



# BT-72 IR THERMAL IMAGER CAMERA

## OPERATION MANUAL

### 1. SAFETY RULES

- To ensure the device is used safely, follow the operation manual's safety and operating instructions. If the device is not used as described in this operation manual, the safety features of this device might be impaired.
- Keep out of reach of children.

### 2. INTERNATIONAL SYMBOLS



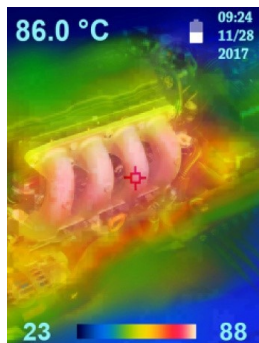
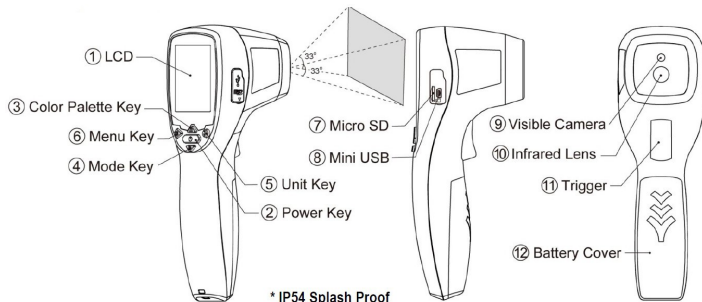
Important information see manual

### 3. SPECIFICATIONS

<b>Thermal Image Resolution</b>	160 x 120
<b>Visual Image Resolution</b>	640 x 480
<b>Measurement Range</b>	-20 to +500°C (-4 to +932°F)
<b>Accuracy (Tamb=20~26°C)</b>	±2% of reading, or 2°C(4°F) whichever is greater
<b>Thermal Sensitivity</b>	0.1°C(0.1°F)
<b>Frame Rate</b>	9Hz
<b>Field of View</b>	51 x 63.5 deg
<b>Emissivity Range</b>	0.95 default – adjustable 0.1 to 1 step .01
<b>Focus</b>	Focus free
<b>LCD (inch)</b>	2.8
<b>LCD Type</b>	Color
<b>Image Storage</b>	Depends on the capacity of the Micro SD card. (e.g. stores up to 100,000 images, PNG format, for 16G Micro SD card)
<b>Memory Type</b>	Type Support micro SD card up to 32G. (Recommend to use the attached 16G micro SD card)
<b>Spectral Range</b>	8 ~ 14um
<b>Interface</b>	USB (Data Transfer), SD Card
<b>Battery Type</b>	3.7V Li-ion rechargeable battery
<b>Battery Life (Li-ion rechargeable battery)</b>	4 hrs. continuous with backlight *Backlight is default set fixed ON
<b>Dimensions</b>	96 x 74 x 234mm (3.8 x 2.9 x 9.2 inch)
<b>Weight</b>	345 grams(12.17 oz.) including the battery
<b>IP Classification</b>	IP54

Note: If using an SDHC memory card other than supplied, recommend do test before use. Typical full battery charging time 8hr. Do not charge overnight / without personnel surveilling. Recommend charging 12hr for first-time use.

### 4. THERMAL IMAGER CAMERA DESCRIPTIONS



(Fusion Mode - Rainbow)

### 5. OPERATION

#### ⚠ WARNING

- Caution: DO NOT use the AC power adapter over output 5V 2A to avoid the product damaged and failed to activate.
- EMC/RFI: Readings may be affected if the unit is operated within radiofrequency electromagnetic field strength of approximately 3 volts per meter, but the instrument's performance will not be permanently affected.

#### 5.1 Operation Selection

Power On	Press "Power key" (2) for 2 seconds and then release it, the startup process will complete in 15 seconds.
Display Mode	Press Mode Key (4) to switch the display mode. (Fusion-Thermal-Visual) <b>Note:</b> Fusion is the default mode.
Taking images and temperature	After power on, simply aim the thermal imager camera at the measure target with Lens (10) and get the images and temperature immediately. Please make sure the target area is within the field of view. <b>Note:</b> There is a cursor on the screen. The cursor shows the temperature of the object located in the middle of the screen.
Save images	Press Trigger (11) to save the images to the micro SD card. <b>Note:</b> When " " icon appears on the LCD, please check if there is a micro SD card or it is not properly installed in the micro SD card slot (7).
Color palettes	Press Color Palette Key (3) to select the color palette (4 selectable color palettes) to view thermal images. Ironbow      Rainbow      High contrast      Grayscale
°C/°F switch	Press Unit Key (5) to convert temperature unit.
Power off	Press Power Key (2) for more than 3 sec. to power off the device. Auto power off time is around 1 minute. (Please see the "5.3 Setting" section to learn how to adjust the auto off time.)

#### 5.2 Function Selection

Press Menu Key (6) to display functions, then press Colour Palette Key (3) or Mode Key (4) to select the function. Under the function mode, press Unit Key (5) for setting and then press Trigger (11) to confirm it.

