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Certificate Number 10088
ISO 9001

FevIR Scan™ 2

GC010008 Quick Start Guide - Ethernet

CAUTION

There is a mechanical shutter in front of the thermal imaging camera lens that is recessed inside the white camera case. The shutter moves in front of the thermal lens (the reflective lens) about once per minute to perform a system calibration. The frequency of calibration varies depending on a number of factors (environmental temperature, time from power on, etc).

- Do not insert any object into the opening or attempt to clean the thermal lens with any material.
- Do not interrupt the movement of the shutter.
- Do not force the shutter with your finger or any other item.

Failure to observe these instructions may lead to permanent damage of the shutter mechanism and will invalidate the product warranty.

Please note that the FevIR Scan 2 skin temperature measurement system lacks FDA clearance, approval or authorization.

NOTE

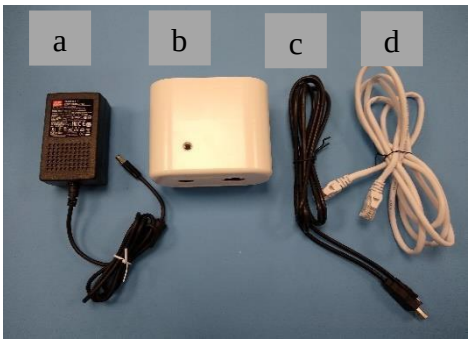
This document provides a quick start procedure to follow. There is also a full "Operation Manual" (Part number GC010006) which is included in electronic format (PDF) on the USB stick enclosed and is also present on the desktop of the Laptop computer.

PC Admin Password

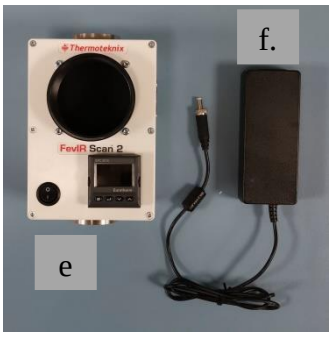
The Admin Password required for PC Management or software installation is:

TTX-Admin

1. Box Contents

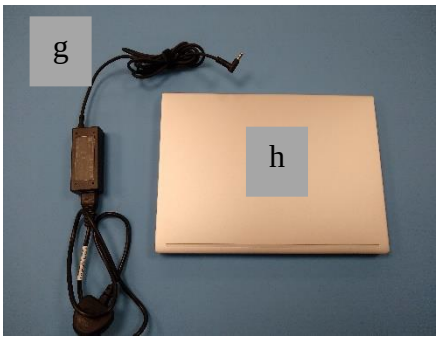


a. 5V Power Supply Unit
b. FevIR Scan FSD01 Camera
c. USB lead
d. Network Cable



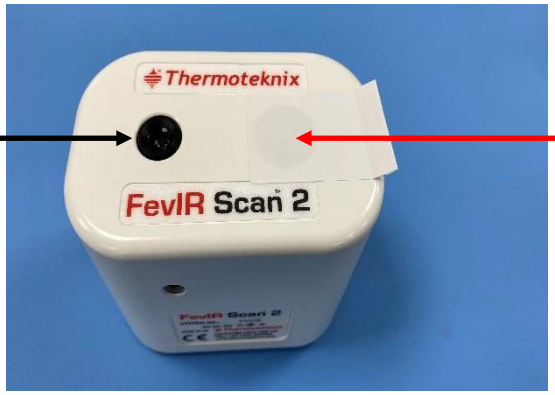
e. ThermaRef 35B1 blackbody temperature reference
f. 24V Power Supply Unit

Optional



g. Laptop Power Supply Unit
h. Laptop with FevIR Scan 2 software program

Color visible CCD camera



Remove protective cover from FevIR Scan 2 FSD01 Thermal Camera

2. Connections

(1)

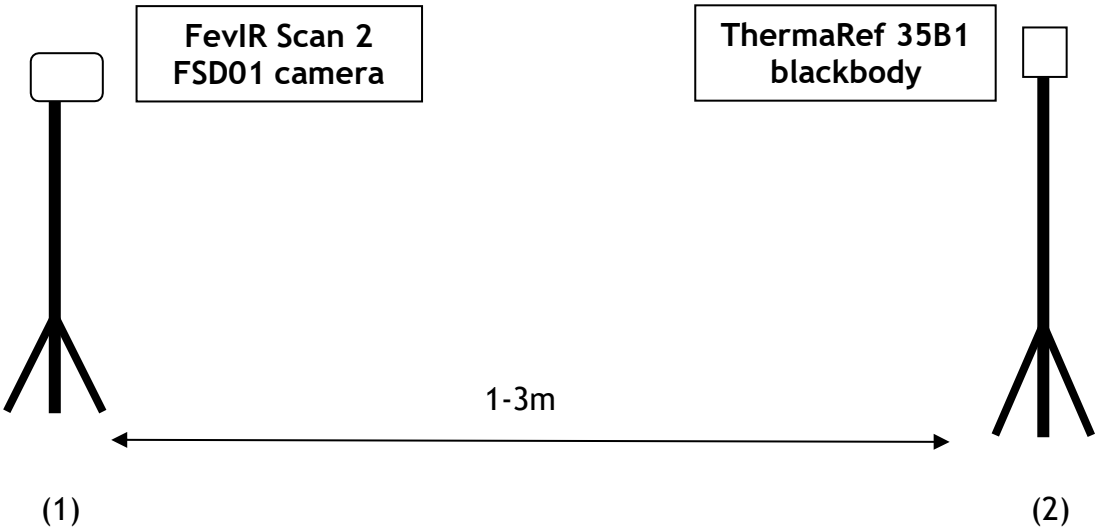
(2)

(3)

(4)

1. Connect the Laptop (h) and the FevIR Scan 2 FSD01 camera (b) by fitting cables (c) and (d) respectively.
2. Connect the ThermaRef 35B1 (e) to its power supply (f) and SWITCH ON. The ThermaRef is factory set at 35°C and will need approx. 20 minutes to stabilize.
3. Connect the FSD01 camera (b) to its power source (a) (DO NOT SWITCH ON).
4. Connect the Laptop (h) to its power source (g) and turn on the Laptop.
5. Do not power on FevIR Scan 2 FSD01 camera yet.

