ThermalTronix

TT-1060WMD-HBTMS

Intelligent Human Temperature Monitoring System (Mobile)

Contents

Part 1. **Hardware**

1. Install infrared host

First rotating mechanism by screws installed in the bottom of the system host, and then rotating mechanism fixed to mobile lifter top; Figure 1
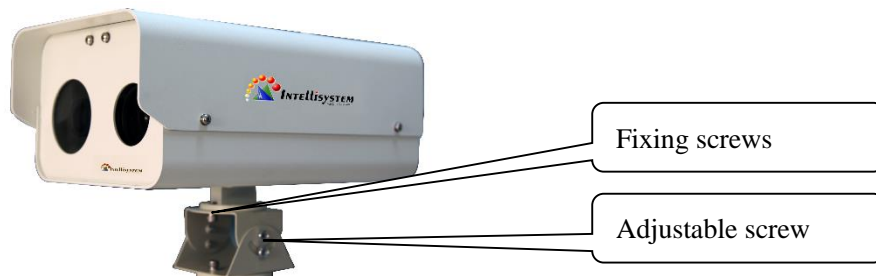

Fixing screws

Adjustable screw

Figure 1

2. Connection

Threading the system cables (which include one power cord, two video cables, one network cable and one control cable) to mobile station. Plug the power cord, video cable, network cable, control lines are connected to the upper portion of the rear infrared host interface, access to the lower portion of the corresponding position in the mobile station. (You see Figure 2)

Figure 2

2.1
The power cable: DC12V power transfer with AC220V to DC12V power adapter, Plug the power supply interface access to the infrared interface of the host, note the power of positive and negative (red and black terminals).

2.2
Video Cable: System is equipped with two video lines, respectively, access to instrument IR-VIDEO interface and CCD-VIDEO interface. At the host computer terminal, The IR video capture card adapter cable access to terminal red line on the 1st (VID1) terminal, The CCD video capture card line access to the red number 2 (VID2) terminals.
PC Interface. (You see Figure 3 and Figure 4)

Control cable

Video

Capture card socket   Figure 3   Figure 4   Video Line Interface

(VID1\VID2)

2.3

Network cable: One end access to on the host RJ45-1 infrared port, the other end to the computer network port;

2.4

Control lines: System is equipped with one network cable, One end access to host RJ45-2 Infrared Interface (network crystal head Pin number: No.7 (positive) 485 +, No.8 (negative) 485 -, the other end to the serial port on the host computer, with a 232 to 485 converter. Automatic restart function is mainly used when the line power switch and infrared systems system failure. (You see Figure 3)

3. PC Monitor Installation

3.1

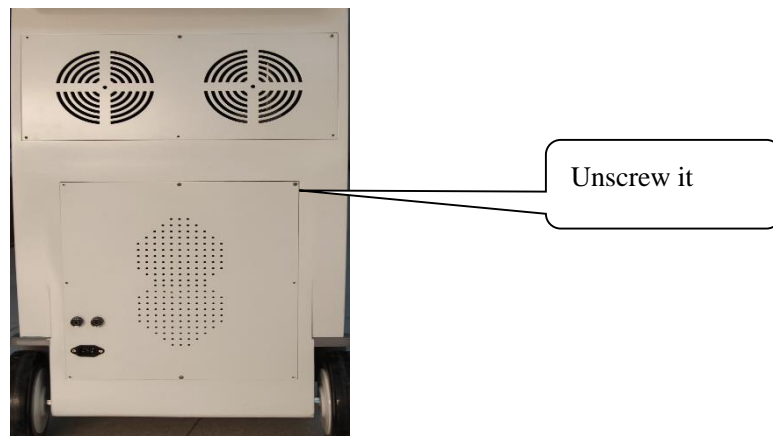Open the mobile station, cover screws, as shown in Figure 5

Unscrew it

Figure 5

3.2

Put into the power supply chassis, panel toward the front door, opened the front door. (You see Figure 6)

Figure 6

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3.3

Monitors installed directly to the mobile station monitors installed in the chassis at a fixed installation, as shown in Figure 7.
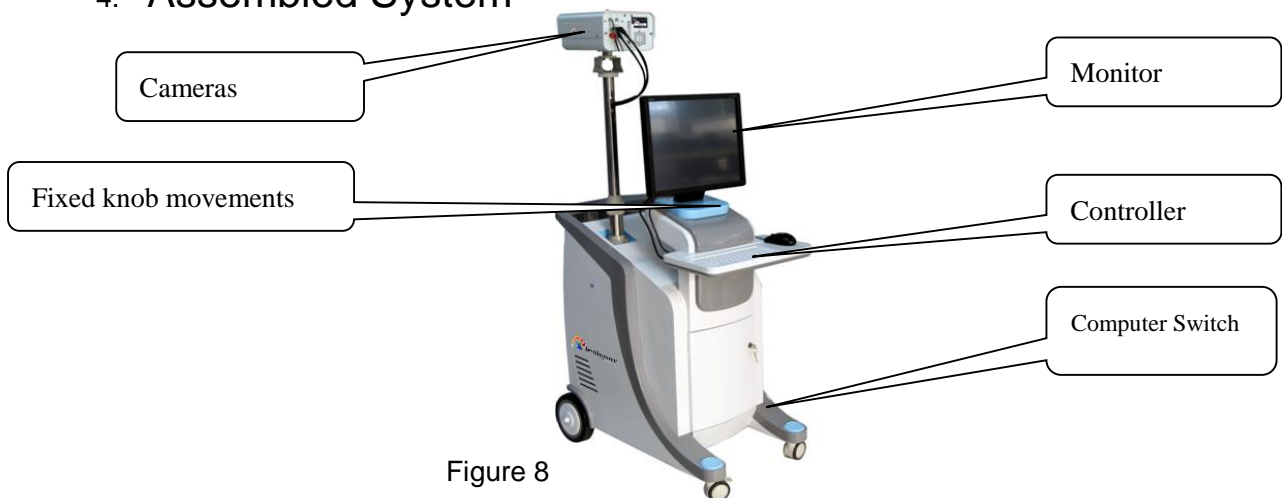

Figure 7

4. Assembled System

Cameras

Monitor

Fixed knob movements

Controller

Computer Switch

Figure 8

5. Entire system site placement Instructions

After connecting the system installed in bold stand, when in using, mind blackbody stent placement and the mobile station at a distance of about six meters (factory default instrument about 6 meters of clear focus point), Body position adjustment in the upper left or right corner of the infrared image, in the image height above the person.

