AUTO TEST
Products Pty Ltd®

User Manual
March 2026

AUTO *Test* ® InfraRed Camera

Hand Held Infrared Thermal Imager

AUTO TEST
Products Pty Ltd®

E7474 CE UK CA RoHS COMPLIANT 2002 / 95 / EC

DECLARATION OF CONFORMITY

We, Auto*Test*® Products Pty Ltd, declare under our sole responsibility that the product Auto*Test*® InfraRed Camera is in conformity with the provisions of the following Council Directive: 1999/5/EC. A copy of the Declaration of Conformity is available from http://www.autotest.net.au Auto*Test*® Products Pty Ltd (Auto*Test*®) [2026].

FOR YOUR SAFETY

Read these simple guidelines. Not following them may be dangerous. Read the complete user guide. Further detailed information is given in this manual.

SWITCH ON SAFELY
Do not switch the device on when wireless device use is prohibited or when it may cause interference or danger.

FOLLOW INSTRUCTIONS
To ensure accurate results and safety, please use this product in accordance with the user manual, otherwise warranty may not be provided if the product is damaged.

USE SENSIBLY
Use only in the positions as explained in the product documentation.

CLEAN AFTER USE
Clean the housing using a damp cloth or a mild soap solution. Avoid the use of abrasives, alcohol, or solvents when cleaning the instrument.

FLAMMABLE ENVIRONMENTS
Please do not use this product in flammable, explosive, humid or corrosive environments.

Damage
To prevent inaccurate measurements, discontinue use if the product is damaged, or has been dropped.

CORRECT SETTINGS
Please use the correct emissivity to obtain accurate temperature readings

QUALIFIED SERVICE
Only qualified personnel may install or repair this product.

ACCESSORIES AND BATTERIES
Use only approved accessories and batteries. Do not connect incompatible products.

WATER-RESISTANCE
Your device is not water-resistant. Keep it dry.

CONNECTING TO OTHER DEVICES
When connecting to any other device, read its user guide for detailed safety instructions. Do not connect incompatible products.

WARM UP BEFORE USE
To ensure the measurement accuracy, please warm up the device for 10 minutes before measuring if the product has not been used for a long time.

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1 UNPACKING AND FIRST TIME USE

Congratulations on your choice of the Auto*Test*® *InfraRed Camera*. Please take the time to read this User's Manual before using the InfraRed Camera in the field. Incorrect or inappropriate use of this instrument may void the warranty. Retain the packing materials for future shipping and transport of the unit for periodic calibration.

The packing box containing your Auto*Test*® InfraRed Camera contains:

Auto*Test*® InfraRed Camera,

USB Lead

QR Code Information Card

Hand strap

Screwdriver

2 APPLICATION INFORMATION

2.1 Application

The Auto*Test*® InfraRed Camera is a handheld, dual-camera infrared thermal imaging instrument designed for inspection, maintenance, and fault-finding applications. It incorporates both an infrared thermal sensor and a visible light camera, enabling accurate identification and localisation of temperature-related faults.
The device features a 3.5-inch high-resolution LCD display, providing a wide field of view for efficient inspection of large areas. User-adjustable emissivity settings allow the camera to be optimised for different surface materials, improving temperature measurement accuracy.
Thermal and visible images can be captured and stored internally, then easily transferred via USB-C connection or SD card for analysis, reporting, and maintenance records. The camera is powered by a built-in 5000 mAh

lithium battery, offering extended operating time and convenient recharging through a USB-C interface.
The Auto*Test*® InfraRed Camera supports automatic hot-spot and cold-spot tracking, real-time maximum and minimum temperature locking, and configurable high and low temperature alarms. These functions provide reliable, real-time temperature data to support a wide range of diagnostic and monitoring tasks.
For operation in low-light environments, the device includes an integrated 3 watt white LED working light, improving visibility and operator safety during inspections. With an IP65 protection rating, the camera is resistant to dust ingress and moisture, making it suitable for use in harsh industrial and outdoor environments.

2.2 Applicable standards

The Auto*Test*® InfraRed Camera is designed in accordance with applicable international safety standards, electromagnetic compatibility standards, and infrared thermography standards. Compliance with these standards ensures reliable performance, measurement accuracy, and safe operation when used as specified.

The instrument is designed with reference to internationally recognised standards including:

IEC 61010-1
Safety requirements for electrical equipment for measurement, control, and laboratory use
IEC 61326-1
Electrical equipment for measurement, control and laboratory use – EMC requirements
IEC 61000-6-2
Generic immunity standard – Industrial environments

- **IEC 61000-6-4**
  Generic emission standard – Industrial environments
- **AS ISO 10880:2017**
  Non-destructive testing — Infrared thermographic testing — General principles

- **AS ISO 18434-1**
  Condition monitoring and diagnostics of machines — Thermography — General procedures

European Union (EU) Applicable Directives

- **2014/30/EU – EMC Directive**
- **ISO 18251-2:2023**
  Infrared thermography — Performance testing of equipment