3. Physical Alignment

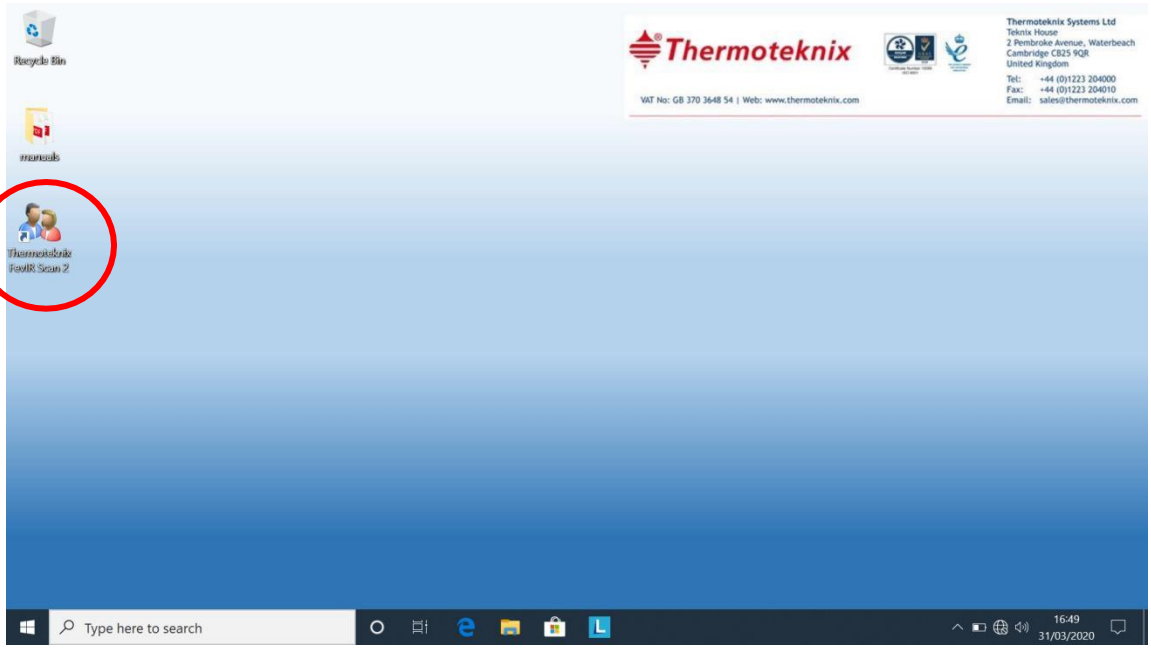


1. Mount the FSD01 camera (1) on a suitable platform (tripod/ceiling mount).
2. Mount the ThermaRef 35B1 blackbody (2) on a suitable platform (tripod/ceiling mount) at a distance of 1-3m from the FevIR Scan 2 FSD01 camera.
3. When viewed from behind the FevIR Scan 2 FSD01 camera, the ThermaRef 35B1 blackbody should be offset to the left or right and not viewed directly in line with the front of the field of view.
4. The ThermaRef 35B1 blackbody should be located at the same point as that used to measure subject's skin temperature. This point should be outlined on the floor with tape and people should be instructed to pause momentarily to confirm no alarm has been activated.
5. Tape or barriers should be used to ensure people cannot walk between the camera and the reference source.

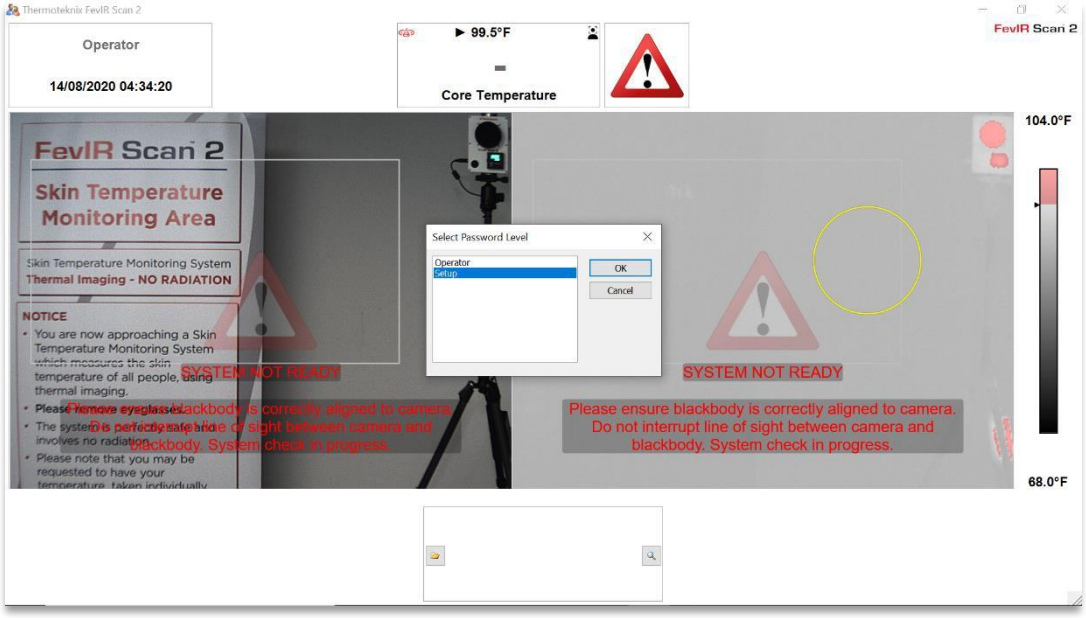
NOTE: *To avoid undue stress and strain on the cable connection, suitably tie-wrap them to the tripod or the support of choice to reduce potential damage.*

