

AttackPRO+

User manual



IMPORTANT SAFETY INFORMATION
READ ENTIRE MANUAL BEFORE USE

Introduction

Thank you for choosing Seek Thermal!

We hope you find the AttackPRO+ Firefighting thermal imaging camera to be the most efficient and effective tool in your arsenal and we look forward to continuing to support the firefighting and emergency medical service community worldwide.

PLEASE READ THIS ENTIRE USER MANUAL BEFORE USE

Go to thermal.com/attackpro or scan this QR code to view all online materials and videos for Seek Thermal AttackPRO+.



Battery Disposal: Lithium Ion batteries contain elements that may pose health risks to individuals if they are allowed to leach into the ground water supply. In some countries, it may be illegal to dispose of these batteries in standard household waste. Fortunately, many recycling facilities exist that process lithium ion batteries, in part due to the value of the materials contained within the individual cells. In the United States and Canada, a large network of over 30,000 battery drop-off locations may be found at www.call2recycle.org.

Introduction



FCC Statement: This device has been tested and found to comply with part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and the receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help

Operation is subjected to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

Note Modification to this product will void the user's authority to operate this equipment.

Introduction

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

CAN ICES-3 (B)/NMB-3(B)

IC **IC Statement:** This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

This Class B digital apparatus complies with Canadian ICES-003. Cet appareil numérique de la classe B est conforme à la norme'

Introduction



European Union:

RFI Emissions: EN 61000-6-3

Immunity: EN 61000-6-2

Electrical Safety: EN/IEC 61010-1

ROHS: This RoHS-compliant product conforms to the European Union Restriction of the Use of Certain Hazardous Substances (RoHS) in Electrical and Electronic Equipment. Seek Thermal ensures RoHS conformance by requiring supplier Declarations of Conformity, monitoring incoming materials, and maintaining manufacturing process controls.



WEEE: This symbol on the product(s) and / or accompanying documents means that used electrical and electronic equipment should not be mixed with general household waste. For proper treatment, recovery and recycling, please take this product(s) to designated collection points where it will be accepted free of charge. Alternatively, in some countries, you may be able to return your products to your local retailer upon purchase of an equivalent new product.

Disposing of this product correctly will help save valuable resources and prevent any potential negative effects on human health and the environment, which could otherwise arise from inappropriate waste handling.

Please contact your local authority for further details of your nearest designated collection point.

Penalties may be applicable for incorrect disposal of this waste, in accordance with your national legislation.

Table of contents

1. Safety and Usage Information
 2. Getting to know your AttackPRO+
 3. Getting started (detailed operating instructions)
 4. Care and Maintenance
 5. Troubleshooting
 6. Legal and Warranty
-

Safety and usage information

IMPORTANT SAFETY INFORMATION

WARNING - INDICATES A HAZARDOUS SITUATION THAT, IF NOT AVOIDED, COULD RESULT IN DEATH OR SERIOUS INJURY

CAUTION - INDICATES A HAZARDOUS SITUATION THAT, IF NOT AVOIDED, COULD RESULT IN MINOR OR MODERATE INJURY

NOTICE - INDICATES INFORMATION CONSIDERED IMPORTANT, BUT NOT HAZARD-RELATED

WARNING

1. EXPLOSION HAZARD - Imager must only be charged and batteries must only be changed in an area free of ignitable concentrations.
 2. Never become wholly dependent on the thermal imager for personal navigation. It is not a night vision camera. Always maintain awareness of location and escape routes when using this device. Failure to do so may result in serious injury or death.
 3. The thermal imager is not life support equipment and should not be used as such. Users of thermal imagers, regardless of brand or type, are required to read the operating manual prior to using thermal imagers.
-