3 GETTING STARTED

3.1 Button/Function Description

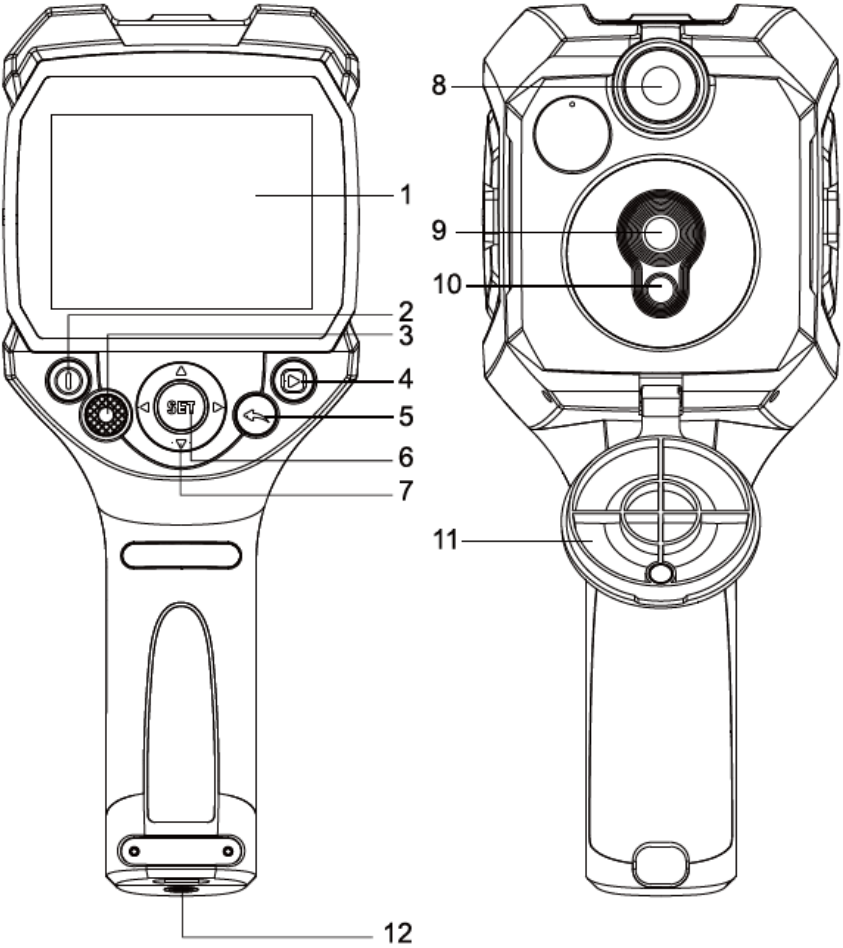
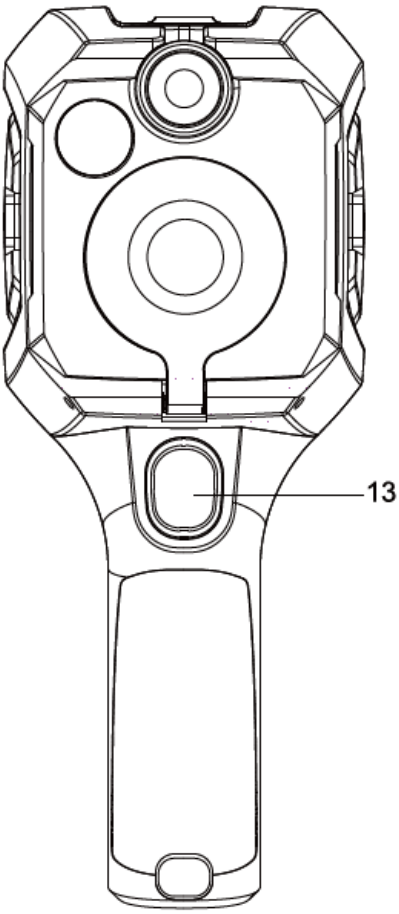


Figure 1- Button locations



1. **LCD Screen**
2. **On/off button**
3. **LED Light Button**
   Short press to turn on, short press again to increase brightness or turn off.
4. **Picture Memory Button**
   Short Press to enter picture memory, press the set button to delete all or one picture.
5. **Return**
   Short press to return.
6. **Set Button**
   Short press to enter settings menu.
7. **Up/Down/Left/Right/Button**
   To select options, move cursor and view records
8. **Led Light**
9. **Infrared Camera**
10. **Visible Light Camera**
11. **Camera Cover**
12. **Tripod Screw Hole**
13. **Picture Snap button**
    Short Press to take picture and save.

Figure 2- Button locations cont.

3.2 Display Function Description

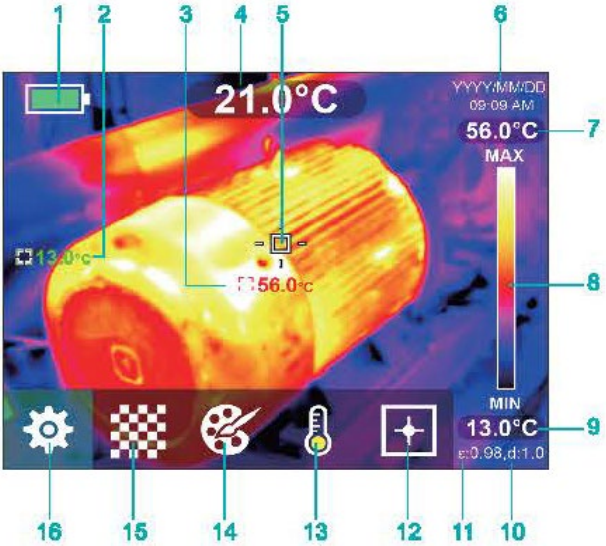


Figure 3- Display function locations

1. Battery status
2. Minimum temperature and position in Current view
3. Maximum temperature and position in Current view
4. Centre point
5. Centre point temperature
6. Current date and time
7. Maximum temperature of colour bar
8. Colour Bar
9. Minimum temperature of colour bar
10. Current detection distance
11. Current emissivity
12. Cursor options select
13. Temperature options select
14. Palette options select
15. IR and visible light display options
16. Settings menu

12. Cursor options

Press ▲/▼ button to switch, and accept
press the return button to exit the settings menu.