4. Switch on and Setup

1. **Power on the FevIR Scan 2 FSD01 camera.**
2. **On the Laptop start the software application - Thermoteknix FevIR Scan 2.**



3. **Once running, press F7 or "Fn" F7 on Lenovo laptops to enter the Setup menu.**

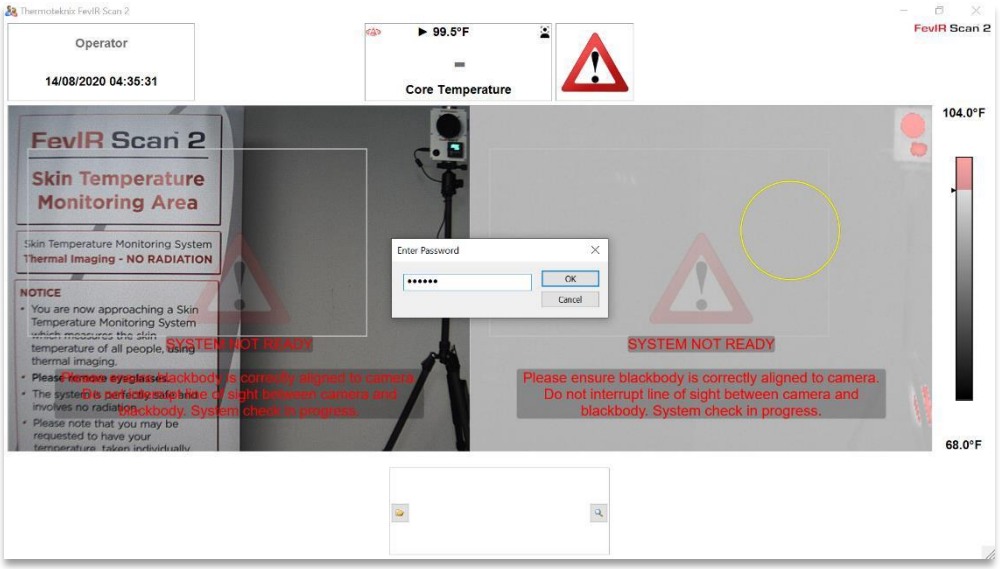


4. **Select "Setup" and click "OK".**

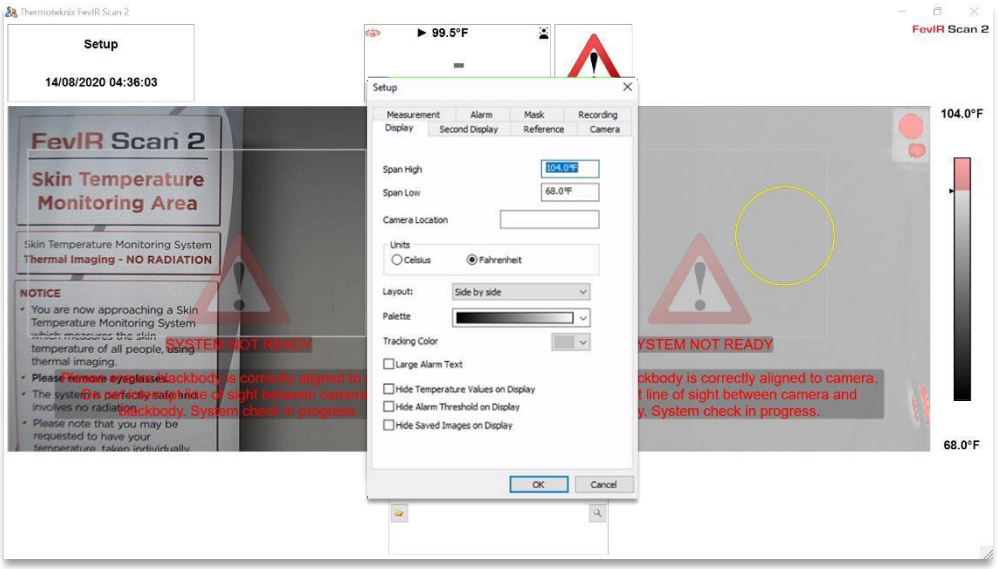
5. **Enter password:**

000000

(6 zeroes)



6. **Many of the parameters are preset, these can be changed under the various tabs shown below.**
7. **Select the fourth tab: “Display”.**



8. **Set the “Palette” to Monochrome for the Setup process. This can be altered later once everything is up and running.**
9. **Click “OK” and the menu will close, returning to the main screen.**

5. Stability Monitor

1. On the right side of the screen is a system status icon to inform the operator as to the condition of the system.

2. There are four system status icons:

System operating normally - blackbody temperature stable.
- camera operating normally.

Subject detected with normal temperature (above "Tracking Temperature" and below "Alarm Temperature")

High temperature detected - check subject with thermometer.

System NOT operating - blackbody and or camera temperature not stable.
- blackbody not uniform.