Safety and usage information

4. The thermal imager must only be used by authorized personnel familiar with and trained on the uses, proper operation, features and full functionality of the thermal imager, including training in simulated fire conditions such as controlled live burn simulations. This includes understanding thermal images and how they are interpreted.
 5. The thermal imager is a complex electro-optical device, and just like any other machinery, electronic systems are subject to potential failures. If a failure occurs, the user will no longer have access to the thermal imagery provided by the thermal imager. Tactical use of this equipment must not deviate from standard operating procedures used by personnel who do not have the benefit of the equipment. Failure to follow your fire department's standard operating procedures in a hazardous atmosphere could result in disorientation, serious injury or death should equipment failure occur.
 6. Never use the thermal imager as the sole source of navigation. If system failure occurs, you may become disoriented or lost in a hazardous environment which could result in serious injury or death.
 7. Failure to exit a hazardous environment immediately on observation of the low battery warning may result in system failure in a hazardous environment which could result in serious injury or death.
 8. Do not disassemble or modify the battery used with this device. The battery contains safety and protection devices which, if damage occurs, can cause the battery to become hot or cause an explosion or ignition.
-

CAUTION

1. Nonincendive Electrical Equipment for use in Class I, Division 2, Groups A, B, C and D; Class II, Division 2, Groups F and G, and Class III Hazardous Locations, or Non-Hazardous (Ordinary) Locations.
 2. Only to be used with batteries marked with P/N FA-BAA (3.63V nominal) provided by Seek Thermal Inc.
 3. Risk of injury or product impairment if the AttackPRO Camera is used in a manner not specified by Seek Thermal.
 4. Users should be conscious of the battery life. Only enter a hazardous environment when a full battery charge is indicated on the battery charge icon and the thermal imager is confirmed as fully operational.
 5. If there is a leak from the battery and you get the fluid in your eyes, do not rub your eyes. Flush well with water and immediately get medical care. The battery fluid can cause injury to your eyes.
 6. Do not continue to charge the battery if it does not become charged in the specified charging time. If you continue charging the battery, it can become hot or cause an explosion or ignition, potentially causing injury.
 7. Do not connect the positive terminal and the negative terminal of the battery to each other with a metal or conductive object. Damage to battery can occur.
 8. Do not get water or salt water on the battery or permit the battery to become wet. Damage to battery can occur.
 9. Do not strike or hit the battery. Damage to the battery can occur.
-

Safety and usage information

10. Do not charge the thermal imager or individual batteries in a hazardous location.

11. Do not use the battery if, when you use, charge, or place the battery in storage, there is an unusual smell from the battery, or it feels hot to the touch, or changes color, or changes shape, or is an otherwise unusual condition.

12. Only use a seek thermal specified battery charger when you charge the battery. otherwise, damage to the battery can occur.

13. Do not put the battery in a fire or increase the temperature of the battery. Do not leave the batteries in direct sunlight for extended periods of time. Damage to battery can occur.

14. Remove any water or moisture from the battery before you install it. Do not apply solvents or equivalent liquids to the camera, cables, or other items. Damage to the components can occur.

15. It is important to test the thermal imager and any other associated accessories prior to use to ensure that the equipment is functional before entering a hazardous environment. Always perform a visual and functional check on the equipment to validate that it has not been damaged or degraded prior to use.

16. The thermal imager is a navigational tool which provides a thermal image in conditions where vision is impaired. The user should follow safety precautions and protocols and stay within communication range of the incident command structure.

17. Do not point the infrared camera at strong energy sources, for example, devices that cause laser radiation, or the sun. This can affect the accuracy of the camera and cause damage to the detector.

NOTICE

1. Contact your dealer for servicing by authorized personnel. The thermal imager contains no user-serviceable components.
 2. As with most electronic products, this equipment must be disposed of in an environmentally friendly way and in accordance with existing regulations for electronic waste.
 3. The thermal imager will not provide images through glass, water, or shiny objects. These surfaces act like mirrors to the thermal imager.
 4. The thermal imager will not provide thermal images underwater.
 5. When using the thermal imager in a cold environment (below 0°C/32°F), the maximum temperature that the thermal imager can detect is lowered, until the unit reaches an internal nominal temp of (20°C/68°F). Be aware that colorization and temperature readings may not be accurate under these conditions.
 6. For best performance and accurate scene colorization, always store the thermal imager indoors or in a room temperature environment (20°C/68°F). Do not leave the thermal imager exposed to cold environments.
 7. Repeated exposure to high temperature environments without adequate periods for the unit to self-cool may result in degradation or loss of the thermal image or damage to the internal components. Be sure to allow adequate cool-down periods between high temperature exposures.
-

