THERMAL IMAGING CAMERA

MODEL NO: **VS913.V2**

Thank you for purchasing a Sealey product. Manufactured to a high standard, this product will, if used according to these instructions, and properly maintained, give you years of trouble free performance.

IMPORTANT: PLEASE READ THESE INSTRUCTIONS CAREFULLY. NOTE THE SAFE OPERATIONAL REQUIREMENTS, WARNINGS & CAUTIONS. USE THE PRODUCT CORRECTLY AND WITH CARE FOR THE PURPOSE FOR WHICH IT IS INTENDED. FAILURE TO DO SO MAY CAUSE DAMAGE AND/OR PERSONAL INJURY AND WILL INVALIDATE THE WARRANTY. KEEP THESE INSTRUCTIONS SAFE FOR FUTURE USE.

Refer to Instruction Manual

1. SAFETY

- ❑ **WARNING!** Ensure that Health & Safety, local authority and general workshop practice regulations are adhered to when using this equipment.
- ✓ Familiarise yourself with the applications, limitations, and potential hazards of the Thermal Camera.
- ✓ Keep the Thermal Camera clean and in good condition.
- ✓ Protect the Thermal Camera from the following:
- ✓ - Thermal shock caused by large and/or rapid ambient temperature change.
  - High temperatures.
- × **DO NOT** get the Thermal Camera wet or use in damp or wet locations or areas where there is condensation.
- × **DO NOT** use the Thermal Camera for any purpose other than that for which it is designed.
- × **DO NOT** allow untrained persons (particularly children) to operate the Thermal Camera.
- × **DO NOT** operate the Thermal Camera when you are tired or under the influence of alcohol, drugs or intoxicating medication.
- ❑ **WARNING!** The warnings, cautions and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood that common sense and caution are factors which cannot be built into this product, but must be applied by the operator.

2. INTRODUCTION

Thermal imaging camera identifies high and low temperature zones with precision. Heat-mapped colour palettes display temperature gradients for fast diagnostics. On-screen cursor pinpoints minimum and maximum temperature variations. Ideal for automotive, building, electrical and HVAC inspections. Clear 60mm screen delivers sharp thermal imaging for accurate diagnostics. Operates via four AA batteries (supplied) or mains power (USB-C cable supplied). Micro SD card enables image and data capture for review and reporting (supplied). Supplied in a storage case.

3. SPECIFICATION

Model No	VS913.V2
Battery Run Time	12hrs
Colour Palette	Rainbow, Iron Red, Ink Colour, Black & White, Ocean Blue
Emissivity	0.1 to 1 Adjustable
Field of Vision	32° x 32°
Image Mix (Camera to Thermal)	0%, 25%, 50%, 75%, 100%
Memory Capacity	8GB SD Memory Card (Supplied) Supporting up to 16GB
Nett Weight	0.32kg
Resolution	Infrared Image 33 x 33 (1089 Pixels)-Camera Image 3 Mega Pixels
Screen Size	60mm
Temperature Range	-20°C to +480°C (-4°F - 896°F)

Original Language Version

TECHNICAL DATA

Infrared temperature range	-20~480ºC/-4~896ºF	
Infrared temperature accuracy	>0ºC±2% or reading±2ºC/3.6ºF <0ºC±3ºC/5.4ºF Note: Accuracy is measured in an environment of 18-28ºC	
Ambient temperature range	N/A	-20~70ºC/-4~158ºF
Ambient temperature accuracy	N/A	±1.0ºC/1.8ºF
Ambient humidity range	N/A	0~100%RH
Ambient humidity accuracy	N/A	35~80%RH; ±4.0%R H Other ±7.0%RH
Dew point temp. range	N/A	-30~100ºC/-22~212ºF
Dew point temp. accuracy	N/A	±1.0ºC/1.8ºF (25ºC/77ºF,35~80%RH)
Wew bulb temp. range	N/A	-30~100ºC/-22~212ºF
Wew bulb temp. accuracy	N/A	±1.0ºC/1.8ºF (25ºC/77ºF,35~80%RH)
Visual image resolution	300000 pixel s	
Thermal Sensitivity	0.15ºC/0.27ºF	
Image Capture Frequency	9HZ	
Wavelength Range	8-14um	
Focus Mode	Fixed	
View Options	Blending of the visual and the infrared from full infrared to full visual in 25% steps	
File Format	BMP	
Memory View	Scroll all saved images and view them on the screen	
Auto Power Off	3minutes,5minutes,10minutes,are optional	
Working Temperature	- 5~40ºC / 23~104ºF	
Storage Temp. Range	- 30~60ºC/ - 22~140ºF	
Relative Humidity	10~80%RH	
Size	198*98*55mm	