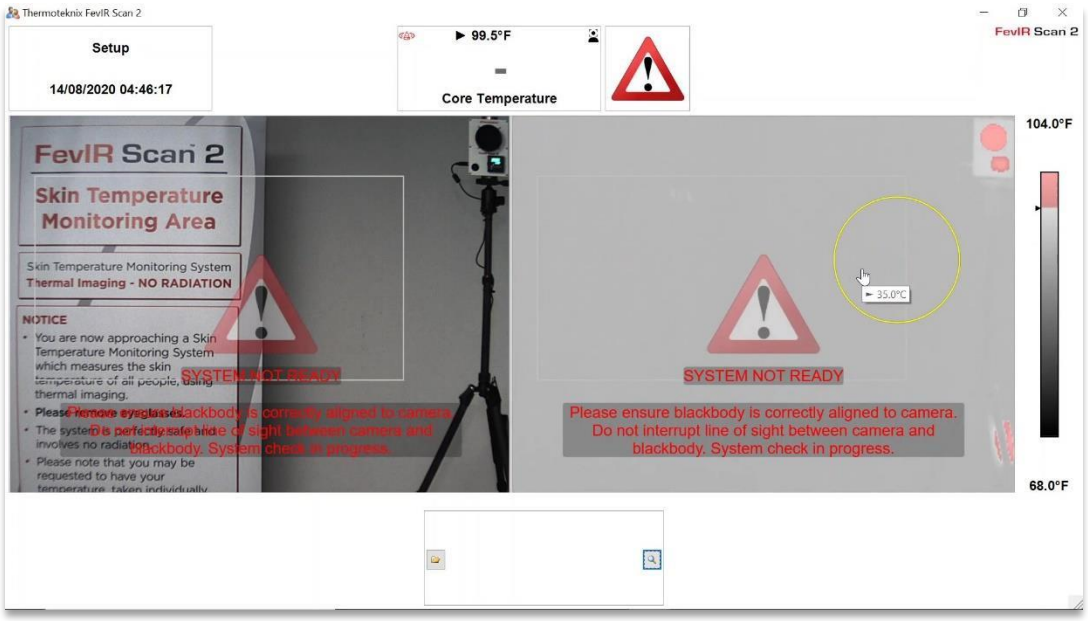
3. Further information can be found in the manual.

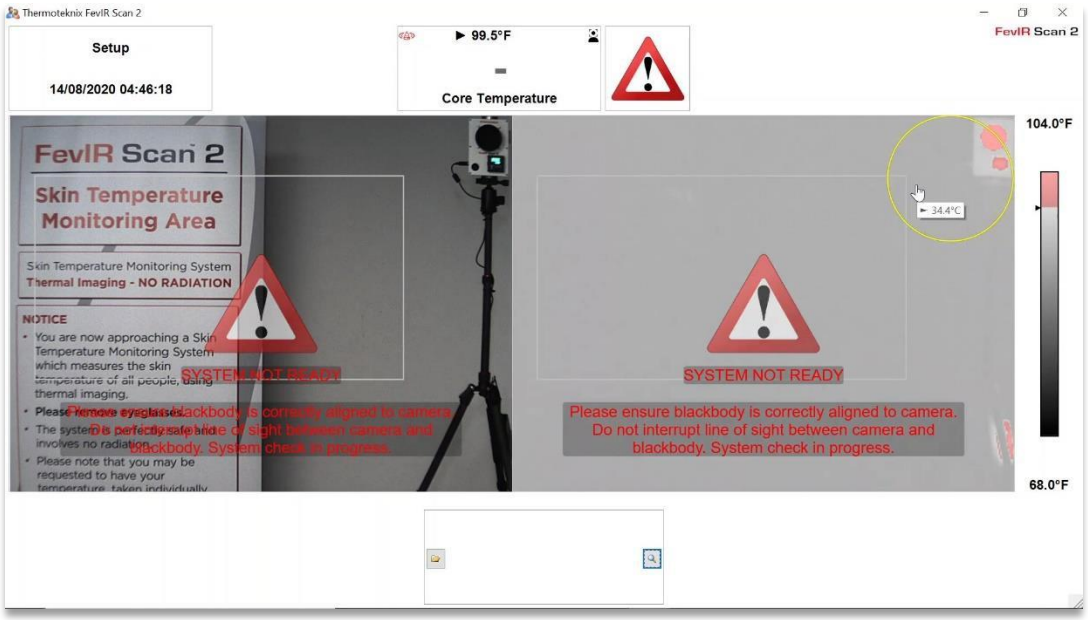
6. Aligning the Blackbody Thermal Reference (critical)

Please watch the below video in the "manuals" folder on the Laptop desktop:

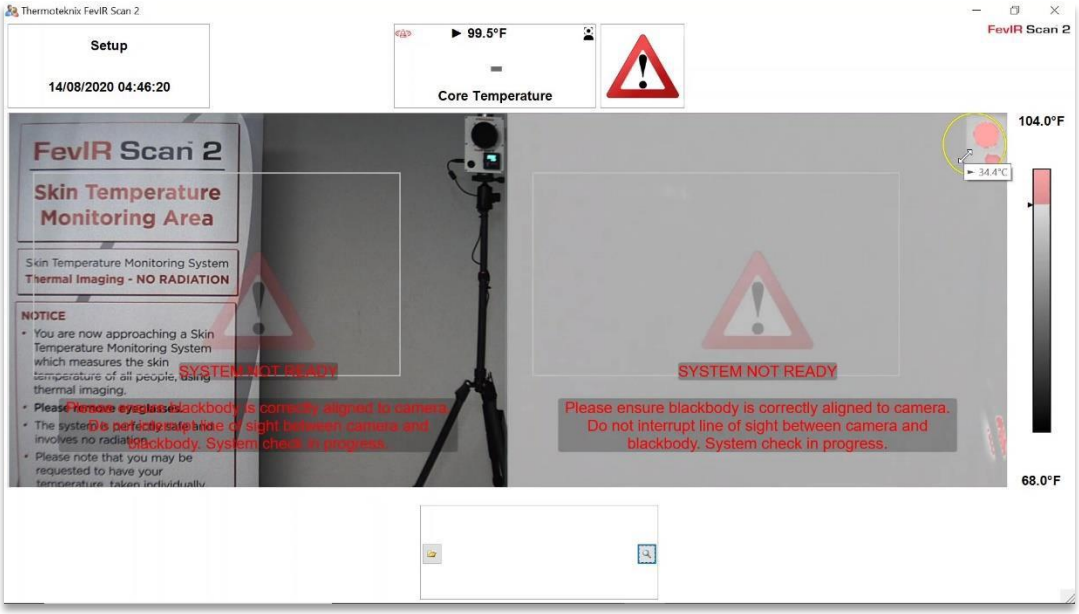
Blackbody Thermal Reference - Yellow Circle Resizing.mp4