Figure as below

Part 2. **System functions and configuration Introduction**

1. System functions

- Use of uncooled focal plane detector, 384 * 288 pixels;
- Use high-resolution CCD camera with a resolution of up to 600 lines;
- Real-time dynamic thermal imaging, multi-objective automatic measurement;
- Non-contact distance measurement, fast and secure;
- Intelligent temperature measurement, automatic correction of body surface temperature;
- Automatic calibration, without human intervention, the built-in reference blackbody and precision temperature sensors eliminate temperature drift, be stable and reliable work for many years, subject to environmental temperature and other factors interfere.
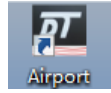
2. System Standard Configuration

2.1 Infrared detection device comprising: an infrared thermal imaging host, visible light cameras, indoor guard, turn the adjustment mechanism and other components, (1 set).

2.2 Mainframe computers: hard disk 500G (video storage time of more than 1000 hours or alarm image storage greater than 400,000), memory 2GB, CUP: dual-core, mouse, and keyboard. (1 set)

2.3 Display: 19-inch touch display

2.4 Mobile Workbench: contains a set of mobile lifter

2.5 Blackbody: with blackbody bracket (1 set)

2.6 Auxiliary: cable, power adapter (DC12V), Plug In Panel (1 set)

2.7 Intelligent Temperature Analysis Software (1 set)

Part 3. Software Operations

1. Open computer
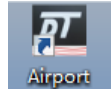
Double click [Airport] Wait about 15 seconds after the software starts, showing the main interface.

2. Software Interface

Real-time
Image-thermal

Maximum \ minimum \
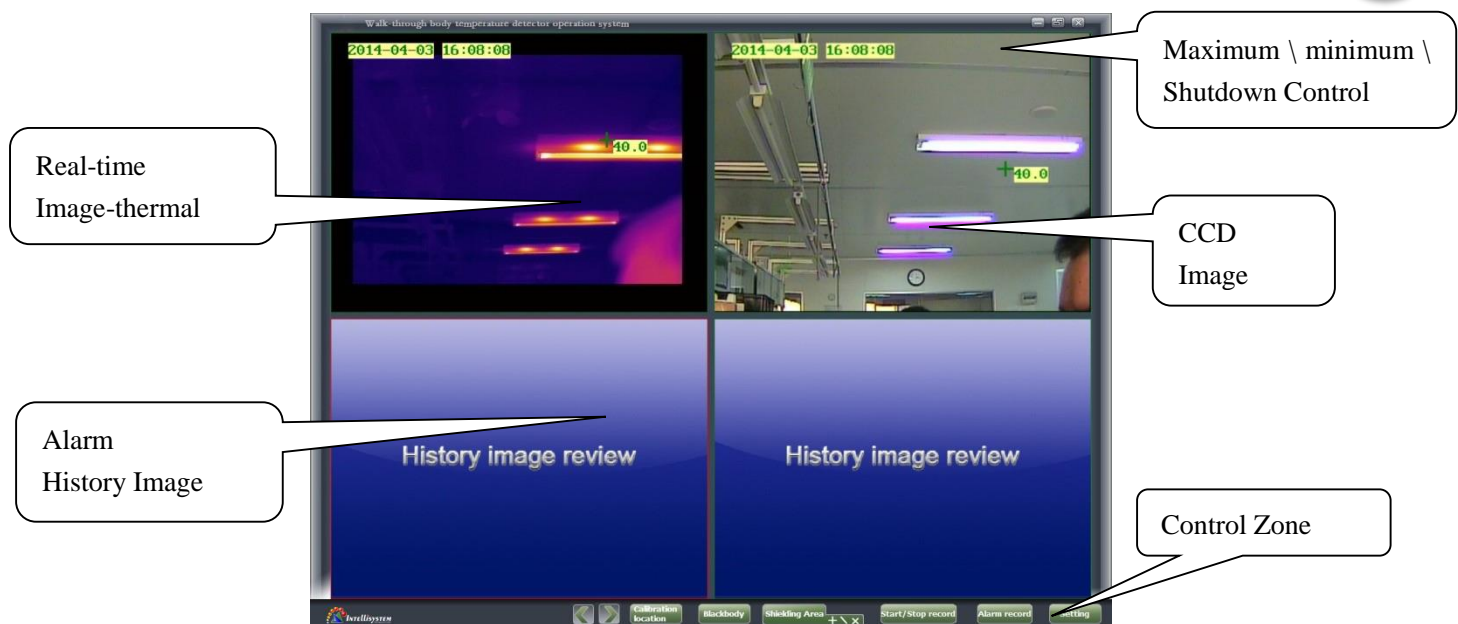Shutdown Control

CCD
Image

Alarm
History Image

Control Zone

Figure. 9

Image playback screen is divided into four zones, as real-time infrared video, real-time video of CCD, infrared alarm picture and CCD alarm picture.