Cursor Measurement	The cursor shows the object's temperature in the middle of the screen. Hide the cursor measurement.
Brightness	3-level brightness LOW       Medium       High
Fusion Ratio	Fusion images by a 3-level ratio of combining thermal and visual images. →  →  (  is the default mode)
File Management	View image: After selecting the image folder, press Trigger (11) to view images stored on the micro SD card. Delete image: After selecting the image folder or image file, press and hold Trigger (11) and TIPS "Do you want to delete it?" appears on the LCD. If you do not want to delete the file, select "NO" and press Trigger (11) to confirm it; if you want to delete the file, press UnitKey (5) to select "YES", then press Trigger (11) to confirm the deletion. <b>Note:</b> If you want to manage images on the computer, please use the USB cable to connect the device and the computer.

#### 5.3 Setting Selection

	Emissivity	The default emissivity is 0.95, or select other default emissivity: <b>Blackbody:1.0, Matt:0.95, Semi-matt:0.8, Semi-glossy:0.6, Glossy:0.3</b> Select <b>Set E value</b> to adjust the emissivity (0.1 to 1 step .01).
	HAL Temp	When the reading is outside the <b>High Alarm (HAL)</b> or <b>Lo Alarm (LAL)</b> limit, the reading (HAL: red texts, LAL:blue texts) shown at the top left corner of screen will flash with two short beep sound constantly. Select <b>HAL Temp</b> or <b>LAL Temp</b> to adjust the limits or select ON/OFF to turn on/off the alert.( step 1)
	LAL Temp	
	Save Mode	Select <b>Photo</b> : Save fusion/thermal/visual images in photo mode. (PNG and Excel formats) Select <b>Video</b> : Save fusion/thermal/visual images in video mode.
	Auto Off	The default setting is "Auto off 1 min", you can select other default value: 5, 10, 20 minutes or "No auto off". Manually power off the device by pressing Power Key (2) for 3 seconds.
	Target Distance	The maximum distance is between the thermal imager camera and the target.
	Languages	English/French/German/Dutch/Portuguese/Italian/Spanish/Traditional Chinese/Simplified Chinese/Japanese
	Set Date and Time	Set the date and time in <b>MM/DD/YYYY</b> (month/day/year) and <b>HH/MM/SS</b> (hour/minute/second) formats.

#### 5.4 Temperature Measurement

The thermal imager camera can measure from -20 to +500°C (-4 to +932°F) and displays the thermal image and temperature. Furthermore, thermal images can be saved to a Micro SD card.




### 6. MAINTENANCE

#### CAUTION

BEFORE ATTEMPTING BATTERY REMOVAL OR REPLACEMENT, TURN THE THERMAL IMAGER CAMERA OFF.

#### 6.1 Fitting and replacing the battery

The Thermal Imager Camera incorporates visual low battery indication as follows:

	'Battery OK': Thermal Imager Camera function normal
	'Battery Low': battery needs to be replaced, Thermal Imager Camera still function normally
	'Battery Exhausted': Thermal Imager Camera does not function

1. When the 'Low Battery' icon indicates the battery is low, the battery should be recharged by a USB port.
2. Dispose of used battery promptly and keep away from children.
3. If the device is not used for a long time, turn the power off, remove and store the batteries in a cool, dry place.

#### 6.2 Storage & Cleaning

The Thermal Imager Camera should be stored at room temperature between -20 to +65°C (-4 to +149°F) and 85% of relative humidity with no condensation or less. The sensor lens is the most delicate part of the Thermal Imager Camera. The lens should be kept clean at all times. Take care when cleaning the lens using only a soft cloth or cotton swab with distilled water or medical alcohol, allowing the lens to entirely dry before using the Thermal Imager Camera. Do not submerge any part of the Thermal Imager Camera.

### 7. ACCESSORIES

The accessories contained inside the packaging are the following:

- English instruction manual
- Tool box
- Micro SD card
- Mini USB cable

### 8. SERVICE

#### 8.1 Limited Warranty Conditions

This Thermal Imager Camera is guaranteed against any material fault or manufacturer's defect under the general conditions of sale. During the warranty period (12 months from shipment date), faulty parts may be replaced, with the manufacturer reserving the right to repair or replace the product.

The customer pays the inward outward transporter when returning the Thermal Imager Camera to the after-sales Service or a regional branch. The delivery must be agreed upon in advance with the consignee.

For delivery, indicate the reasons for returning it through an enclosed note as simple as possible. Use only the original packing.

Any damage caused by shipment using NOT the original packaging will be charged in any case to the consignor.

The manufacturer will not be responsible for any damage to persons/ things.

The warranty does not apply to the following cases:

- Accessories and batteries are not included in the warranty.
- Unsuitable use of the Thermal Imager Camera or combining the latter with incompatible-Thermal Imager Camera or accessories.
- Repairs resulting from incorrect shipping.
- Repairs resulting from servicing carried out by a person not approved by the company.
- Modifications to the Thermal Imager Camera without explicit authorization from our technical department.
- Inappropriate applications are not provided for by the definition of the Thermal Imager Camera or by the instruction manual.

The contents of this manual may not be reproduced in any form whatsoever without the manufacturer's authorization.

#### 8.2 Before calling Service

If the Thermal Imager Camera should not work correctly, before contacting the DEALER OR THE SERVICE CENTRE, check the battery condition, etc. Change them if necessary.

If the Thermal Imager Camera still does not work, check if your operating procedure agrees with the description in this manual.

**FOR TECHNICAL ASSISTANCE,  
PLEASE CONTACT:**



**Remarks: Due to our policy of continual product development, we reserve the right to amend the specifications of the mentioned products without notice.**



BT-72  
REV1.0/MAY22