1. **On the screen you will see a yellow circle. Use the Laptop mouse pad to grab (hold down the left key) and move the circle to lie over the blackbody.**

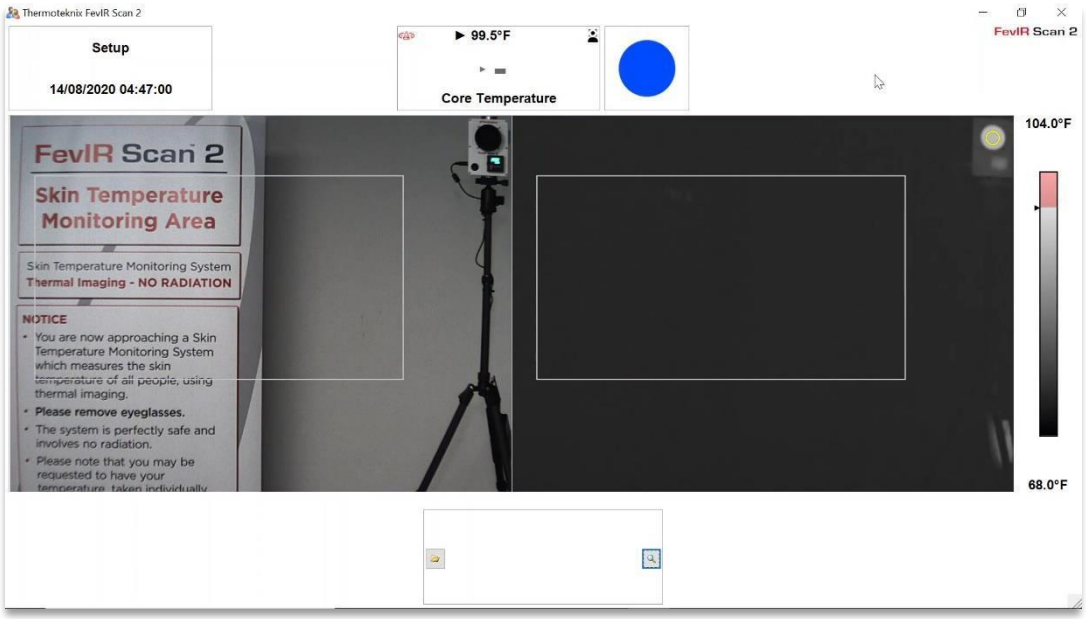




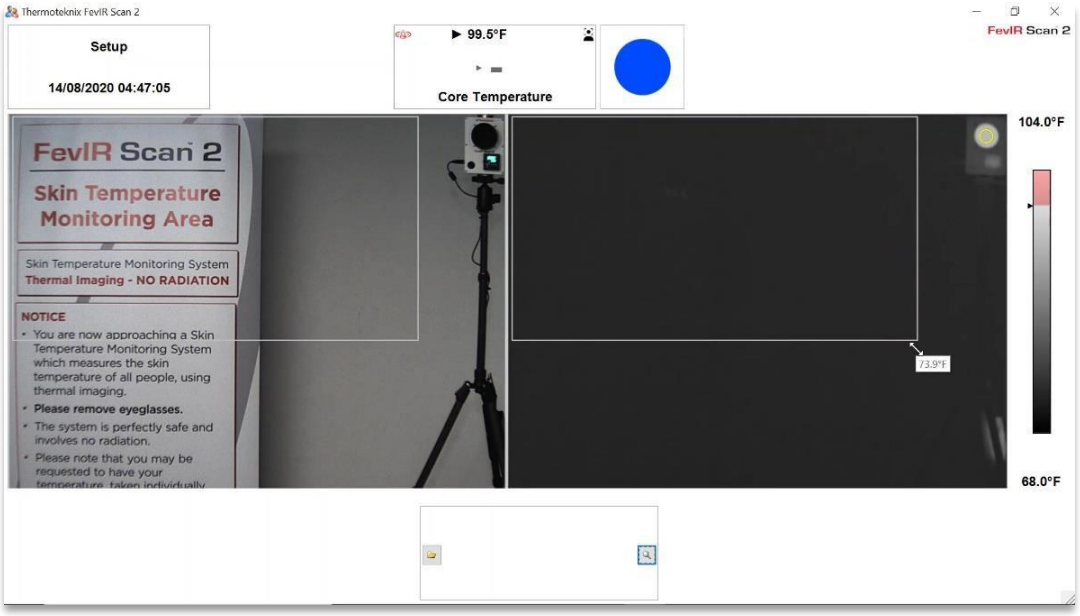
2. **Resize the yellow circle to fit inside the circular hot area of the ThermaRef 35B1 blackbody by clicking and holding on the edge of the circle and changing/reducing the shape of the circle.**