Safety and usage information

8. The service life of the thermal imager depends in part on how it is used and the environmental conditions in which it is used. Under heavy usage, or under extreme environmental conditions, the service life of the equipment may vary.
 9. Battery lifespan can vary greatly depending on prolonged exposure to hot and cold environments, but a typical battery life when used at ambient conditions of 23°C (73°F) is expected to be 3yrs while still maintaining 80% of its original performance and capacity.
 10. While every effort has been made to ensure that your thermal imager is both tough and reliable, the thermal imager is a sophisticated electro-optical system that will fail if it is abused or exposed to environments beyond its design envelope.
 11. Do not alter or cover over any labels on the thermal imager.
 12. Exposure to some chemicals may degrade the sealing properties of materials used in the thermal imager and battery assembly.
 13. The thermal imager is IP67 rated against debris and water ingress. However, the thermal imager must not be exposed to debris and water while the battery cover door is open or otherwise unlatched and unsecured or permanent damage to the electronics or performance may occur. Make sure the battery latch is secured closed before use.
-

Getting to know your AttackPRO+

What's included in the box:

1. Thermal Imaging Camera
2. Li-ion Batteries (x2)
3. Battery Charger
4. Power Supply (for Battery Charger)
5. AC plugs for US, EU, and UK (for Power Supply)
6. USB Cable
7. USB Cable Tool
8. Durable Quick Start Guide
9. Warranty Statement
10. Manufacturer's Certificate

AttackPRO+ manufacturer specified parts:

- Thermal Imaging Camera - Seek Thermal, FQ-PPNX
- Desktop Charger - Seek Thermal, FD-SAA
- Battery - Seek Thermal, FA-BAA
- Truck Charger - Seek Thermal, FD-PAA (may be sold separately)

Seek Thermal reserves the right to discontinue models, parts, accessories, additional items, and product specifications at any time without prior notice.

Technical specifications

Specifications	Descriptions
Thermal Sensor	320 x 240 (76,800 pixels) 7.8-14µm
Detection Distance	12 inches to 1,000 feet
Field of View	Wide, 57 ° HFOV, 42 ° VFOV
Start up time	< 5 secs
Object Temperature	-4 to 1,022 °F (-20 to 550 °C)
Operating Temperature	-4 to 131 °F (-20 to 55 °C) no time limit up to 302 °F (150 °C) - max 15 min up to 500 °F (260 °C) - max 5 min
Frame Rate	> 25Hz
Thermal Sensitivity	< 35mK with SV1
Gain Mode	Mixed Gain Technology
Image Modes	Ti Basic, Ti Basic+, Survey Mode
Accuracy	Typical: +/-5°C or 5% (-20 °C to 500 °C) @ 22 °C
Display	3.5" color LCD, 320 x 240, Impact resistant glass
Flashlight	300 Lumens LED
IP Rating	IP67
Battery	Li-Ion, 3.6V 4900mAh, Rechargeable
Battery Operating Time	6hrs (thermal imaging only @ 77 °F/25 °C) 3hrs (imaging w/ flashlight @ 77 °F/25 °C)
User Interface	Two button tactile operation
USB interface	USB Type-C for firmware updates
Drop/Impact	2m, multi-orientation onto concrete
Weight	2.5lbs (1.17kg)
Size (approx.)	11" x 4.5" x 5" (280mm x 115mm x 130mm)
Compliance	Certified to NFPA 1930 (1801) 2025 Ed. Nonincendive Electrical Equipment for Use in Class I, Division 2, Groups A, B, C and D; Class II, Division 2, Groups F and G, and Class III Hazardous Locations, or Non-Hazardous (Ordinary) Locations, Temperature Code: T4A