4. OPERATION

4.1. FUNCTIONS

1	Infrared imaging lens
2	Visible light camera
3	LED lighting
4	Image capture key
5	Installation nuts for battery cover and tripod
6	Up button
7	Menu key/confirmation key
8	Down button
9	Power key/return key
10	TFT high definition colour screen
11	SDcard, Type-C USB interface

5. CONTENTS

5.1.1. Instruction manual
5.1.2. Micro SD card
5.1.3. Type-C cable
5.1.4. SD card reader
5.1.5. Hard shell case

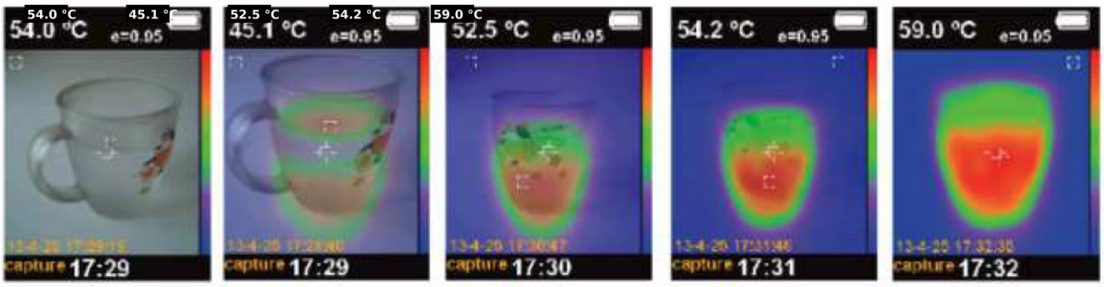
6. KEY FUNCTIONS

6.1.1. Function: hold down button about 3 seconds, and the instrument can be controlled to turn on and off. In setting mode, press button to exit the function.

6.1.2. Functi ess button one time, the instrument enters the setting menu interface. In menu setting mode, press button to determine the function.

6.1.3. Function: to go into measuring mode, press this key to turn on and off the LED lighting. In the main menu mode, press the key to go up. In secondary menu mode, to increase the value.

6.1.4. Function; to go into measuring mode, press this key to adjust the mixed image from 0% to 100%, step size 25%. In the main menu mode, press the key down. In secondary menu mode, to reduce the value.



0% 25% 50% 75% 100%

6.1. IMAGE CAPTURE FUNCTION OF TRIGGER KEY:

6.1.1. When the trigger key is pressed, YES and NO symbols will be displayed on the screen, the image will be saved by pressing "▲", and the captured image will be cancelled by pressing "▼" . If "SD card error! please check!" is displayed,it indicates that the SD card is not installed. If " FULL" is displayed in the lower left corner of the display screen,it indicates that the SD card is full. Note: SD card with 8GB memory.

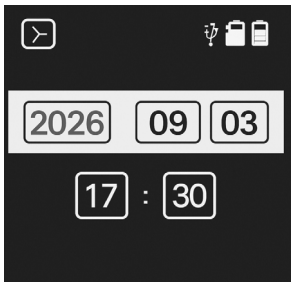
6.2. **MAIN MENU DESCRIPTION**

12:30	Time settings
5000	Image storage quantity
50%	Backlight intensity adjustment
C	Temperature unit settings
OFF	Automatic shutdown settings
11088 MB	Memory card capacity
	Colour palette settings
0.95	Emissivity settings
ON	Hot and cold markers

6.3. SECONDARY MENU DESCRIPTION

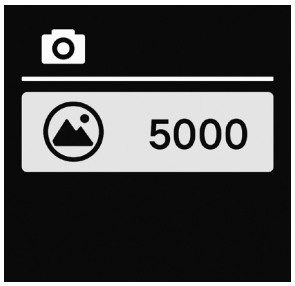
6.4. TIME SETTINGS

6.4.1. Power on the meter, press “MODE” to enter the time setting then press the “MODE” key to enter into mode as in the figure below, press the “▲”key or “▼”key to menu setting mode, select the image list as below by select the desired value. Press the “MODE” key to switch pressing “▼” key and “MODE” key to view the saved the setting of year, month, day, hour and minute in turn. image. After selecting the corresponding image by pressing the power button to saves the time settings and “▲” key or the “▼” key, press the “MODE” key to view the specific image, press the “▲” key or the “▼” key to return to main menu.