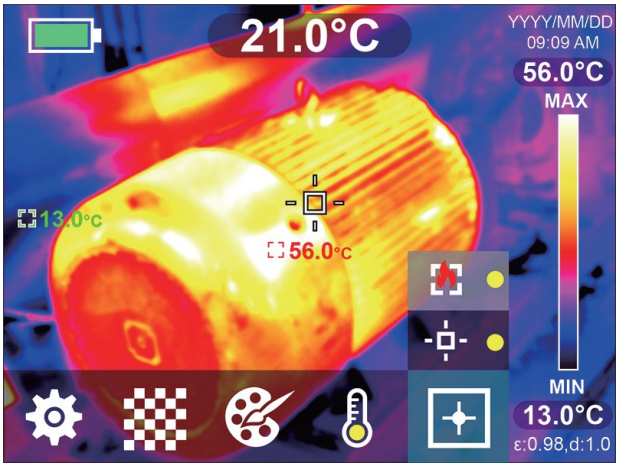


Figure 4- Display cursor options

13. Temperature Options

Press ▲/▼ button to switch between ºC and ºF.

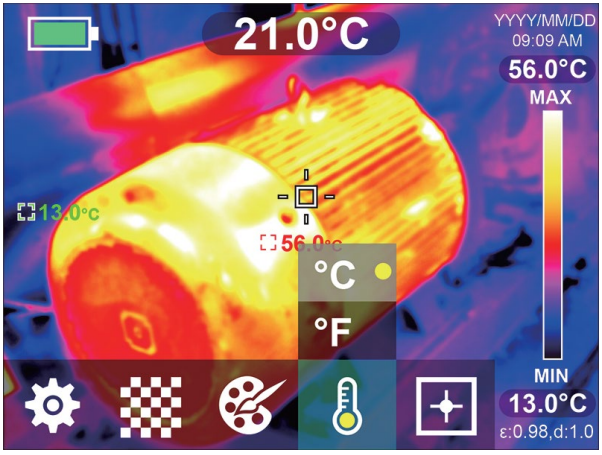


Figure 5- Display temperature options

14. Palette Options

Press ▲/▼ button to switch between the six colour palette modes.

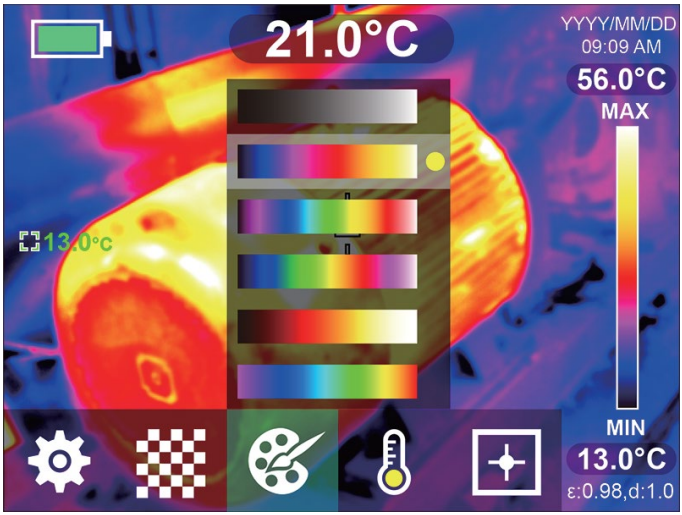


Figure 6- Display palette options

Six colours and imaging modes

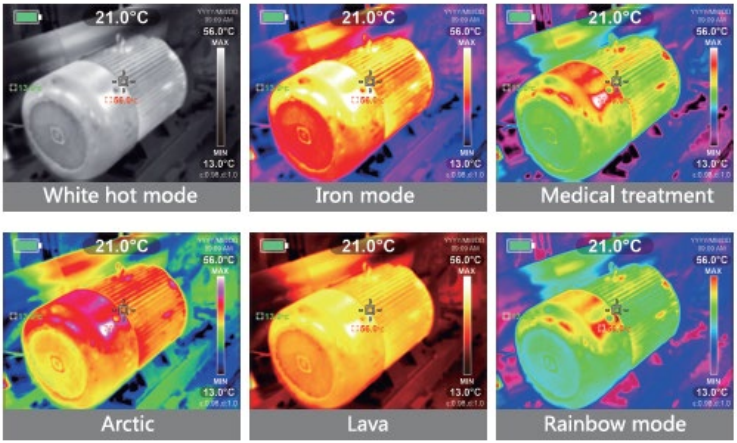
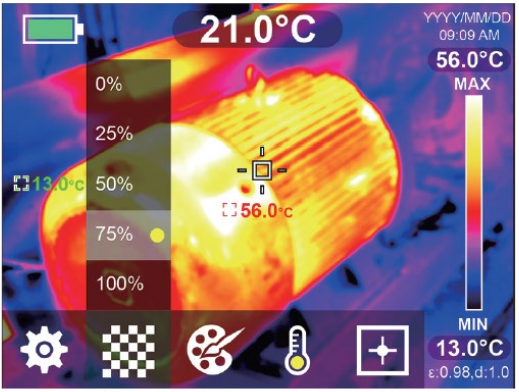


