



# NEW! Wahl 150 & 170 Series Imagers

## Instantly find Hot or Cold Spots Withstands 2 Meter Drop Test!



IR / Visible Light / Picture-in-Picture / SpyLite™

Touch Screen for easy access of menu functions

-4° to 662°F (-20° to 350°C) and 212° to 1202°F (100° to 650°C)

60Hz\* or 9Hz Frame Rate

Field of View: 25° x 19°

3.2 Megapixel CMOS Sensor

Every Pixel Calibrated

**Model 150:** Thermal Sensitivity  $\leq 0.05^\circ\text{C}$

Resolution: 160 x 120 with 19, 200 Pixels

**Model 170:** Ultra High Thermal Sensitivity  $\leq 0.04^\circ\text{C}$

Resolution: 384 x 288 with 110, 592 Pixels

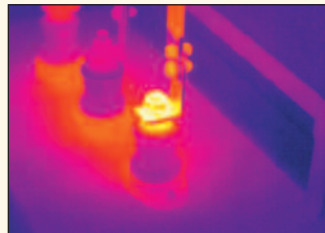
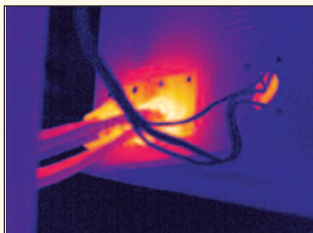
Extended Temperature Option to 1200°C or 2000°C

**Unlimited Phone Support  
with every Heat Spy!**

- **SpyLite™** - only temperatures over or under preset point shown thermally over visible image
- **Picture-in-Picture** - all temperatures shown thermally over visible image
- **Large 3.6" LCD Touch Screen Display** - for quick and easy use of menu functions
- **Dual LED "Head Lights"** - easily light subject even in low light conditions
- **Ergonomic design** - with easy grip, trigger and hand strap for easy scanning
- **Thermal - Visible - PIP - SpyLite Image Save**
- **Thermal - Visible - Video Recording**
- **"z" models - 60 Hz or "a" models - 9 Hz** (Factory Set)("a" models for use outside USA)
- **Laser Aiming** - pinpoints hot or cold spots
- **Engineered to withstand 2 meter Drop Test**
- **Optional Lenses** - increase functionality  
**Telephoto:** 2X and 4X\*\*  
**Wide Angle:** 0.5X and Ultra Wideangle: 0.25X\*\*
- **Real Time Image and Data transfer** - through Ethernet to Windows PC to manage settings and files, or view live video output
- **Bluetooth** - Wireless transfer of files to PC, or connect headset to record and play back verbal image annotation (Earphone/RS232)
- **Advanced Heat Spy Report and Analysis Software** - included for quick and professional reports with precise image and temperature analysis on any point in an image.

TWO YEAR  
**2**  
WARRANTY

**IP54**  
COMPLIANT



Find problems quickly, easily, and safely with the Wahl 150 and 170 Series

\*Export Licensing Fee on 60Hz models may be required for your country, subject to US Government approval. No Export License required on 9Hz models. \*\*Model 170 only.

Heat Spy® is a registered trademark of Wahl Instruments, Inc.

[www.wahlheatspy.com](http://www.wahlheatspy.com)

Specifications subject to change without notice

**ISO 9001:2008**  
CERTIFIED QUALITY  
MANAGEMENT SYSTEM

Palmer Wahl • 234 Old Weaverville Road • Asheville • North Carolina • 28804  
sales@palmerwahl.com • Phone: (800) 421-2853 • FAX: (828) 658-0728