Getting to know your AttackPRO+

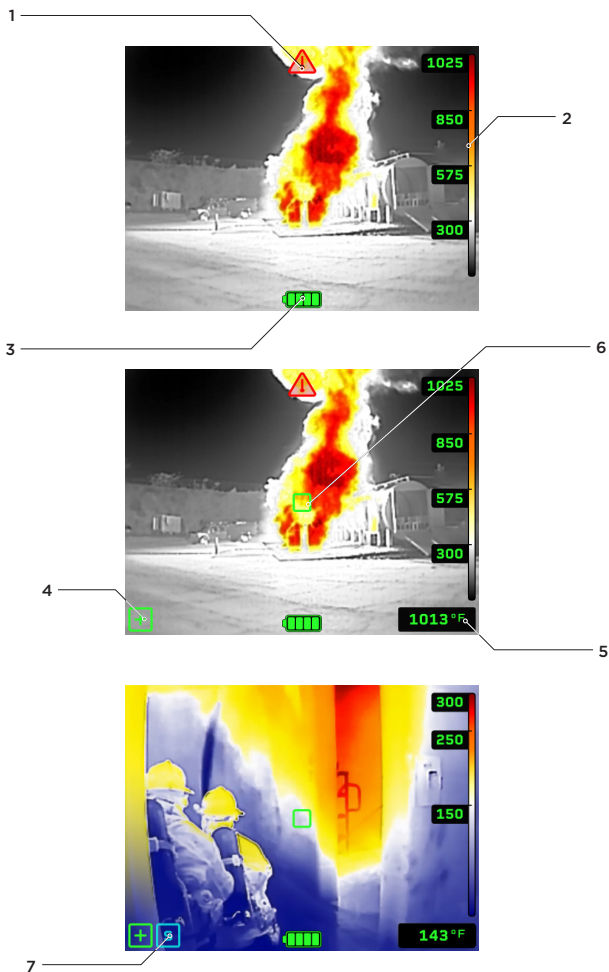


Camera components

1. Power On/Off and revert to TI BASIC button
2. Temperature units toggle button
3. Flashlight On/Off and mode change
4. 320 x 240 display with protective glass cover
5. Thermal imaging sensor and lens
6. LED flashlight
7. Lanyard attach point
8. Battery door latch (no tools required)
9. Battery door
10. QD swivel attach point (QD swivel not included)
11. Spring-loaded thumb lock

Note Refer to the figures on the previous page for corresponding illustrations.

Getting to know your AttackPRO+



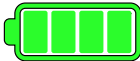
Screen Elements

1. Over temperature indicator, provides a visual warning that the thermal imaging camera is about to shut down due to overheating of internal components. Move the camera to a cooler location.
2. Color reference temperature bar
3. Battery status indicator
4. TI BASIC+ icon, indicates that the extra features of TI BASIC+ are enabled; quickly press and release the Green power button to revert to TI BASIC mode. Using the camera in TI BASIC+ mode may require additional training.
5. Temperature measurement reading, displays the temperature measured at the center reticle location (when Ti Basic+ and Survey Mode is enabled)
6. Temperature reticle (when Ti Basic+ and Survey Mode is enabled)
7. Survey Mode icon, indicates that the camera is in Survey Mode.

Note Refer to the figures on the previous page for corresponding illustrations.

Getting to know your AttackPRO+

Battery status indicator

Full charge (green) 100-76% charge remaining >360 - 355 mins remaining	
75% charge remaining (green) 75-51% charge remaining 355 - 240 mins remaining	
50% charge remaining (yellow) 50-26% charge remaining 240 - 130 mins remaining	
25% charge remaining (red) 25-5% charge remaining 130 - 35 mins remaining	
Low Power (flashing red) < 35 min remaining	

Equipment ratings

Supply Voltage	7.5VDC
Power Rating	13W
Battery Type	Li-ion 3.63V / 4.9Ah / 17.78Wh (Seek P/N FA-BAA only)
Environmental	Intended for indoor/outdoor use
	2000m max pressure altitude
	0 to +40C charging, 0 to +55C operating
	10-90% relative humidity, non-condensing
	Overvoltage Category OVC 1
	Intended for wet locations
	Pollution Degree 2
	IP67

Quick start guide

Quick Start Guide

Please refer to the following to start using the product right away:

1. Charge the AttackPRO battery, either individually or inserted into the AttackPRO+ camera (if using the Truck Charger), using the separate charging dock. Charge for < 6 hours before using the camera for the first time, or until the green LED is indicated on the charging dock.
 2. Press and release the green power (left) button to turn the camera on. The camera should start imaging withing 5 seconds.
 3. Quickly press and release the green power (left) button while the camera is turned on at any time to revert the camera mode back to TI BASIC.
 4. Press and hold the green power (left) button for 3 seconds while the camera is turned on to power off the camera.
 5. Aim the front lens of the camera toward the scene of interest.
 6. Quickly press and release the flashlight (right) button to enable the flashlight; quickly press and release again to disable the flashlight.
 7. Press and hold the flashlight (right) button for 3 seconds to toggle between TI Basic, TI Basic+, and Survey Mode(s). A “+” icon will appear in the lower left corner of the display.
-

Quick start guide

8. To change temperature units between °C and °F, use a paper clip or similar to quickly press and release the small pinhole center button.

Updating the camera

Periodically, Seek Thermal will release product improvements or enhancement in the form of firmware updates. To update the product, refer to the following:

1. Visit the support section at www.thermal.com/support and download the most recent or relevant firmware update to your PC.
 2. Power off the AttackPRO+ and remove the battery
 3. Plug the included USB cable into the USB port within the handle, the included tool maybe be used to guide the USB-C plug.
 4. The AttackPRO will show up as a drive in your folder structure or finder.
 5. Drag the firmware file from the previously saved location to the AttackPRO+.
 6. Eject or remove the AttackPRO+ as a drive from your PC, insert a charged battery and power on the device to begin using.
-

Quick start guide

Inserting/removing a battery

Use only batteries provided by Seek Thermal designed for the AttackPRO+ product with the camera.

Inserting a battery

1. Insert a fully charged battery, making sure to align the rib on the battery housing with the channel in the camera battery compartment.
2. Insert fully and press on battery door, this will compress the battery gasket.
3. Slide the spring-loaded thumb lock in the direction shown.
4. Press down on battery door until battery door latch engages.
5. Release and ensure the battery door is fully locked.

Removing a battery - two handed operation

1. Power off the camera.
2. On the bottom of the handle, slide the spring-loaded thumb lock in the direction shown on the battery door.
3. Press down on the battery door, this will slightly compress the battery gasket.
4. Slide the battery door latch toward the front of the camera.

Charging a battery with the desktop charger

Use only batteries provided by Seek Thermal designed for the AttackPRO product with the camera.

Quick start guide

1. Remove the battery from the camera.
2. Place the desktop charger on a stable surface protected from liquids.
3. Plug the barrel connector of the provided Seek Thermal power supply into the rear of the desktop charger.
4. Plug the provided Seek Thermal power supply into a safe AC power source using the appropriate regional adapter (US, EU, UK).
5. Insert the battery making sure to align the rib in the battery housing with the channel in the desktop charger.
6. A LED light on the front of the charger should indicate RED = charging, GREEN = fully charged, RED FLASHING = error (try reseating the battery, there may be a battery or charger issue if the light still flashes).

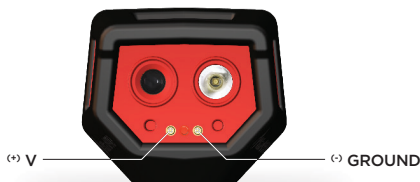
Charging a battery with the truck charger

Use only batteries provided by Seek Thermal designed for the AttackPRO+ product with the camera.

1. You may leave the battery inserted in the camera.
 2. Make sure the Seek Thermal truck charger is placed on a stable surface or is securely wall mounted and protected from liquids.
-

Quick start guide

3. Make sure the Seek Thermal truck charger is properly connected to a power source as described in the truck charger operating instructions. A blue light should be displayed on the front of the truck charger.
4. Pivot the top of AttackPRO+ camera into the appropriate docking well on the Seek Thermal truck charger so it engages under the top mating edge of the truck charger.
5. Allow the handle of the AttackPRO+ to sit in the mating handle well of the truck charger and secure product with the retention strap.
6. The charge pins as indicated below should make contact and begin charging the AttackPRO+ with battery inserted.
7. A separate battery may also be installed and charged with the Seek Thermal truck charger by aligning and inserting the top of the battery in the appropriate well first, then securing with the retention strap.
8. The right LED light on the front of the charger should indicate RED = charging, GREEN = fully charged, RED FLASHING = error (try reseating the battery, there may be a battery or charger issue if the light still flashes).