Management control area: There are calibration location, blackbody, shielded area, start (stop) recording, alarm recording and setup functions.

3. Functions

3.1 Basic functions

Run the software, it will auto-play real-time infrared, CCD images, and automatically connect the infrared device to measure temperature. If you find the body temperature exceeds the set temperature, the alarm occurs, at the same time taking pictures of the infrared, CCD images then poste them on the infrared and visible alarm warning area, and save it for inspection.

3.2 Calibrate position

Calibration function to adjust the position of infrared and visible light.

Position 2 consistent with the position of IR image

Position 1 consistent with the position of IR image

Settings：Click the calibration location button, there will be two points named 1,2 on the real-time infrared video and real-time CCD video. In the play area, press the mouse to select the subject matter of the point position after moving to release the mouse, then this point has been setted. Click the calibration button after 4 points are setted, four points disappear, means that setup is complete.

Note：If the equipment does not move after the completion of the calibration, not need recalibration.

3.3 Blackbody

The function of Blackbody is to adjust the accuracy of detecting the temperature.

Settings：press blackbody button, if you have added bold, real-time video and real-time infrared video can see the region of setting blackbold; If not have added boldbody, then click the mounse and darg the blackbody at the corresponding position in real time infrared video to add blackbody. You can also adjust the size and position of the blackbody. Finally, click on the button of blackbody, then setup is complete. Note: You can only set a blackbody.

3.4 Masking zone

Masking zone is set because there are some heat source light on the screen close to temperature of people, and the person cannot possibly appear in this zone.

Masking zone Settings have three options: add, modify and delete. Click ➕ to add masking zone, after clicking the icon changes to ➕; add in real-time infrared video screen, after completing click the masking zone button to finish. Click ◥ to modify masking zone, after clicking the icon changes to ◥, modify the position and size of the zone, which has been added in real-time infrared video, after completing, click the masking zone button to finish. Click ✖ to delete masking zone, delete the zone which has been added in real-time infrared video, after completing click the masking zone button to finish. (Can exist multiple masking zone).

3.5 Alarm record

Alarm record is used to check the historical alarm recording and video recording.

Click the Record button to display alarm dialog box, select the alarm pictures, after the start time and end time, click on the find, at the bottom displays the selected time period the alarm recording, alarm recording time display and alarm occurrence alarm point. Click alarm recording, on the top two screen shots show the infrared and visible light when was alarmed.
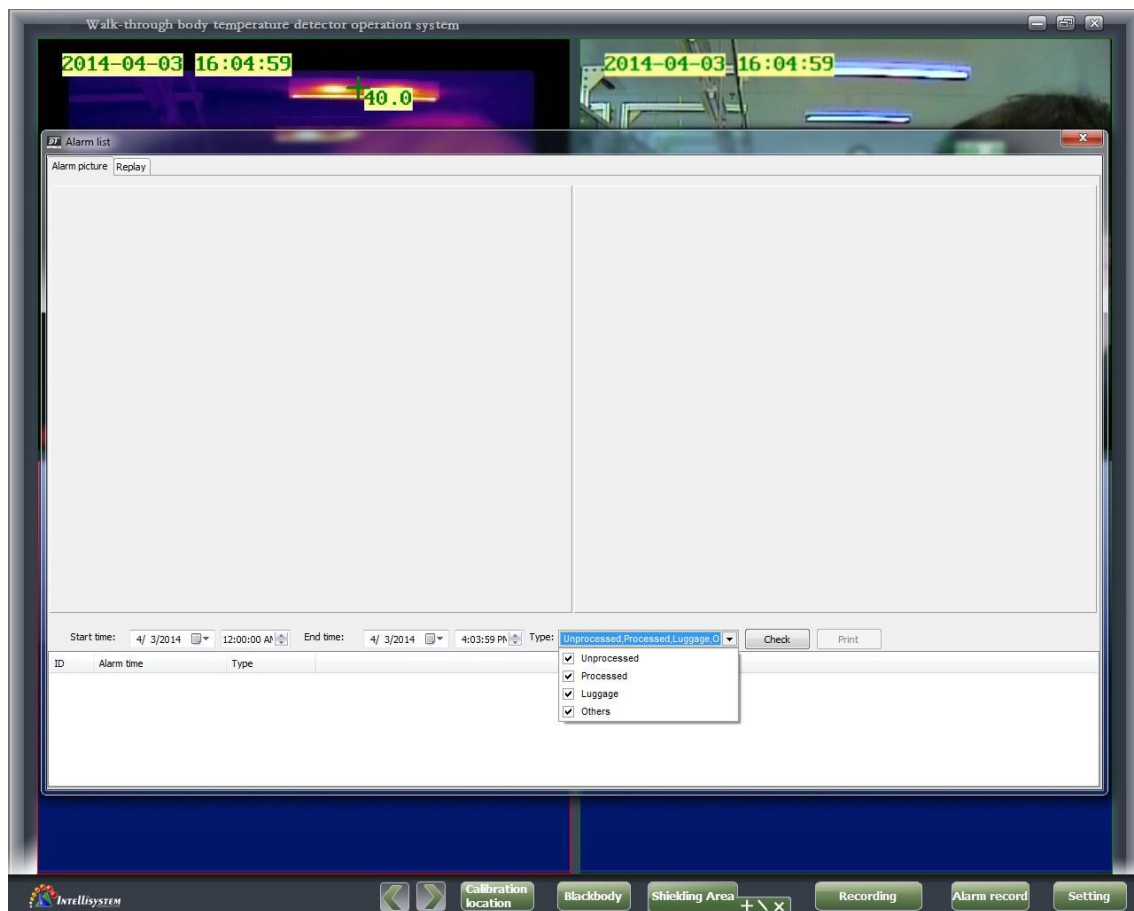
Click on the video playback, select the start time and the end time, click Find to display the selected time period video at the bottom, double-click the video playback time to start playback.