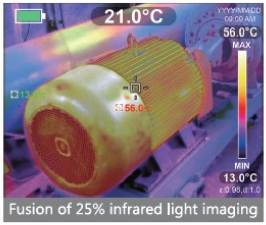
Figure 7- Display palette mode options

15. Infrared and visible light ratio options

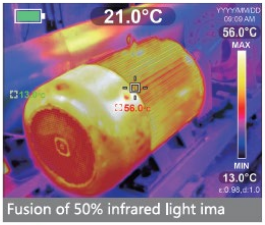
Press the **SET** button, using the ◄ / ► on the scroll ring to scroll to the combination menu. Choose a display mode using the ▲/▼ on the scroll ring and confirm the option with the the SET button. Press the return button to leave the setting menu. You can choose between 0% (visible light View), 25% (25% IR Light View), %0% (50% IR Light View), 75%(75% IR light View), 100% (all IR view).



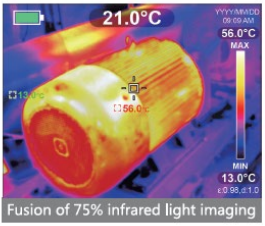
0% (All visible light imaging)



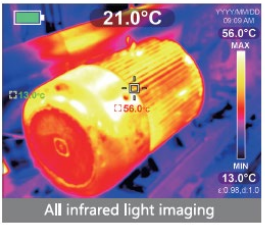
Fusion of 25% infrared light imaging



Fusion of 50% infrared light ima



Fusion of 75% infrared light imaging



All infrared light imaging

Figure 8- Display light ratio options

3.3 Settings Menu

I. Press the SET button to enter the settings menu, you can change the setting area and value.

II. Press ▲/▼ button to switch between the menu options, press SET button to enter the setting interface, press the ▲/▼ button to set the value.

III. Press **SET**/ ► button to enter the settings menu and switch the setting area.

IV. Press ↩. button to return to the main Settings menu.

3.4 Emissivity settings menu

Selecting the correct emissivity is very important for the accuracy of temperature measurements, as emissivity has a significant impact on the measured surface temperature.
Press the SET/ ► button to set the emissivity value, the value in the emissivity setting box turns blue, press the ▲/▼ button to adjust the emissivity value, after setting the value is completed, press the ↩ button to return to the main setting menu.

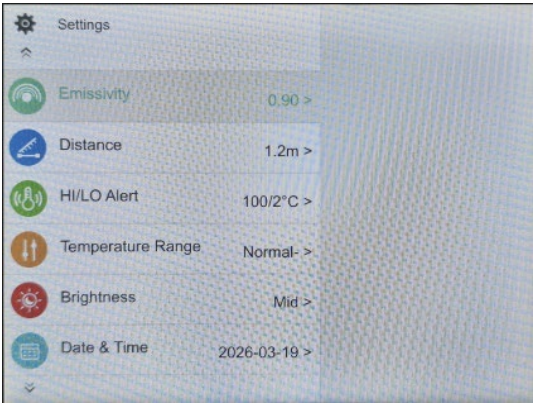


Figure 9- emissivity settings

Tip: The emissivity can be set in the range of 0.01-0.99. For the emissivity of common objects, please refer to the following table.

3.4.1 Emissivity of common objects

Material	Emissivity	Material	Emissivity
Wood	0.85	Black paper	0.86
Water	0.96	Polycarbonate	0.80
Brick	0.75	Concrete	0.97
Stainless steel	0.14	Copper oxide	0.78
Adhesive tape	0.96	Cast iron	0.81
Aluminium plate	0.09	Rust	0.80
Copper plate	0.06	Gypsum	0.75
Black aluminium	0.95	Paint	0.9
Human skin	0.98	Rubber	0.95
Asphalt	0.96	Soil	0.93
PVC plastic	0.93		

3.5 Setting the Distance

Setting the correct distance before detecting an object will ensure a more accurate temperature measurement.
Select the distance option, press the SET/ ► button to enter the value setting menu. Press the ▲/▼ button to set the distance value (0.5-1.2 m). After setting distance is complete, press the ↩ button to return.