PW1283  
03/15 Rev B  
Revised 01/16

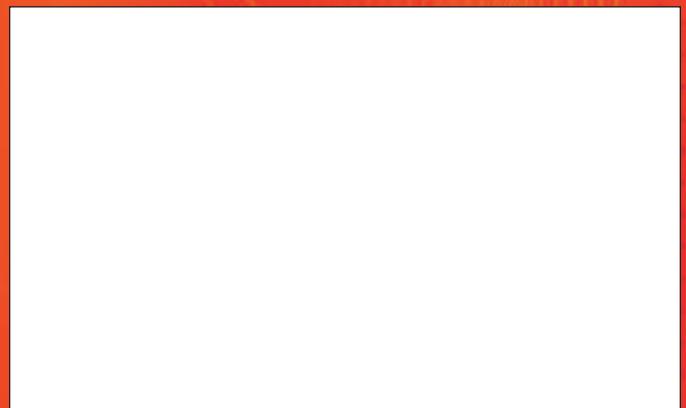
# 150 • 170 Series Thermal Imagers Specifications

Model Number	a150	z150	a170	z170
Frame Rate	9Hz	60Hz*	9Hz	60Hz*
<b>Image Performance</b>				
Detector Type	Uncooled Microbolometer Focal Plane Array (FPA)			
Detector Resolution	160 x 120		384 x 288	
Number of Pixels	19,200		110,592	
Field of View (FOV)	25° x 19°			
Spatial Resolution (IFOV)	2.73 mrad		1.37 mrad**	
Thermal Sensitivity	≤ 0.05 @ 30°C		≤ 0.04 @ 30°C Ultra High Sensitivity	
Focus Range	0.5 m to ∞			
Focus Type	Manual			
IR Digital Zoom	X2 or X4			
Spectral Range	8 - 14µm			
Visible Light Camera	3.2 Megapixel CMOS Sensor, Dual LED Head Lights			
Telephoto Lens Option Factory Upgrade	2X for 12.5° x 9.5° FOV			
	NA	4X for 6.25° x 4.75° FOV		
Wide Angle Lens Option Factory Upgrade	0.5X for 50° x 38° FOV			
	NA	0.25X for 100° x 76° FOV		
<b>Image Display</b>				
Thermal/Visible Light Image	Fast switch between Thermal, Visible Light, or Picture-in-Picture <sup>1</sup> or SpyLite <sup>2</sup>			
LCD Display	High Resolution 3.6" Color LCD Touch Screen, 640 x 480			
Image Control	<b>11 Display Color Palettes:</b> Ironbow; Negative Grayscale; Positive Grayscale; Amber; Hot Metal; Cool Metal; Rainbow Green-Red; Rainbow Blue-Red; Rainbow Black-White; High Contrast Blue-Yellow; and High Contrast Violet-White <b>Image Adjustment:</b> Auto Ranging / Manual Level and Span / Adjustable Display Brightness and Contrast Control			
<b>Measurement Analysis</b>				
Measurement Range (User Selectable via Menu)	-4° to 662°F (-20° to 350°C)		-4° to 662°F (-20° to 350°C) 212° to 1202°F (100° to 650°C)	
Extended Temperature Option	NA		NA	
Measurement Accuracy	Greater of ±2% of reading or ±2°C up to 650°C. Instrument is not calibrated below -10°C.			
Measurement Correction	Auto / Manual			
Measurement Mode	Spots, Areas, Lines, Isotherms, Delta T, Alarms (Multiple Audible and Visible)			
# of Measurement Spots	Up to 5 Moveable Spots, including Hot and Cold Seeking			
# of Measurement Areas	Up to 5 Movable and Sizeable Areas (Max, Min and Avg Temperatures)			
# of Measurement Lines	Up to 2 Moveable Lines, 1 Vertical, 1 Horizontal; Image Temperature Profile Lines			
Emissivity Correction	Adjustable from 0.01 to 1.00 with Built-in Emissivity Table			
Reflected Temperature Compensation	Auto with manual reflected Temperature Adjustment			
Atmospheric Transmission Correction	Automatic Correction according to user input Object Distance, Humidity, and Temperature			
Alarm	High and Low Temperature Audible and Visible Alarm; Isotherm Visible Alarm			
Temperature Scale	User Selectable: °C, °F, and K			
User Settings	Date/Time, Temperature Unit, Brightness/Contrast, LCD Brightness and 8 Languages: English; Spanish; German; Portuguese; Korean; Russian; Simplified Chinese; Traditional Chinese			