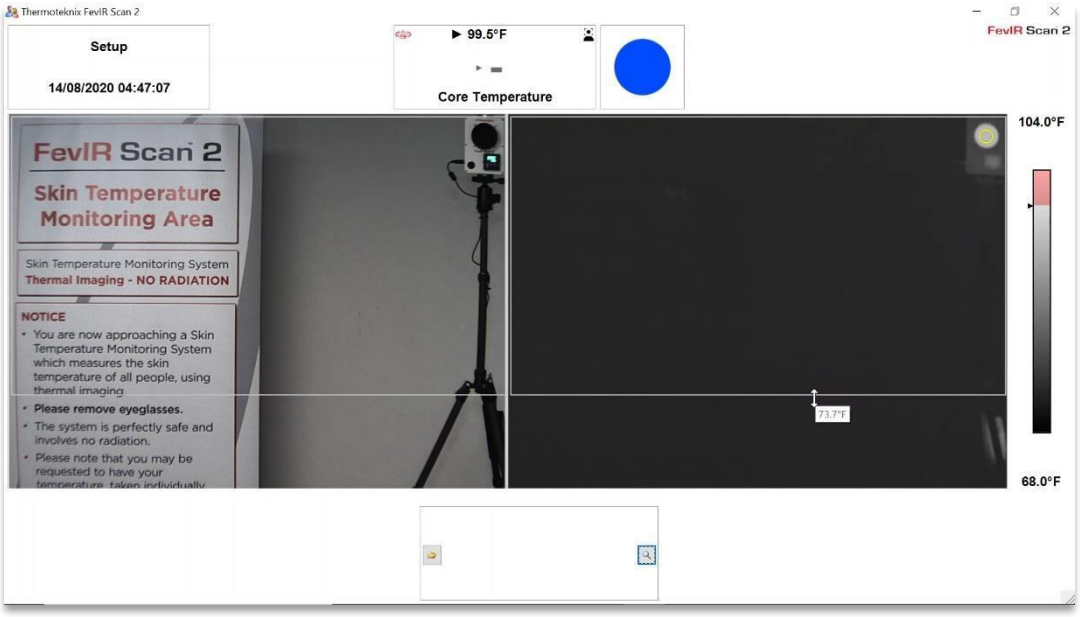


3. **Reposition the circle on the image so that it is entirely within the circular hot area of the blackbody.**
4. **The FevIR Scan 2 self-check software continuously monitors this and it may take up to 1 minute for the light to go green after positioning.**

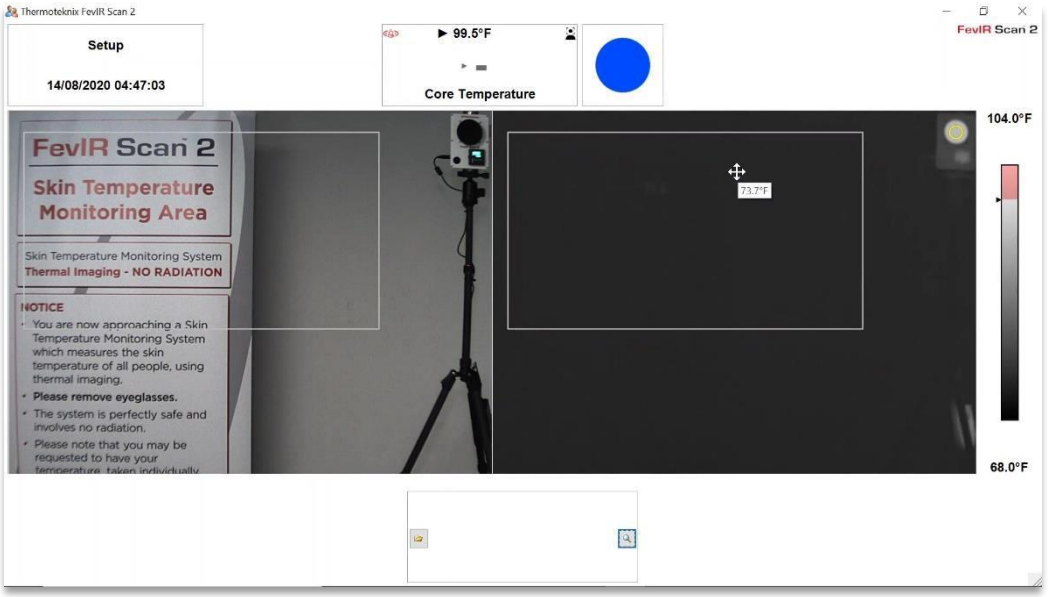


5. **On the screen you will see a white rectangle, this is the active scan area. Move and resize the white rectangle with the mouse so it does not include the reference source. You should not include hot objects, e.g. radiators or motors, within this rectangle.**





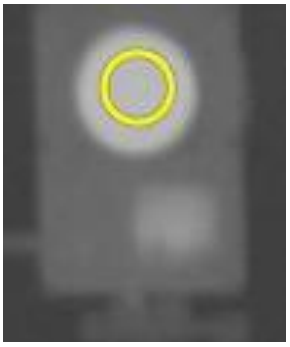
The active scan area box can be resized by clicking and dragging the edges of the box



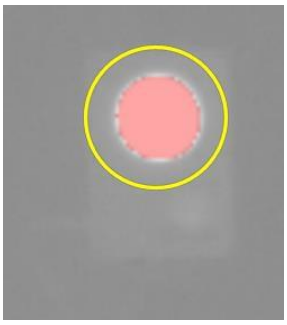
The active scan area box can be moved by clicking and dragging within the box

6. **If necessary, repeat step 3 to reposition the yellow circle entirely within the hot circular area of the blackbody.**

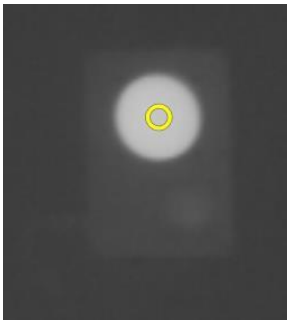
7. Examples of circle positioning:



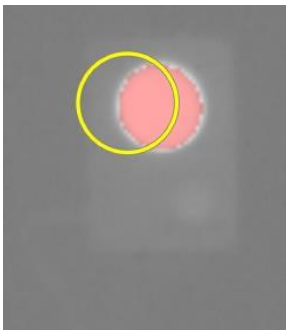
Yellow circle correctly sized and positioned



Yellow circle too big



Yellow circle too small



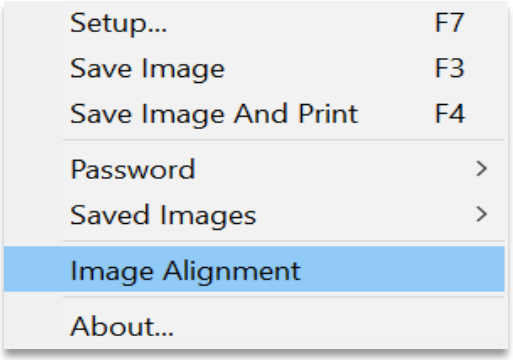
Yellow circle not aligned and too big

7. Aligning the visible image (critical)

Please watch the below video in the "manuals" folder on the Laptop desktop:

Visible Image Alignment.mp4

Ensure the blackbody (thermal reference) is visible on the thermal image. Ensure the yellow reference circle is entirely within the blackbody heat source.