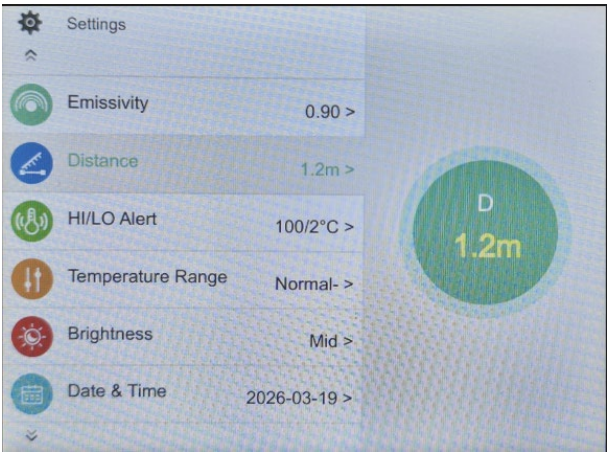


Figure 10- Display distance setting

3.6 Setting the alarm temperature

Select the high/low temperature option, press the **SET**/ ► button to enter the value setting menu. Press the **SET**/ ► button again to change the item, press the ▲/▼ button to set the temperature value and "on/off" to set the alarm. After setting is complete, press the ↩ button to the leave the menu.
High temperature range: 40 °C ~ 400 °C
Low temperature range: -20 °C~ 40°C

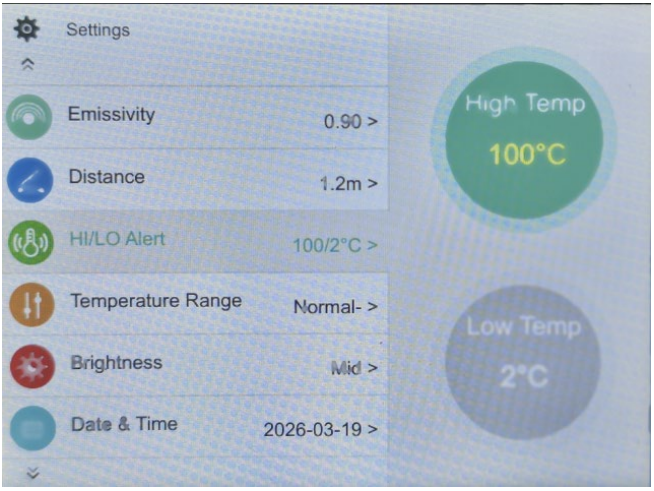
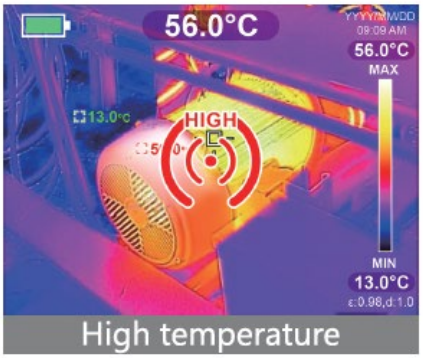


Figure 11- setting the temperature alarm



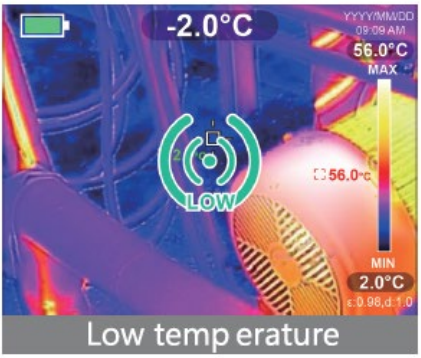


Figure 12- temperature alarm settings

3.7 Setting the temperature scale

Select the temperature option, press the **SET/ ►** button to enter the setting menu, press the ▲/▼ button to switch to the low gain/high gain options, press the **SET** button to confirm, then press and hold the ↩ button to the leave the main setting menu.

Temperature range of normal (-20 °C ~ 40 °C)
Temperature range of High (100 °C ~ 400 °**C**)

Note: It takes over 10s to switch gain. Please wait until the machine readings steady after changing gains. Then continue to perform other operations or temperature measurement

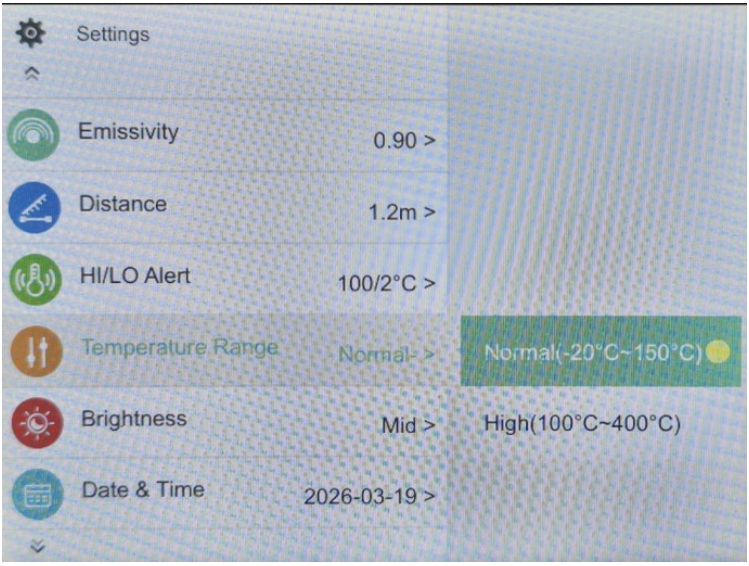


Figure 13- setting the temperature range

3.8 Setting the display brightness

Select the display brightness menu option, press the SET/ ► button to enter the setting menu, press the ▲/▼ button to switch between the low/middle/high options, press the **SET** button to confirm, then press the ↩ button to the left main setting menu.