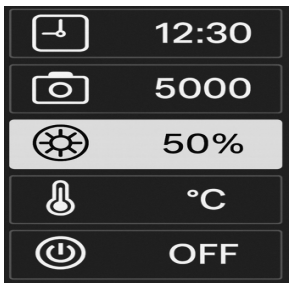
6.5. STORAGE IMAGE

6.5.1. Power on the meter, press the “MODE” key to enter into menu setting mode, select the image list as below by pressing “▼” key and “MODE” key to view the saved image. After selecting the corresponding image by the “▲” key or the “▼” key, press the “MODE” key to view the specific image, press the “▲” key or the “▼” key to switch the image, press the “MODE” key again to delete the image. Press the “MODE” key to exit the specific image view and return to the image list.



6.6. BACKLIGHT SETTINGS

6.6.1. Power on the meter, press the “MODE” key to enter into menu setting mode, select the backlight settings icon by pressing “▼” key as shown in the figure below. After pressing the “MODE” key, the brightness of the screen is set by pressing the “▲” key or the “▼” key. The bigger the value, the brighter the screen. Select the appropriate brightness, press the “power” button to save and return to the menu.

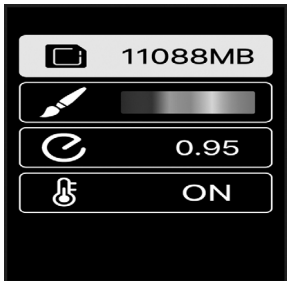


6.7. TEMPERATURE SETTINGS

6.7.1. Power on the meter, press the “MODE” key to enter into menu setting mode, select the temperature units settings mode by pressing “▼” key as shown in the figure below. Press the “MODE” button to switch the temperature unit, Celsius and Fahrenheit to switch. press the “power”button to save and return to the menu.

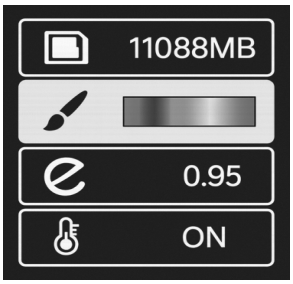
6.8. MEMORY CARD CAPACITY

6.8.1. Power on the meter, press the “MODE” key to enter into menu setting mode, select the memory card capacity by pressing “▼” key to view the remaining capacity of the existing memory card.



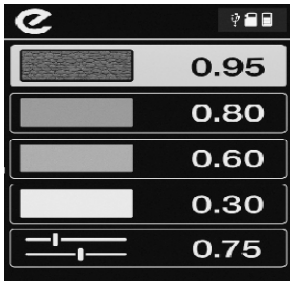
6.9. PALETTE SETTINGS

6.9.1. Power on the meter, press the “MODE” key to enter into menu setting mode, select the palette settings icon mode by pressing the “MODE” key, as shown in the figure below. The five modes of palette can be switched in turn: ink colour, black and white, rainbow colour, ocean blue and iron red.



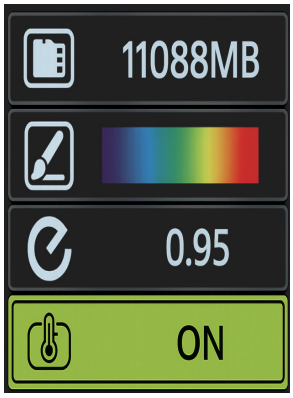
6.10. EMISSIVITY SETTINGS

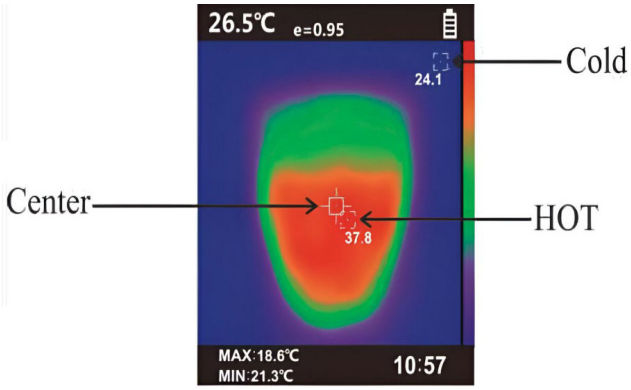
6.10.1. Power on the meter, press the “MODE” key to enter into menu setting mode, select the emissivity setting mode by pressing “▼” key, press the “MODE” key to enter into emissivity setting as below. By pressing the“▲”key or the “▼”key, you can select the pre-set emissivity of 0.95, 0.8, 0.6, 0.3 and custom emissivity.
After selecting the custom emissivity icon and pressing the “MODE” key, adjust the appropriate emissivity value by pressing the “▲” key or the “▼”key, and press the “power” key to save the setting and return to main menu.