3.6 Start / stop recording

When the software running, button displays the "Start / Stop Recording" is not open at this time on behalf of recording function, you can click back, it shows the "Start Recording" At this point there is on the upper screen has two-way real-time image of red dots show said video, and press "Start recording" return "to start / stop recording."

3.7 Setting

Setting: the software-operating environment, temperature and other parameters to be set.

Setting interface as below, alarm parameters, temperature parameter, set the cursor, video management, screen settings, OSD settings, other settings, surface and body temperature conversion and equipment maintenance tab.

3.7.1

Temperature parameters as shown below: emissivity, distance, environment temperature and environment humidity. Adjust the temperature indicates the actual measured temperature with the corresponding figures, you can set a negative.

Recommended settings:

Ratio radiation system: 0.98; Distance: According to major temperature field environment locale, usually no more than 10M; Ambient temperature: According to the site environment settings, usually about 5 degrees relatively little effect on the temperature measurement accuracy; Humidity: according to the scene environment settings: a difference of about 10% had no effect on the temperature measurement accuracy. If you choose the automatic calibration, the system will automatically be corrected according to the body surface temperature conversion table curve.
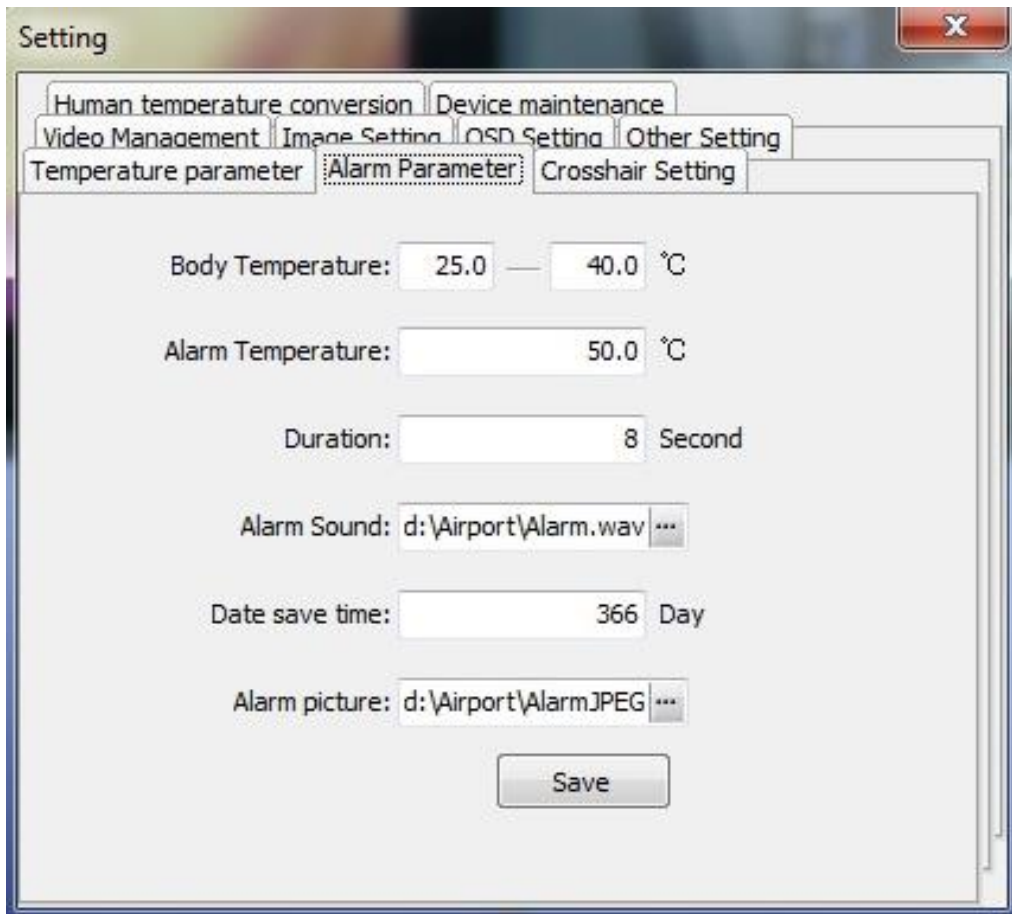
Also automatic calibration and manual calibration, two options are generally select Manual correction can be corrected using the body temperature according to the scene, Adjust the temperature parameter arbitrarily set the general scene when allowed, can be corrected in this key (such as automatic calibration is selected, the system will automatically be corrected for body surface temperature conversion table curve.
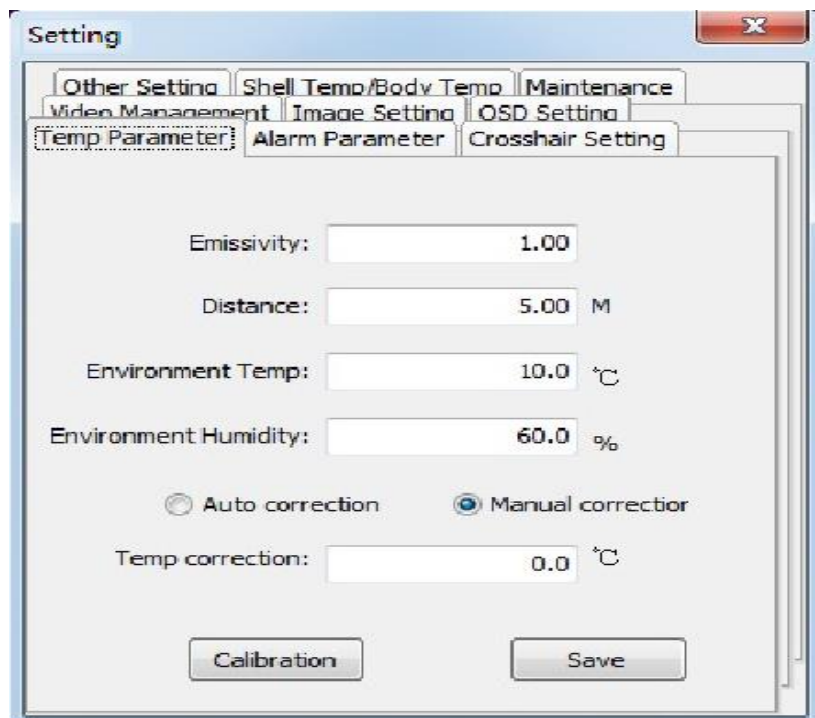
3.7.2