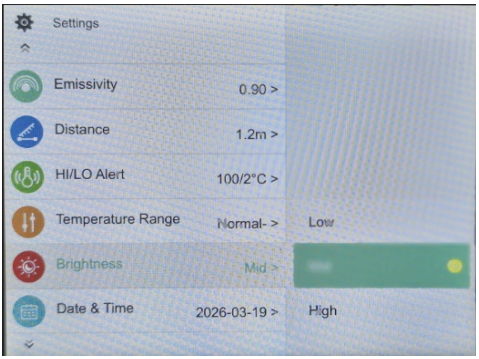


Figure 14- setting the LCD brightness

3.9 Setting the date and time

Select the date & time menu option, press the SET / ► button to enter the menu, press the SET/ ► button again to select between the items, press the ▲/▼ button to set the value. Then press the ↩ button to the leave the menu.

Figure 15- date and time setting

3.10 Setting the palette style

Select the Palette option, press the SET/ ► button to enter the menu, press the ▲/▼ button to select the palette then press the SET button to confirm. Then press the ↩ button to leave the menu setting.

Figure 16- setting the palette style

3.11 Setting the USB source

Select the USB mode option, press the SET/ ► button to enter the USB settings menu, press the ▲/▼ button to switch between "USB and disk/USB camera", press the **SET** button to confirm. Then press the ↩ button to the leave the menu setting.

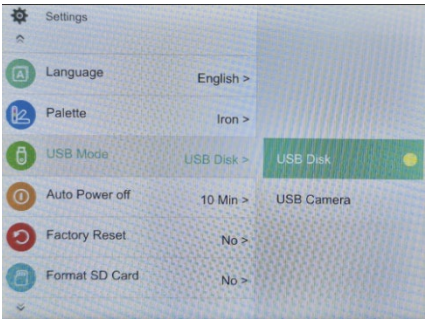


Figure 17- selecting the USB source

When the USB mode is set to USB Disk, the camera can be connected via USB so that pictures can be browsed, copied, moved or deleted on the installed SD-card.

Note: 1) To switch to USB-Disk mode, you need to restart the thermal imager and then plug in the USB cable to apply the USB-disk mode.
Note: 2) Do not change the Image folder name and image name, otherwise there may be a SD-card read error.
When the USB mode is set to USB camera, connect the USB data cable to a screen or projection device, the camera screen will then be projected to the attached device.

Note: 1) To switch to USB camera mode, you need to turn off the thermal imager, then plug in the USB cable, the device **will** automatically start to apply the USB camera mode
Note: 2) Please do NOT unplug the USB cable during computer screen projection Please close the projection software first, then unplug the USB cable.

3.12 Auto power-off settings

Select the auto power off option, press the SET/ ► button to enter, press the ▲/▼ button to switch between the time options, press the SET button to select, then press the ↩ button to the leave the menu item.

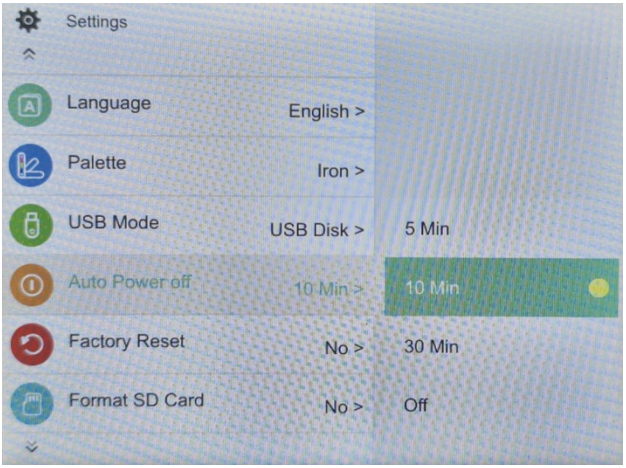


Figure 18- setting the auto power-off time

3.13 Factory Reset

Select the factory reset menu option, press the SET/ ► button to enter, press the ▲/▼ button to select either “yes” or “No”, press the SET button to confirm, then

press the ↩ button to the leave the menu.

Note! please use the Factory Reset function prudently, once reset has been confirmed, all saved information in the device will be lost.

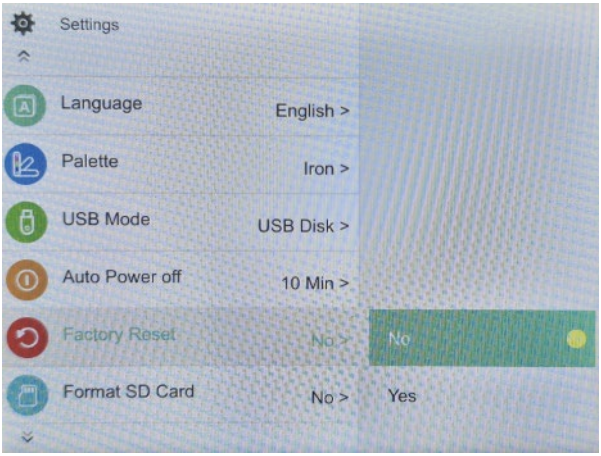


Figure 19- selecting factory reset

3.14 Formatting the SD-Card

Select the Format SD card menu option, press the SET / ► button to enter, press the ▲/▼ button to select either “yes” or “No”, press the SET button to confirm, then press the ↩ button to the leave the menu.

Note! please use the the Format SD card function prudently, once format has been confirmed, all the information in SD card will be lost.