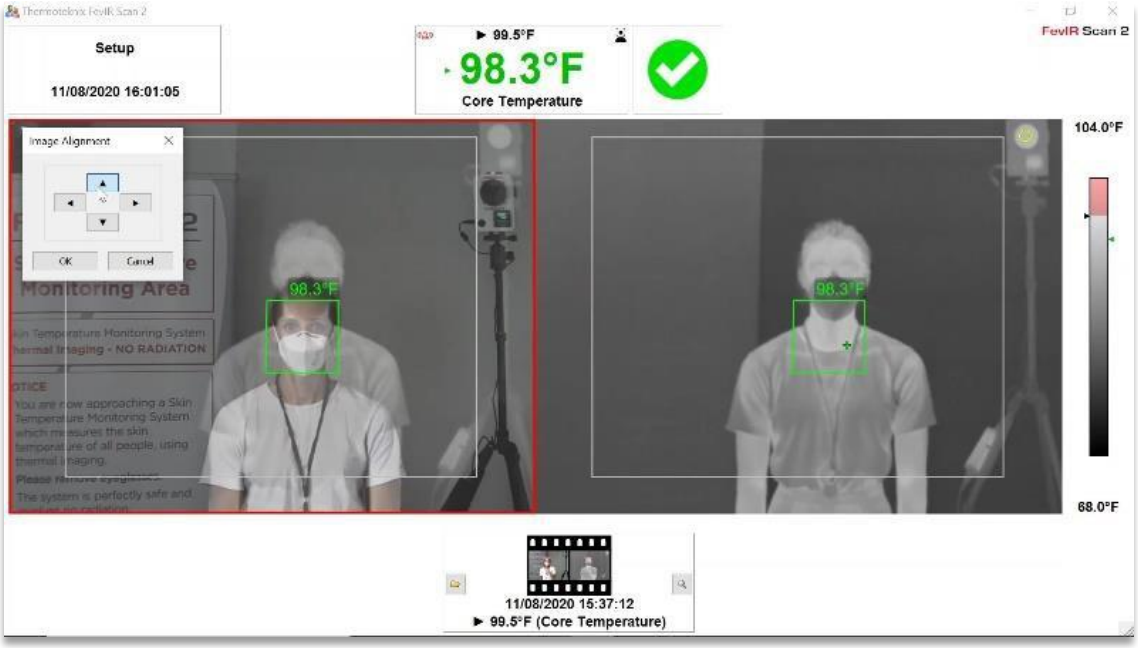
Right click on the screen or press F2 and select "Image Alignment".

This will allow you to align the visible image to the fixed thermal image.

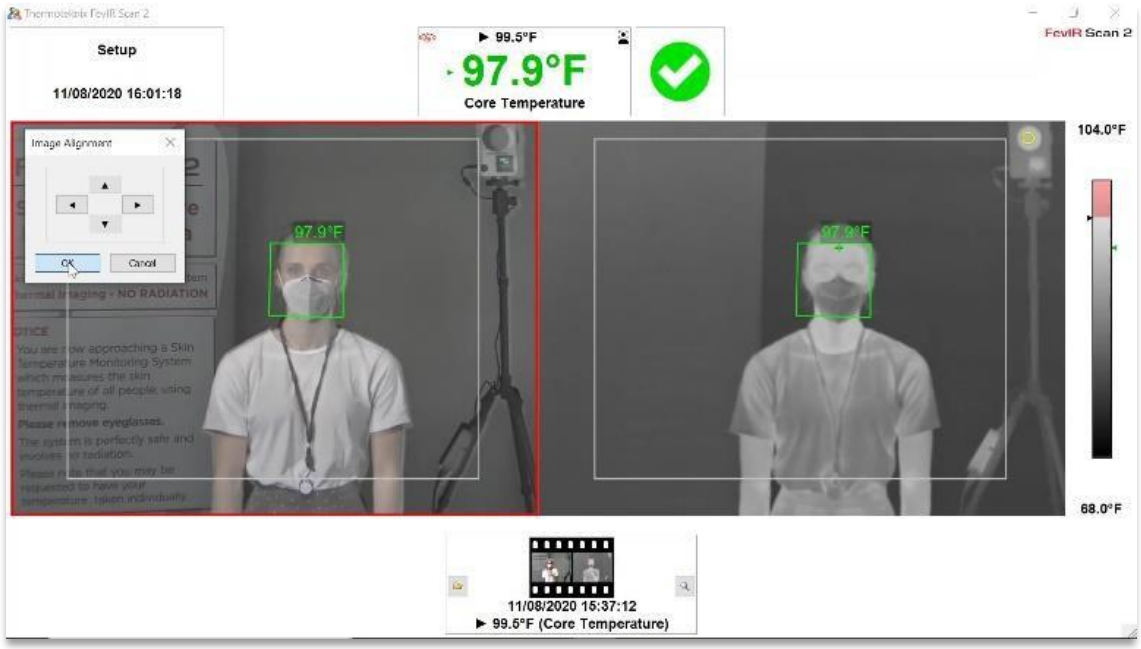
The system will now display a thermal image overlaid on the visible image. A red border around the visible image will appear and a pop-up window titled "Image Alignment" will also appear.

To move the visible image, you can either click on the "Image Alignment" arrows or use the arrow keys on the keyboard.

Visible image needs to be moved to the right and up.

