

WAHL HEAT SPY® IMAGERS



NEW!
**Hand Held
Thermal Imaging
Cameras**

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PALMER Wahl
INSTRUMENTATION GROUP

NEW! Wahl Heat Spy® Imager HSI3000

High Performance Portable Thermal Imaging Camera



***The Lowest Cost,
High Performance,
Thermal Imaging
Camera on the Market!***

- Affordable Easy-to-Use Diagnostic Tool
- Precisely identifies Problem Hot Spots
- Ergonomically Designed, and Compact
- 160 x 120 Detector Array
- Two measurement cursors, movable anywhere in the image
- Temperature and Differential Temperature Measurement
- Download images to PC with the supplied SD Card Reader for Post Analysis
- Images may be captured directly to a PC using the USB interface
- Includes *Wahl Easy Report*¹ and Operating Software

Now with Money Back Guarantee* and a Free Heat Spy® Infrared Thermometer included with purchase! Call for details.

ELECTRICAL

Most electrical problems exhibit a gradual rise in temperature prior to their failure. These problems can relate to problems such as:

- Loose or over tight connections
- Shorted or overloaded circuits
- Load imbalances
- Components which have failed or are fatigued such as fuses, circuit breakers, transformers, etc.

OTHER USES

- Refractory Condition Monitoring
- Process Monitoring
- Quality Control
- Product Development & Testing
- And many more

Wahl's low cost Thermal Imaging Camera helps you find problems, before it's too late...

BUILDING INSPECTION

Help reduce heating and cooling energy costs. Find areas of moisture intrusion in roof and walls. Identify conditions conducive to mold or pest problems.

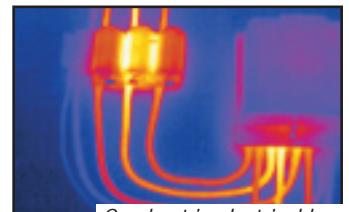
- Detect improper or missing insulation
- Detect energy losses due to air leakage or conductive losses through walls
- Check central heating/cooling and under-floor heating systems

MECHANICAL

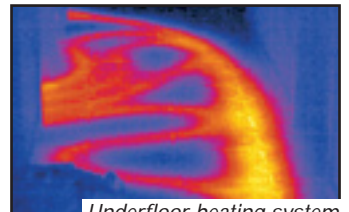
Excessive heating of mechanical devices can signify problems such as:

- Improper lubrication of bearings and motors
- Misalignments in rotating equipment
- Improper tension in drive belts and pulleys

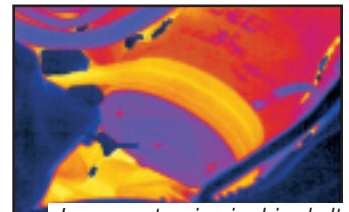
* USA Customers only
¹ Requires Microsoft Outlook



Overheat in electrical box



Underfloor heating system



Improper tension in drive belt



Overheat in process monitoring



Calibration Services Available

PALMER Wahl
INSTRUMENTATION GROUP

172 Years of Continued Innovation

(800) 421-2853 • FAX (828) 658-0728 • www.palmerwahl.com

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FEATURES

- Real Time Image and Temperature Measurement display
- Crisp High Resolution Images
- Large 3-1/2" LCD Display with LED backlight
- Fully Radiometric - Measures the Temperature of every Pixel
- Multiple Temperature Measurements
- Stores up to 1000 Images with supplied SD Card
- Image Browser with full image adjustment
- Includes Operating Software, Wahl Easy Report¹ Software, SD Card & Card Reader
- Lightweight • Simple Operation

SETTING & CONTROLS

- On/Off Soft Power Control
- User Selectable Span Control
- User Selectable Level Control
- Auto Adjust Span and Level
- Trigger activated Class II Laser
- Image Capture, Time and Date
- Display palettes: Rainbow, Ironbow, and Grayscale
- Readout in °C or °F • 2x Digital Zoom



Calibration Services Available

Specifications	
Model Number	HSI3000
Temperature Range	14° to 482°F (-10° to 250°C)
Field of View	20° x 15°
Focus	Manual
Minimum Focus	Approx. 11.8 inches (30 cm)
Spectral Response	8 to 14 microns
Thermal Sensitivity	150 mK @ 25°C Scene Temperature
Detector	160 x 120 pixels uncooled microbolometer
Image Storage	Up to 1000 images on supplied SD Card
Accuracy	The greater of ±2% of reading or ±2°C
Display	3-1/2" Color LCD with LED Backlight and 4 Color Palettes
Laser Pointer	Built in Class II Laser highlights the central measurement area
Radiometry	Two moveable cursors, delta temperature measurement
Emissivity Correction	User selectable 0.2 to 1.0 in steps of 0.01 with reflected ambient temperature compensation
Operating Range	5° to 113°F (-15° to 45°C)
Storage Range	-4° to 150°F (-20° to 70°C)
Humidity	10% to 90% Non-Condensing
Power	Lithium-ion field rechargeable, replaceable batteries
AC Operation	AC Adapter included
Interfaces	USB type B
Housing	Impact Resistant Plastic
Dimensions	9.05 x 4.72 x 4.33 inches (230 x 120 x 110 mm)
Weight	1.65 lbs (0.75 kg) including Battery
Mounting	Handheld and Tripod Mounting
Included Accessories	Rugged Waterproof Carrying Case, Wrist Strap, Battery, AC Adapter, User Manual, Wahl Easy Report ¹ Software, Operating Software CD, USB Cable, SD Card and SD Card Reader Plus! Free Wahl Heat Spy® Infrared Thermometer and Money Back Guarantee*
Optional Accessories	Replacement Battery Part Number #12437-01