Care and maintenance

Cleaning and care

The Seek AttackPRO+ thermal imager requires little maintenance. For best care, please follow the guidelines below:

- When not in use, the thermal imager should be stored in at an average room temp of 23°C (73°F) and kept clear from potential physical damage
- If company or department information is added to the thermal imager, ensure that you do not cover the original product labels or markings, the thermal imager lens, flashlight window, the functional buttons, or the display
- To clean the camera housing, use a soft cloth with warm water only and a mild detergent. Do not use solvents to clean the camera
- To clean the lens and flashlight, a commercial lens cleaning solution with more than 30% isopropyl alcohol may be used with a soft cloth. Gently use the cloth on the lens, as the lens has a delicate anti reflective coating
- Do not allow any liquids or debris to enter the battery compartment, and make sure the battery compartment is closed when handling the device around dirty or contaminated environments
- Decontamination: please make sure the camera is thoroughly cleaned, decontaminated, and disinfected before sending to your reseller or Seek Thermal for service. Contaminants include: chemical fire extinguishing compounds, radioactivity, biohazardous materials, and residues from chemical fires
- Seek Thermal reserves the right to charge the full cost for the decontamination and disinfection of cameras that are shipped to our service department

Care and maintenance

Training

Read and understand this entire manual. Training and practice are required before use of this equipment in a hazardous situation. Use of a thermal imager without proper training may place the user at higher risk in dangerous situations which could result in serious injury or death.

 **WARNING:** This is not, nor is it intended to be, an exhaustive list of behaviors of infrared energy that differ from visible light. Use of this thermal imaging camera must be part of a complete training program. Interpretation of the thermal image requires training and experience. Do not use this product if you have not been thoroughly trained in its use and operation. Use of this product without proper training and thorough understanding of its operation may cause errors in judgment based on misinterpretation of the thermal imaging information, which could result in serious injury or death.

The training must include extensive practice with the thermal imager in a variety of non-hazardous and hazardous environments to develop a complete understanding of how to interpret the thermal image. The user must be able to distinguish between relatively harmless and potentially hazardous sources of heat. The user must also be able to distinguish between actual sources of heat and reflected images of heat sources. Because different brands and models of thermal imagers may operate differently, always update training with each new piece of equipment.

Care and maintenance

Training (continued)

Before entering a potentially hazardous situation, turn on and test the thermal imager to confirm it is operating properly. Failure to confirm the thermal imager is operating properly may place the user at higher risk in dangerous situations which could result in serious injury or death.

Beware of misconceptions about thermal imagers. Thermal imagers only show temperature differences between objects and not an optical image of the objects. The greater the temperature difference, the more distinct the thermal image. Experience and training are required to correctly interpret the thermal image.

These are some other circumstances which could result in misinterpretation:

- The thermal imager cannot see through walls. A source of heat behind a wall will not be evident if it does not heat the wall itself
 - The heat from some high temperature objects or sources of high heat may be blocked, obscured, or made less distinct in the thermal image display by any of the following:
 - Water mist, spray, or highly saturated fog
 - Some chemical substances in a concentrated cloud or vapor
 - Extremely dense smoke
 - Heated smoke or a layer of heated gases
 - If a concrete floor and a hole in that floor have the same temperature, there will be no apparent difference in the thermal image display to indicate the presence of the hole
-

Training (continued)

- Visually transparent or reflective materials such as glass, shiny plastic, or water can reflect infrared radiation from an actual source of high temperature. The user must be able to distinguish and identify when the image in the display could be a reflection and not the actual source of high temperature. For Example:
 - When viewing a window or other shiny surface at an angle, a source of high temperature reflected in the surface will be at some angle opposite and away from the apparent location
 - When viewing a source of high temperature through a clear window with a thermal imager, the thermal imager display will only show a reflection of the user holding the thermal imager and not the source of high temperature behind the window
 - When viewing a hole filled with water, the thermal imager display will show a reflection of any heat sources above and away from the water surface
 - Molten or boiling substances will appear hot in the thermal image display, but it may be difficult to identify their physical nature and the hazards they present based on the thermal image alone
 - Keep the lens clean while operating the thermal imager
 - Dirt or soot build up on the lens will obscure or reduce the clarity of the thermal image. Wipe the lens with a glove or cloth as needed. Clean the lens thoroughly after use
 - Condensation on the lens of the thermal imager will also block the thermal image and make entire display appear blank. Wipe the lens regularly to remove accumulated condensation. Use an approved anti-fog preparation on the lens to reduce the possibility of condensation on the lens
-