Specifications subject to change without notice

Model Number	a150	z150	a170	z170
Frame Rate	9Hz	60Hz*	9Hz	60Hz*
<b>Image Storage</b>				
Removable Storage	8GB Micro SD, max 32GB			
Storage Mode	Manual Single Image Save or Programmable Auto Save to Micro SD Card, Single Thermal Image and Visible Image Save (with link option), Thermal, Visible, Picture-in-Picture <sup>2</sup> and SpyLite <sup>3</sup> Video Save			
File Format (Thermal)	JPEG / H.264 (Both with Radiometric information)			
File Format (Visible Light)	JPEG, MPEG-4			
Voice Annotation	Maximum 60 seconds per image, Microphone or Bluetooth Headset			
Text Annotation	Yes, from Predefined Inspection List			
<b>Laser</b>				
Laser Pointer	Class 2, < 1mW / 635nm, Red			
<b>Record</b>				
Report Analysis Software	Yes			
Video Output	User Selectable PAL and NTSC			
Freeze Frame/Save Image	Freeze Frame and Save Image, Thermal and/or Visible to SD Card			
<b>Interface</b>				
Micro SD Card Slot	Yes			
Mini-USB	Yes			
Network	Real time image and data transfer through Ethernet to Windows PC to manage settings and files, or view live video output			
Bluetooth	Wireless transfer of files to PC, or connect headset (not included) to record and play back verbal image annotation (Earphone/RS232)			
Video	Yes			
Power	DC 12V			
<b>Environment</b>				
Ambient Operating Temp	5° to 122°F (-15° to 50°C)			
Storage Temperature	-13° to 140°F (-25° to 60°C)			
Humidity	≤ 90% non-condensing			
IP Rating	IP54			
Drop Test	2 meters			
<b>Power</b>				
Power / Operating Time	1 Rechargeable Lithium Ion Battery, 2 Batteries provided for approx 3 hours continuous operation per battery			
Power Save Mode	Selectable Time Interval Auto Sleep to save battery, Auto Shut Off			
Charging System	Auxiliary Charging Kit with: 12V DC Car Charger, AC/DC Power Supply/Charger with International Plugs			
<b>General Info</b>				
Housing	Impact Resistant Molded Plastic & Hand Strap (fits either side); Dual Headlights; Microphone; Tripod Mounting/1/4"-20 Thread			
Dimensions	Width: 4.13 in. (105mm) x Length: 9.64 in. (245mm) x Height: 9 in. (230mm)			
Weight (w/o battery)	2.16 lbs (0.98 Kg)			
Software Compatibility	Microsoft Windows 2000, Windows XP, Vista, and 7			
Included Accessories	Carrying Case with Shoulder Strap; Hand Strap; Display Sun Shade; Lens Cap; 2 Rechargeable Lithium Ion Batteries; External AC Battery Charger; Auxiliary Charging Kit with: 12V DC Car Charger; AC/DC Power Supply/Charger with International Plugs; Video Out Cable; Ethernet Cable; Heat Spy Report & Analysis Software; Micro SD Card and Reader; Manual.			
Optional Accessories	Tripod Extension			
<b>Safety Certificates</b>				
Shock Test/Vibration Test	25G, IEC68-2-29 / 2G, IEC68-2-6			
Immunity Tests/Emission Limits	Yes / Yes			

Heat Spy Thermal Imagers are available from:



\* Export Licensing Fee on 60Hz models may be required for your country, subject to US Government approval. No Export License required on 9Hz models.

\*\* 384 x 288 is not directly convertible to 640 x 480 imager display. Image is displayed as a 320 x 240 image. Full 384 x 288 resolution image, (1.09 mrad), downloads to computer.

<sup>1</sup>Picture-in-Picture - all temperatures shown thermally over visible image

<sup>2</sup>SpyLite - only temperatures over or under preset point shown thermally over visible image

Heat Spy® is a registered trademark of Wahl Instruments, Inc.



PW1283  
03/15 Rev B  
Revised 01/16

Register your product at [www.palmerwahl.com/register](http://www.palmerwahl.com/register)