6.11. MAX/MIN POINT TEMPERATURE MARKER

6.11.1. Power on the meter, press the “MODE” key to enter into menu setting mode, select the emissivity setting mode by pressing “▼” key, press the “MODE” key to switch the point temperature label switch as below: ON: enable the MAX/MIN point temperature label, OFF: disable the MAX/MIN point temperature label.





6.12. TIMING AUTOMATIC SHUT-DOWNS

6.12.1. Power on the meter, press the “MODE” key to enter into menu setting mode, select the timing automatic shut-down mode by pressing “▼” key, select the timed automatic shut-down bar, as shown in the figure below,press the “MODE” key to switch off the function of automatic shut-down timing, which can be set in four modes:

6.12.2. 1) OFF: None timed shut-down

6.12.3. 2) 3MIN: Turn off after 3 minutes without operating the instrument.

6.12.4. 3) 5MIN: Turn off after 5 minutes without operating the instrument.

6.12.5. 4) 10MIN: Turn off in 10 minutes without operating the instrument.

6.13. ATTENTION

6.13.1. All objects radiate infrared energy, which is based on the actual surface temperature and surface radiation coefficient of the object. The product perceives the infrared energy on the surface of the object and uses the data to calculate the estimated temperature. Many common objects and materials (such as painted metal,wood, water, skin and fabric) can radiate energy effectively, so it is easy to obtain relatively accurate measurements. for the surface which is easy to radiate energy (high radiation coefficient), the radiation coefficient is greater than 90% (0.90). This simplification does not apply to glossy surfaces or painted metals because their radiation coefficients are less than 60%(0.60). These materials are not easy to radiate energy and are classified as low radiation coefficient materials. In order to measure the material with lower radiation coefficient more accurately, it is necessary to correct the radiation coefficient. Adjusting the radiation value usually enables the product to calculate the actual temperature more accurately.

6.14. EMISSIVITY VALUE OF COMMON MATERIAL

MATERIAL	EMISSIVITY	MATERIAL	EMISSIVITY
Aluminum	0.30	Glass	0.90 to 0.95
Bitumen	0.90~ 0.98	Iron Oxides	0.78 to 0.82
Concrete	0.95	Paint	0.80 to 0.95
Asbestos	0.95	Plastic Cement	0.85 to 0.95
Ceramics	0.90~ 0.95	Paper	0.70 to 0.94
Brass	0.50	Sand	0.90
Brick	0.90	Rubber	0.95
Carbon	0.85	Wood	0.94
Oil Sludge	0.94	Textile	0.94
Frozen Food	0.90	Lead	0.50
Hot Food	0.93	Marble	0.94
Ice	0.96~ 0.98	Cloth (Black)	0.98
Snow	0.83	Gypsum	0.8 0to 0.90
Human Skin	0.98	Water	0.92 ~ 0.96

7. END OF LIFE

When the product is no longer in service, it should be safely dismantled. Components must be carefully removed and sorted for recycling, reuse, or disposal in accordance with safety and environmental regulations, ensuring that all parts are handled responsibly and any hazardous materials are managed appropriately.

WEEE REGULATIONS

Dispose of this product at the end of its working life in compliance with the EU Directive on Waste Electrical and Electronic Equipment (WEEE). When the product is no longer required, it must be disposed of in an environmentally protective way. Contact your local solid waste authority for recycling information.

BATTERY REMOVAL

Under the Waste Batteries and Accumulators Regulations 2009, Jack Sealey Ltd are required to inform potential purchasers of products containing batteries (as defined within these regulations), that they are registered with Valpak's registered compliance scheme. Jack Sealey Ltd Batteries Producer Registration Number (BPRN) is BPRN00705.

ENVIRONMENT PROTECTION

Recycle unwanted materials instead of disposing of them as waste. All tools, accessories and packaging should be sorted, taken to a recycling centre and disposed of in a manner which is compatible with the environment. When the product becomes completely unserviceable and requires disposal, drain any fluids (if applicable) into approved containers and dispose of the product and fluids according to local regulations.

REGISTER YOUR PURCHASE HERE

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