Care and maintenance

Training (continued)

Basic familiarity and fire service use case examples are provided on the Seek Thermal website at www.thermal.com

For additional training resources, please visit the following:

Instructor Andy Starnes - www.insighttrainingllc.com

Max Fire Box fire dynamics - www.maxfirebox.com

Customer and product support

For any questions or issues with the use of this product, do not hesitate to contact our customer support group at www.thermal.com/support

Quality assurance

The Quality Management System under which this product was developed and manufactured has been in compliance to the ISO 9001 Standard. Seek Thermal Incorporated reserves the right to make changes and improvements on any of the products without prior notice.

Troubleshooting

Troubleshooting

If you are experiencing problems with your product, please refer to this checklist. If the problem persists, please contact Seek Thermal Customer Services or your local distributor.

Power and charging

Issues:	Solutions:
Thermal imager will not turn on.	Ensure battery is inserted correctly. Ensure battery is fully charged. Ensure battery contacts are clean.
Thermal imager switches off by itself.	Replace/charge battery.
Battery will not charge.	Clean battery charging contacts.

Performance and imaging

Issues:	Solutions:
Power is on but LCD is black.	Ensure no water or glass items are impeding the view.
Image is a reflection of the user.	Ensure no obstacles are impeding the view.
Image appears blurred.	Ensure the lens window is clean.
Thermal imager will not focus.	Ensure the lens window is clean.

Troubleshooting

Notice to user

- **Disposal of Electronic Waste**

This equipment must be disposed of in an environmentally friendly way, and in accordance with existing regulations for electronic waste.

- **Documentation updates**

Our user manuals and guides are updated periodically. Please check www.thermal.com/support for the most current version of this products documentation.

- **Firmware updates**

The product will periodically have firmware updates available at Seek Thermal support. Please check www.thermal.com/support for the most current version of firmware.

Legal and warranty

Export obligations

The technology utilized in Seek Thermal imagers may be subject to export control regulation by the governments of the USA. Where an export license applies, once obtained by Seek Thermal on behalf of the customer, all parties must strictly adhere to the terms and conditions pertaining to that license.

Where an export license applies, a copy of the license will be provided to the end user, and the end user must agree to follow all license terms and conditions. As an indicative (but not exhaustive) guide, typical thermal imager End User License Standard Conditions are reproduced in the next section.

End user license standard conditions

1. The end user must maintain the Item in their possession at all times and is responsible for its security against theft, loss, unauthorized access, or use.
2. No resale, donation, export, re-export, transfer, or disposal by other means of the Item is authorized. When the Item reaches the end of its service life, it MUST be returned to:

Seek Thermal Incorporated
6300 Hollister Avenue, Santa Barbara, CA 93117

3. Sale, resale, loan, or surrender of the Item for any reason is prohibited.
-

Legal and warranty

4. Maintenance of the Item is limited to routine preventative maintenance and installation of field replacement parts only. Disassembly and/or repair of electrical/mechanical assemblies must only be performed by Seek Thermal authorized personal.
5. If the Item is lost, stolen, or destroyed, or unauthorized people have access to it, this must be reported to Seek Thermal within 21 days. The report must include a description of the incident, to include as appropriate:
 - Who had physical possession of the item
 - What is being done to recover the item
 - Police incident report number
 - Steps taken to prevent another such event
 - If unauthorized personnel had access to the Item, who allowed this and what has been done to avoid recurrence
6. The end user must agree to all conditions set forth in the export license by signing said conditions and returning the signed export license to Seek Thermal prior to shipment of the Item.

Seek Thermal

www.thermal.com

www.thermal.com/support

Disclaimer

Specifications subject to change without further notice. Models and accessories subject to regional market considerations. License procedures may apply. Products described herein may be subject to US Export Regulations. Please refer to thermal.com/support with any questions.