Alarm parameters as shown below： human body is temperature range of the temperature range, the temperature is not in this range is not determined within the range of the human body. Alarm temperature alarm occurs when the body temperature is greater than this temperature; this value is within the range of body temperature. Alarm duration is the interval after an alarm occurs to the next alarm; the minimum value is 5 seconds. Alarm sound which when alarm occurs playing sound is file.

Note: The temperature range such as setting up: 25 to 40 degrees, the system test, if there were no walking, no higher than the temperature of the environment point of 25 degrees, the system will be unable to temperature, please note that when used.

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3.7.3

The crosshair is setted as shown below: crosshair color, crosshair size, pen thickness under normal situation, the maximum temperature measured is the body displayed on the screen cursor tracking parameters. Alarm crosshair color, alarm crosshair size, alarm pen thickness under alarm situation, The maximum temperature measured is the body displayed on the screen cursor tracking parameters, Alarm occurs point tracking cursor parameters are displayed on the screen.
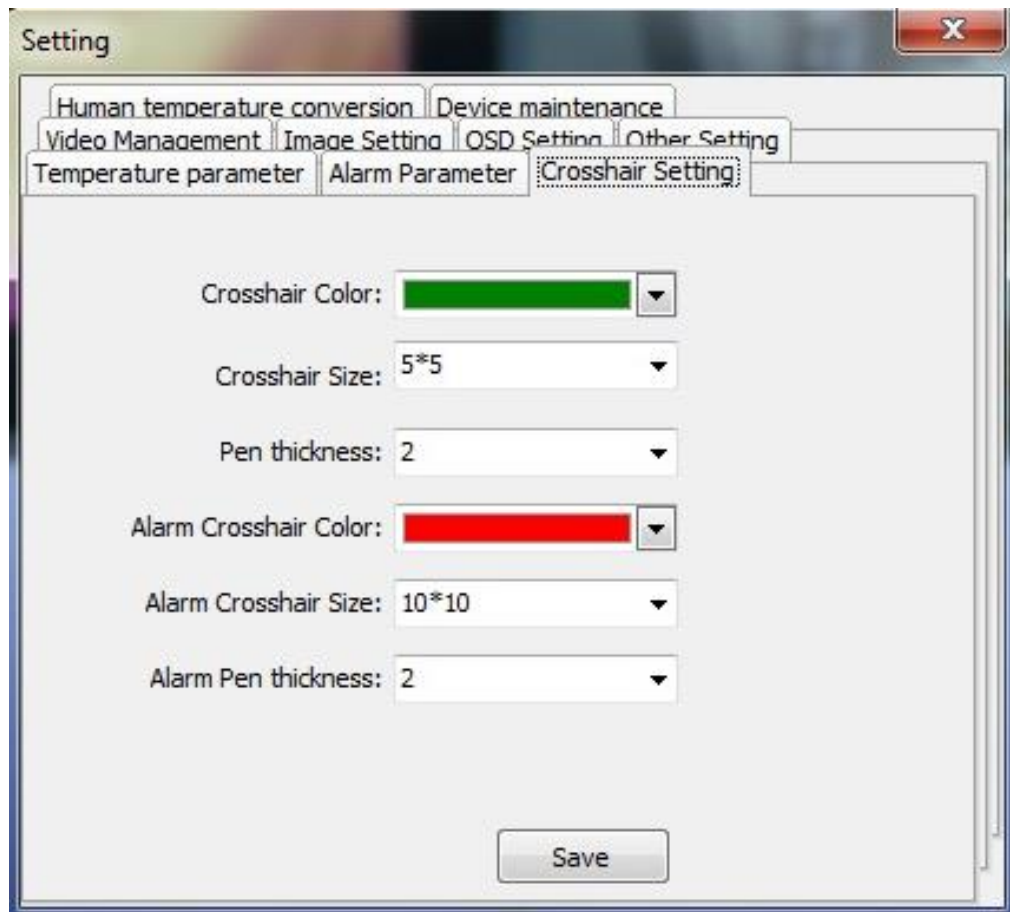
3.7.4