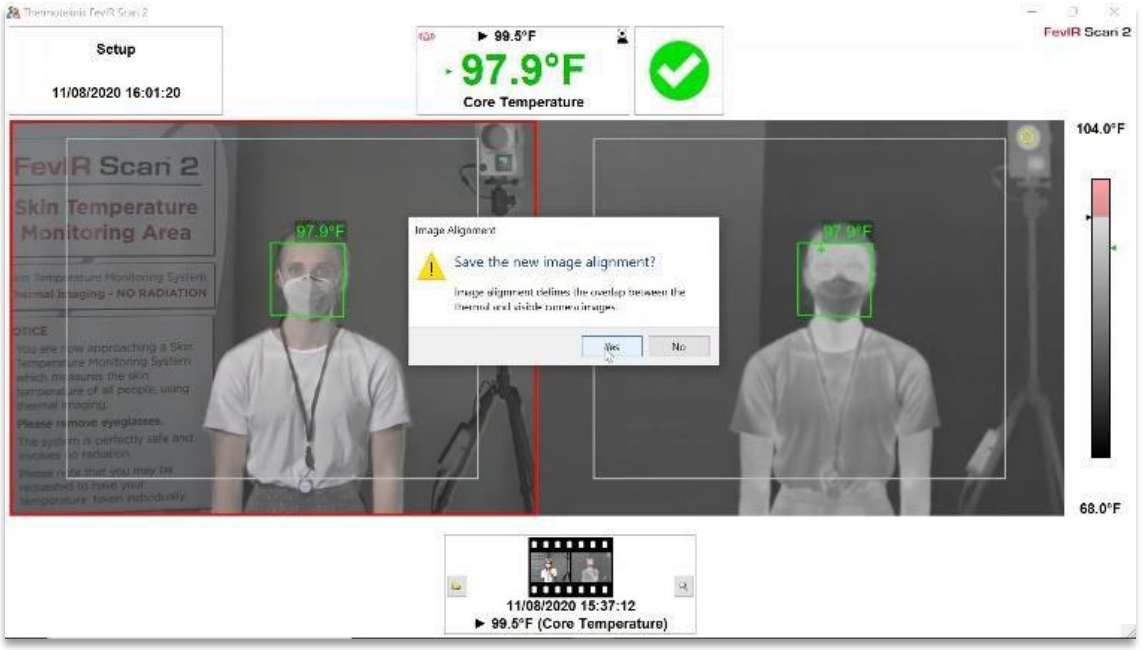


Visible image has been moved to the right, it now needs to be moved up.



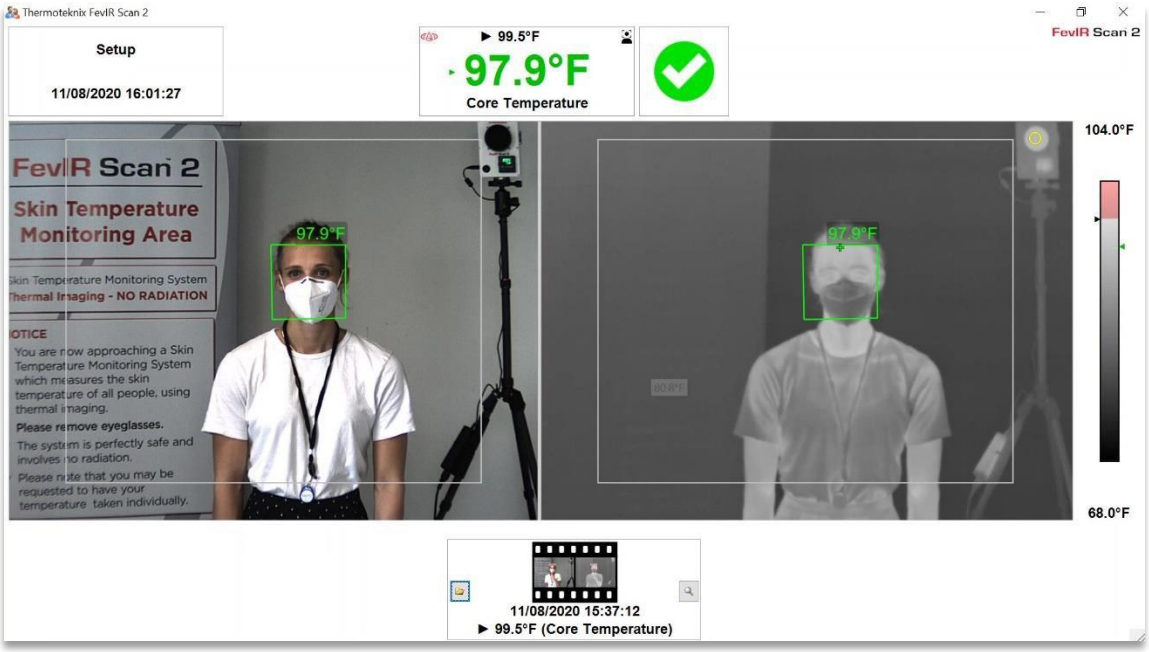
Visible image aligned.

When the visible image is aligned with the thermal overlay, click "OK". If you want to exit image alignment without saving the alignment click "Cancel".



Save the alignment.

To save the alignment click “Yes” and you will exit image alignment. Clicking “No” will exit image alignment without saving any changes to the alignment. The red border around the visible image will disappear after exiting.



Aligned.

The above image has been aligned successfully and image alignment is complete.

8. Setup and Testing

1. **The Setup menu allows for certain temperature parameters to be changed including: Tracking Temperature, Alarm Temperature and Upper Temperature Limit.**
2. **The Setup menu also allows for display changes to be made such as the color palette of the thermal image and the layout of the thermal and visible images.**
3. **Further information on each tab within the Setup menu can be found in the manual.**

A complete user manual is included on the PC desktop and also on the USB memory stick provided.

For Technical Support please contact:

support@thermoteknix.com