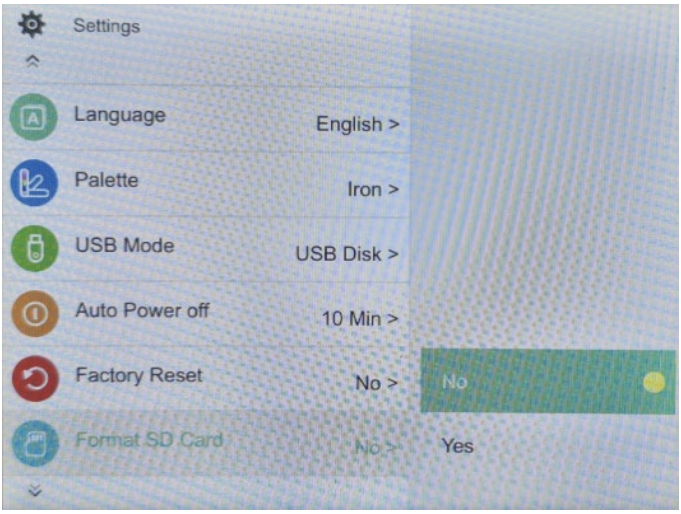


Figure 20- formatting the SD-card

3.15 Browsing images

A Short press of the ▶ button to enter Image browsing interface, press ◄ / ► to select different Images, press the SET button to enter the delete Image option, press the ▲/▼ button to Delete a single image or Delete all images, then press the SET button confirm deletion.
Note: Please do not remove the SD card while browsing images, otherwise images in SD card may be lost.

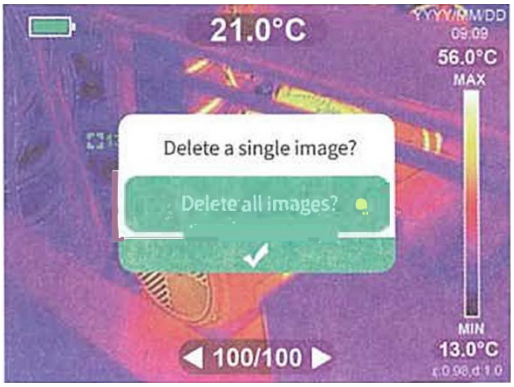


Figure 21- browsing and deleting images

3.16 LED Light

The LED lamp may be turned on and off using the LED Button (3)
To avoid prolonged use of the LED lamp influencing the temperature of the object being measured, the LED light will turn off automatically after 5 minutes of continuous use. If you required, it can be turned on again by repressing the button.

3.17 Charging the battery

The Imaging camera has an internal lithium battery, this battery is not user serviceable. The battery may be charged using the USB port located on the top of the camera, with the USB cable attached to a suitable USB power source. The state of charge is indicated on the top left of the display.

3.18 SD-Card

The micro-SD Card is located on the top of the camera adjacent to the USB Port. The card may be ejected by gently pushing the top of the card.

3.19 Maintenance

Do not drop or hit the instrument.
Do not to disassemble the instrument as this may damage the delicate electronic circuits causing failure.
Do Not subject the instrument to high Temperatures or store the instrument in high temperature, high humidity, flammable, explosive and strong electromagnetic environments.
Clean the instrument with a soft cloth using a small amount of water or neutral detergent to wipe the case. Abrasives and solvents should not be used to prevent corrosion and damage to the instrument.

4 SPECIFICATIONS

Thermal imaging pixels	10800 (120 x 90)
Spectral response band	8 ~ 14 um
Field of view	50° ~ 63.4°
Pixel size	17 um
Output frame rate	< 20 Hz
Thermal sensitivity	< 60 mK
Working environment temperature	0 ~ 35 °C
Temperature range	-20°C – 400 °C
Accuracy	1) -20 °C ~ 0 °C ±5 °C 2) 0 °C ~ 100 °C ± 3 °C 3) 100 °C ~ 400 °C ± 5%
Measurable distance range	0.5 m ~ 1.2 m
Colour palette	Six
High/low temperature alarm	√
SENSOR non-uniformity	<5%
Display Size	90 mm
Display resolution	320 x 240
Visible light resolution	640 x 480
Storage	External Micro-SD card
Storage memory	SDRAM – 256 Mbit, FLASH 64 Mbit
Communication Interface	USB 2.0
Video output	Selectable
Power	lithium battery 5000 mAh
Light	High-power white LED
Protection class	IP65
Keypad	6 keys tactile silicone keypad
Operating temperature	-10 °C – 50 °C
Storage temperature	-40 °C – 70 °C
Weight	0.54 kg
Physical Dimensions	238 x 95 x 86 mm

5 SERVICE AND REPAIR

Like all electronic instrumentation the Auto*Test*® *InfraRed Camera* must be serviced. The reason for this is to maintain creditability in tests and acceptance of data according to international standards.
For the current cost and time required for repair or service please contact Auto*Test*®.

5.1 Packaging

The unit should be packaged in the original shipping container. However, where the container is not available it is important to remember that you are shipping an electronic instrument. Bubble pack or foam should surround the unit and should be inserted into a sturdy cardboard box. Please ensure that the container is locked or otherwise obviously secured.

5.2 Shipping

Labelling
A label should be placed on the outside of the container noting “Electronic Device Fragile”.

Freight Carrier
Container should be sent, Freight Prepaid. Auto*Test*® has no preference on freight carriers.
Return freight details must be included.