Video Management as below: When the option is selected video recording will work at boot time automatically when software opens. Video save path and the maximum recording time can be set. Select a hard disk full alarm is stored in the hard disk recording exceeds the proportion, the software will alarm. Take timely clean-up or copied to other backup disk.
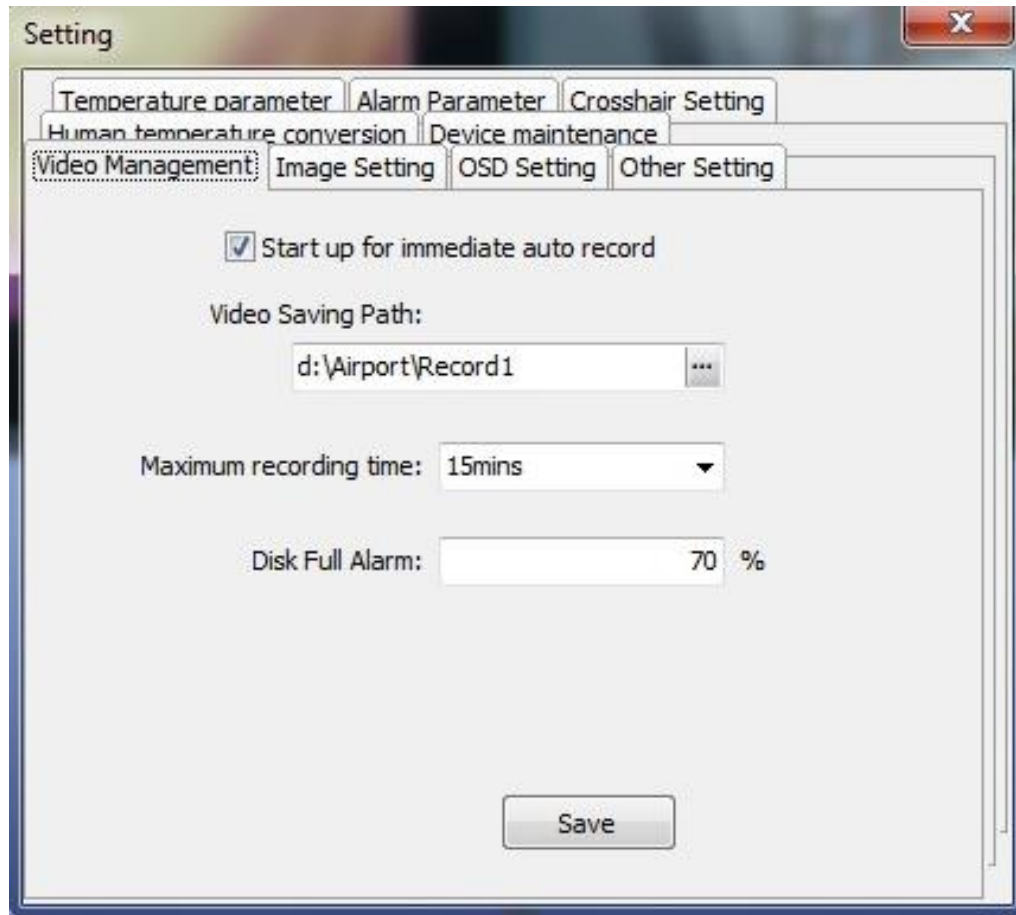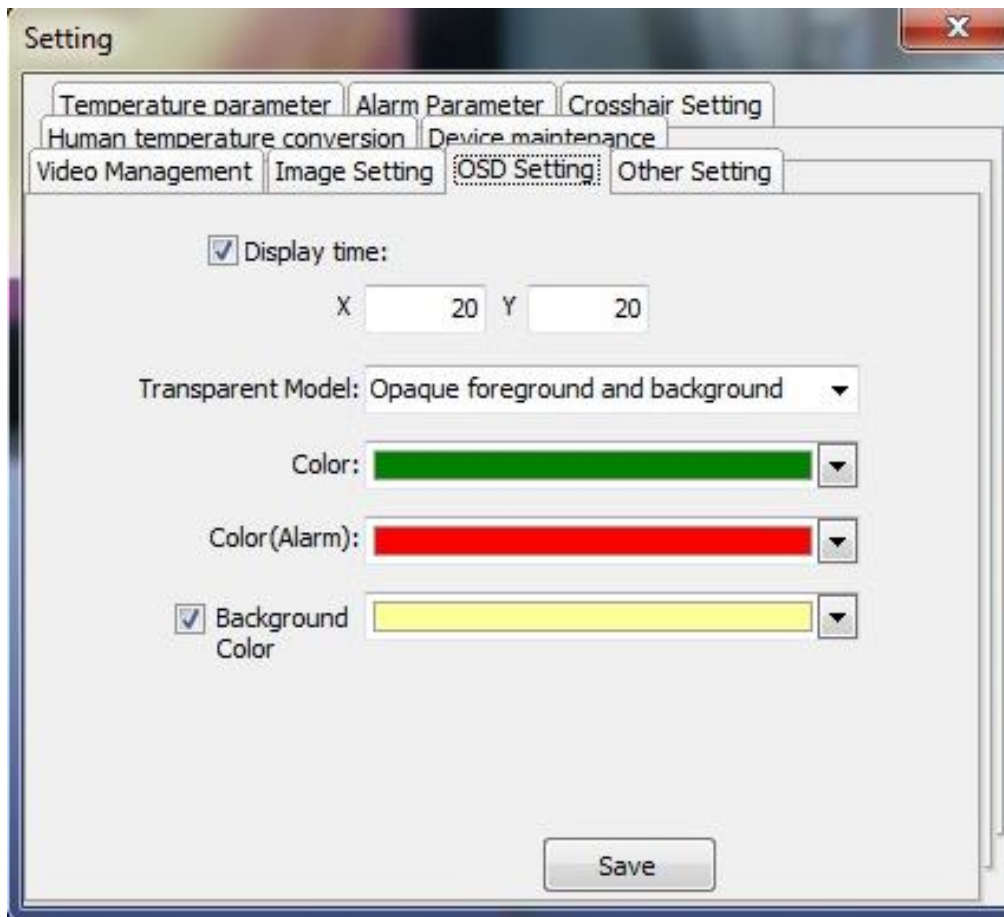
3.7.5