HSI3000 is shipped complete with: Rugged, Waterproof, Carrying Case, Wrist Strap, Battery, AC Adapter, User Manual, Software CD, USB Cable, SD Card and SD Card Reader.

Plus - Free Wahl Heat Spy® Infrared Thermometer and Money Back Guarantee* included with purchase!

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¹ Requires Microsoft Outlook

NEW! Wahl Heat Spy® Imager HSI3000 Image Processing Software

• Manipulate, Analyze, and Store Thermal Images

When you purchase a Wahl Heat Spy® HSI3000 Thermal Imager it includes easy to use, Heat Spy® image processing software which allows the user to manipulate, analyze and store thermal images obtained with the HSI3000 thermal imaging camera.

Thermal images taken in the field and stored on the HSI3000 camera's removable SD memory card can be transferred to a PC by means of the SD card reader included in package. Live thermal images can also be downloaded from the HSI3000 via the supplied USB cable.



POWERFUL FEATURES OF THE WAHL HEAT SPY® HSI3000 IMAGE PROCESSING SOFTWARE

Download and View previously stored thermal images in any of five Window Explorer views: thumbnail, tile, icon, list or details. Images are date and time stamped, contains imager settings and the temperature of each individual pixel (160 x 120) composing the thermal scene, which can be viewed by moving your mouse anywhere in the scene.

Enhance Image Details by manually or automatically adjusting temperature level and span, and change emissivity and reflected temperature settings if necessary. Select from four-color palettes and a zoom capability up to 4X. Select to interpolate the image to 320 x 240 or 640 x 480.

Perform Accurate Detailed Temperature Measurement Analysis with histograms, 2D profiles, dual isotherms and the ability

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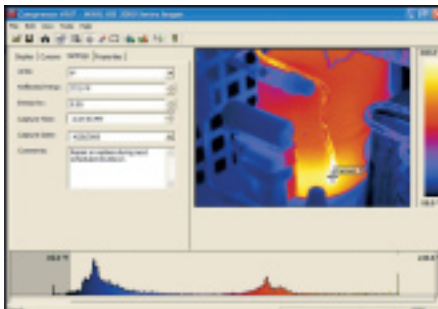
to add multiple temperature points any where in the scene. Or select the "hot and cold spot cursors" feature that directs cursors to the hottest and coldest measurements in the scene. The values of these (and the difference) are shown in a measurement cursors list. In addition, all individual pixel temperatures

in the image can also be output to a Microsoft Excel .csv file for further analysis and trending.

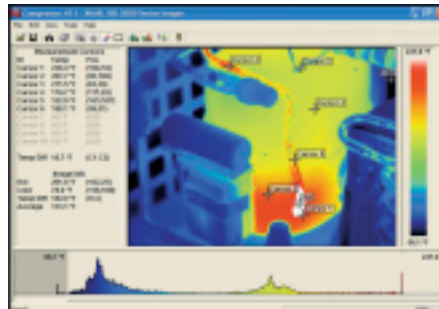
Add Comments to each image and then copy a screen capture of the application window, or copy to Bitmap (BMP) and paste into a picture editor or Microsoft Windows applications, e.g. Word, Excel etc.

System Requirements: The personal computer should be IBM compatible running MS Windows XP or 2000, with a CD drive, and a USB rev. 2.0 port or an SD card reader.

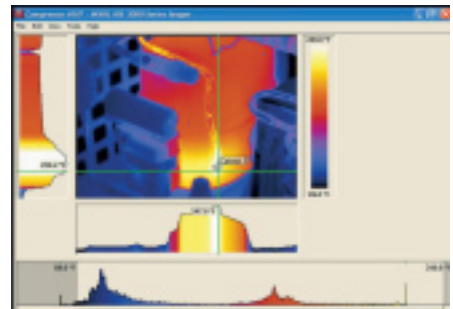
ENHANCE IMAGE DETAILS



Add comments to the image: select either °F, °C or °K: adjust the target object emissivity: adjust the reflected temperature correction: adjust capture time and date.



Placing measurement cursors anywhere in the image creates a list that includes the spot measurement, pixel position, and the difference between measurement cursors 1 and 2. Also displays the hottest and coldest measurements in the scene, their difference, and the average.



2D profile which displays a graphical representation of the temperature values along the selected vertical and horizontal lines. Also thermal intensity plots which correspond to the vertical and horizontal cross-sections through the image.