the target temperature is enabled by default. It will only display 5 of the most recent over-target temperature images. To **disable: un-check** the **Enable Automatic Capture** button
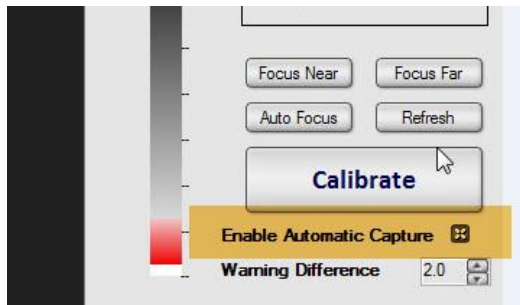
4. The **audio alarm can be disabled** by clicking on the bell in the upper left corner of the screen which will be covered by an "X" indicating disabled. The volume of the alarm can be controlled on the computer's audio volume.
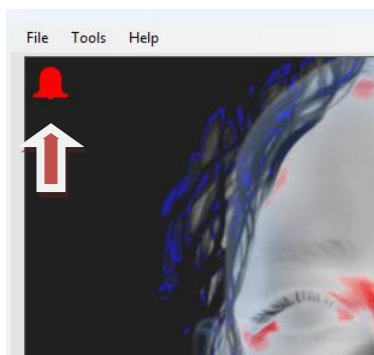
5. You are now ready to screen.
   Instruct them to:
- Remove glasses
- Remove hats or anything on the forehead
- Not open their mouths or talk

The person's face should fit into the "mask" on the screen as much as possible or at least in the center of the mask and ask them to look at the camera lens. The reading is instant so if there is or is not an alarm, they can move away quickly.

Note: This is a non-contact adjunctive screening procedure. Those who trigger the alarm must have a reliable temperature measurement follow-up test to determine true core body temperature.

Optional Color Palette

Although we prefer the grayscale, there is an option for a rainbow palette, as seen below. Use the #1 and #2 keys on the keyboard to change the palette. In both cases, white is the hottest temperature.