Addressing
Please address to

Auto*Test*® Products Pty Ltd
Att: Service Department
69 Parsons St
Kensington, VIC 3031 AUSTRALIA

Phone: +61 3 8840 3000
Email: service@autotest.com.au

6 WARRANTY

6.1 Application of these conditions

These conditions, subject to any variations we agree to in writing, apply to all supplies made by Auto*Test*® Products Pty Ltd (Supplier) specified in an invoice or contract as the supplier to the entity specified in the invoice or the contract as the purchaser. These conditions, in their present form or as changed, pursuant to these conditions, together with the relevant payment, invoices and Purchase Orders exchanged between the parties form the contract.

6.2 Inconsistencies

Where the supply purports to be made on or subject to terms and conditions other than these conditions, the Purchaser agrees that such other terms and conditions are disregarded and form no part of the Contract unless the Supplier agrees otherwise in writing.

6.3 Warranty terms and conditions

When you purchase an Auto*Test*® Product you are required to complete warranty registration form and return to Auto*Test*® Products Pty Ltd within 10 days of purchase of the product.

Auto*Test*® Products or any Authorised Auto*Test*® Service Centre warrants this product against defects in material and workmanship for a period of 12 months from the original date of purchase.
This warranty applies only to products and components supplied by Auto*Test*® Products which can be identified by the trade name or logo affixed to them or by other documents.
Auto*Test*® Products does not warrant any products not supplied by Auto*Test*® Products.

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law.

Subject to section 8.1 and the terms below, as your Standard Warranty Auto*Test*® agrees to repair or replace at Auto*Test* 's cost the Auto*Test*® product, and any Auto*Test*® accessory supplied with the product, purchased by you in Australia from a Auto*Test*® Authorised Dealer when the product does not perform in accordance with the manufacturer's specifications during the Warranty Term, commencing from the date of purchase. Transit insurance and return freight will be at the owner’s expense.

Auto*Test*® Products or any Authorised Auto*Test*® Service Centre reserves the right to refuse warranty repair if accident, abuse, misuse or misapplication has damaged the product. In transit or as a result of service or modification by other than an Authorised Service Centre, nor are any other warranties expressed or implied, including any regarding merchantability or fitness for any other particular purpose.
Products presented for repair may be replaced by refurbished products of the same type rather than being repaired. Refurbished parts may be used to repair the products. Replacement of the product or a part does not extend or restart the Warranty Term.
The product will be at the owner's risk whilst in transit to and from the Auto*Test*® Authorised Service Centre.
Auto*Test*® will bear the expense of transport where transported by Auto*Test*® or its Authorised representatives. Any other expense of claiming the warranty will be borne by you.
Auto*Test*® and its Authorised Service Centres may seek reimbursement of any costs incurred by them when the product is found to be in good working order.

Auto*Test*® Products or an Authorised Service Centre is not responsible for incidental or consequential damage resulting from the breach of any express or implied warranty, including damage to property and, to the extent permitted by law, damages for personal injury.
To the full extent permitted by law, but subject always to 8.1, the Standard Warranty
does not cover:

- If the product has not been installed, operated, maintained or used in accordance with the manufacturer's instructions or specifications provided with the product.
- If the factory-applied serial number has been altered or removed from the product.
- To damage, malfunction or failure resulting from alterations, accident, misuse, abuse, fire, liquid spillage, mis-adjustment of customer controls, use on an incorrect voltage, power surges and dips, thunderstorm activity, voltage supply problems, tampering or unauthorised repairs by any persons, use of defective or incompatible accessories, the operation of a computer virus of any kind, exposure to abnormally corrosive conditions or entry by any insect, vermin or foreign object in the product.
- The use of proper paper and stationery is very important to the operation of the printers. Use of non-standard paper will jam the

printer and/or wear the print head. Use of non-standard paper will void the warranty.

- Repairs attempted or made by other than our regional repair centre or authorised warranty service centre.
- To damage arising during transportation, installation or while moving the product, or to any transportation costs of the product or any parts thereof to and from the owner, unless otherwise specified in these Warranty Terms.
- Conditions or malfunctions caused by the reasonable effects of fair wear and tear or the malfunction of normally wearing parts, which include but are not limited to: Batteries, plugs and leads.
- To any third-party software or hardware not contained in the product as originally configured by the manufacturer.
- To any failure, to the extent that the failure is not a failure of the product to perform in accordance with its specifications.
- To replacement or repair of any
  1) consumables (including cables), paper, ink ribbons or
  2) batteries (beyond 3 months from date of purchase), or
  3) lost parts or accessories.
- To service of any product whilst it is outside Australia.
- To any wear and tear.
- Auto*Test*® will not be liable for any loss, damage or alterations to
  1) third party hardware or software.
  or
  2) programs, data or information stored on any media or any part of the product, no matter how occurring.
  or
  3) for any loss or damage arising from loss of use, loss of profits or revenue, or for any resulting indirect or consequential loss or damage.
- Modified, abused, neglected, accidentally damaged or excessively worn products, or products that have become damaged or defective as a result of improper use.
- Auto*Test*® products that are not distributed through Auto*Test* 's authorised distributors and resellers.

(Warranty non-transferable) This warranty is not transferrable beyond the original purchaser.
Warranty is subject to Auto*Test*® Products Standard Terms & Conditions published widely. For more detailed warranty clause, please visit our website www.autotest.net.au/terms-and-conditions/.

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