Image setting as below：Set infrared and CCD video's brightness, contrast, saturation and palette.
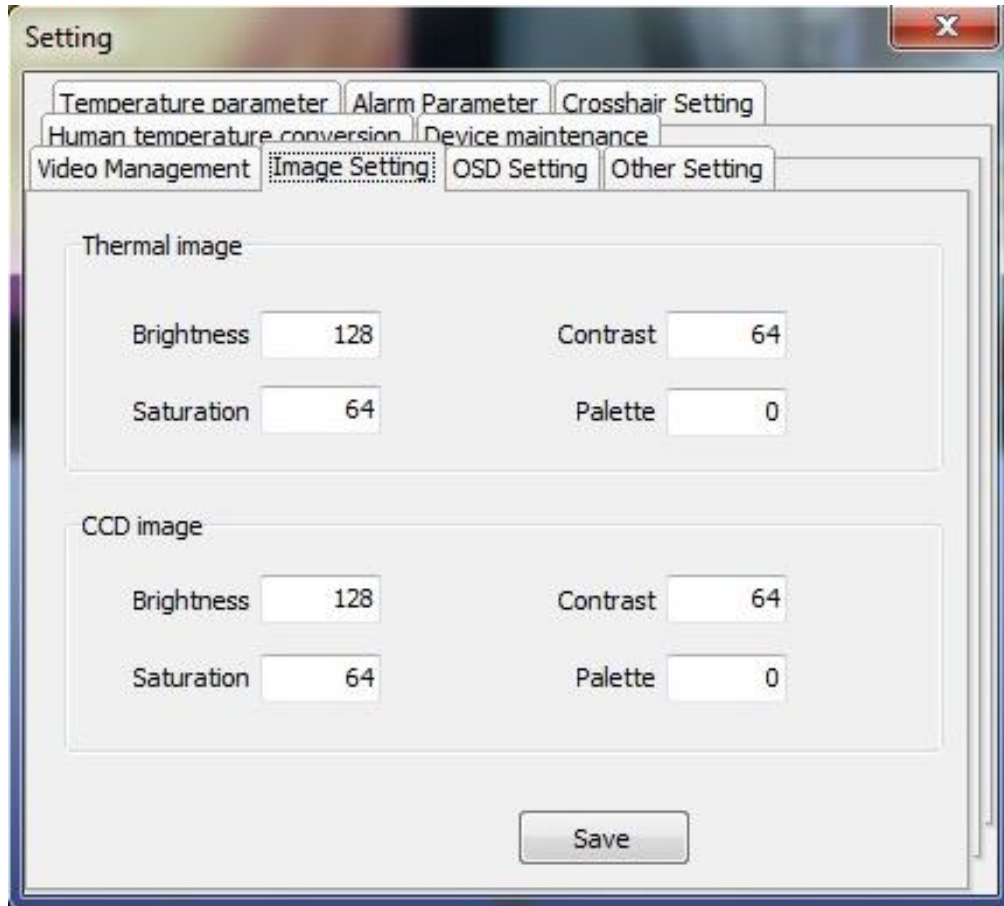
3.7.6

OSD setting as below：time options，XY indicates the time display position. Transparent Model, Character color，Character color when alarm，The background color can be set to display the temperature of the color and the background.

3.7.7

Other settings as below：Black body area display indicates whether to display the region under normal circumstances, whether to show the video on the infrared and visible region of the video blackbody position, the black body's color indicates if shown in bold area,and its colors is which you choose. Shielding area display indicates whether to display the region under normal circumstances, whether to show the video on the infrared and visible region of the video shielding position, the black body's color indicates if shown in shielding area, and its colors is which you choose. Blackbody temperature indicates the temperature blackbody settings.
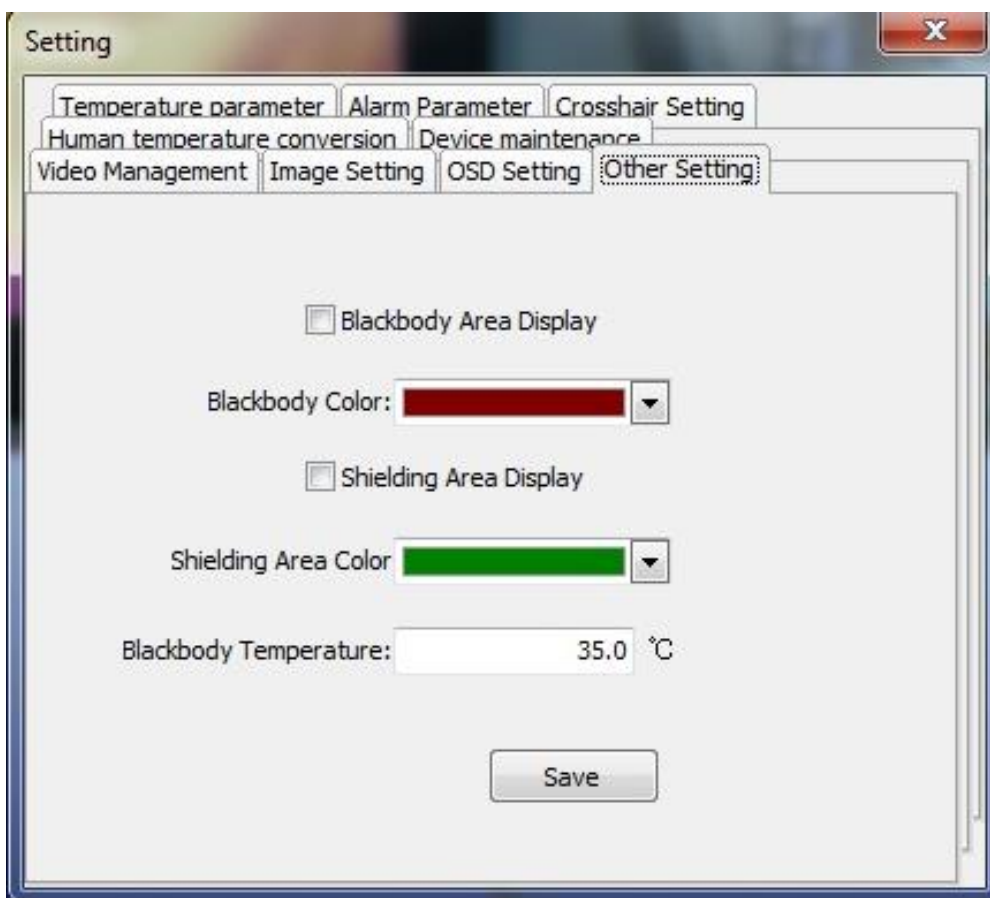
3.7.8

Relation between shell temp and body temp as below: AutoCorrect Options and select the temperature, the system will automatically translated surface body temperature conversion formula based on surface body. The ordinate represents the superposition of the temperature; the abscissa represents the surface temperature。

3.7.9

Maintenance as below: if select the option "turn off the device", the temperature measurement devices will automatically be shuttled down when turn off the computer. Click "Open" to open temperature device and click 'Close' to close the temperature device.
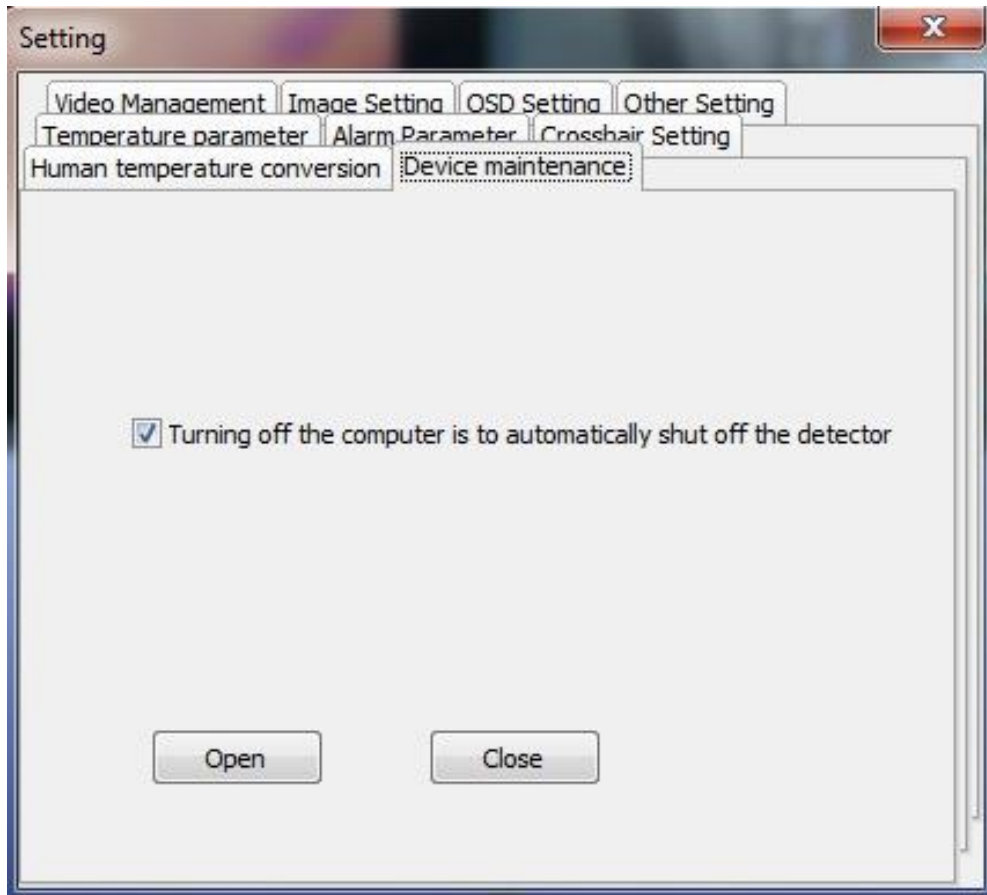
Note: Open the above settings, you must have a password verified the default password

111. Figure:

Part 4. Notes

1. The system software is generally installed completely at the factory, click on the field to run the program to use, do not modify the internal document, otherwise the software will not run.

2. Equipment during transport, if we find the focal length not clear when using the infrared image , the need to open the cover screws cover, push the cover to see the lens, you can manually control the infrared lens focal length, rotate clockwise or counterclockwise focus, know clearly outline the position. Visible light camera can also get a clear picture by adjusting the lens focal length.

   Note: It is recommended equipment manufacturers designated training person to operate the equipment, non-professionals do not secretly dismantling operation when adjusting the focal length of the lens!

3. Continuous system operating time suggestions for a 12-hour, over 12 hours, the recommended suggest to turn off the computer power switch off the mobile station to re-switch.

4. In the event of a computer failure, re-install the system, the need to re-install the software, you need to set up the software installation file to open the file in Bodytemp.ini internal IfrDeviceIP = 192.168.1.10 set the instrument IP, the factory default 192.168.1.10, then the computer IP address need to be in the same network segment such as 192.168.1.198: other parameters not modify.

5. The system is used in the indoor environment, do not place in an outdoor environment.

6. The use of infrared found no temperature data, please check the device network cable is normal, or restart the infrared camera.

7. If you find instrument temperature, the temperature data is very inaccurate, please check whether the external image blackbody select function, has been selected, the external blackbody temperature settings and system settings to ensure the "bold" setting option values are consistent.