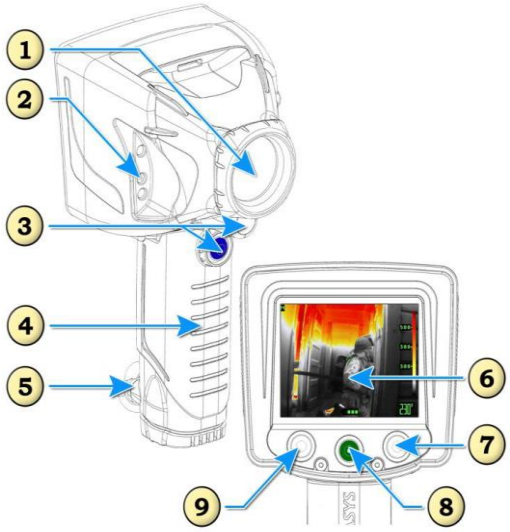
THERMAL IMAGING CAMERA
3M SCOTT X380 3-BUTTON OPERATIONS

1. EQUIPMENT

- X380 3-Button TIC
- Lanyard
- Two Batteries
- Fast Attack Truck Charger

2. PARTS and CONTROLS

1) Lens window
2) Charging contacts
3) Laser Assist
4) Battery Compartment
5) Lanyard "Quick Detachment" Point
6) LCD Display
7) Zoom Button
8) Green Power button & LED
9) Hot and Cold spot tracker button



❖ *This thermal imaging system **is not rated** as intrinsically safe. **Do not** use the camera in atmospheres where static or spark may cause an explosion.*

3. OPERATING FEATURES

Inserting the Battery

1) Ensure the battery is fully charged by a SOLID GREEN LED indication on the battery charger.
2) Insert the battery with the notch forward into the battery compartment.
3) Twist the battery cover clockwise to lock.
4) Secure the battery by turning the set screw clockwise.

Power On

1) Press for 1 second and release the Green Power button. Prior to use, observe or check for the following indicators on the screen: Overheat Warning; Battery Charge State; Color Reference Bar, DTM readout; DTM Crosshair and battery indicator shows fully charged.
2) The ISG INFRASYS logo Start-up screen is displayed, signifying that the start-up sequence has been initiated.

3) Live thermal image is displayed with a DTM readout given in the bottom right corner to signify the thermal imager is operating in Basic Imaging Mode.

Power Off

1) Press and hold the Power button.
2) Release when the thermal imager powers down or when the timer next to the Power Off icon reaches 0. The power off sequence will be aborted if the Power button is released prior to the thermal imager powering off.

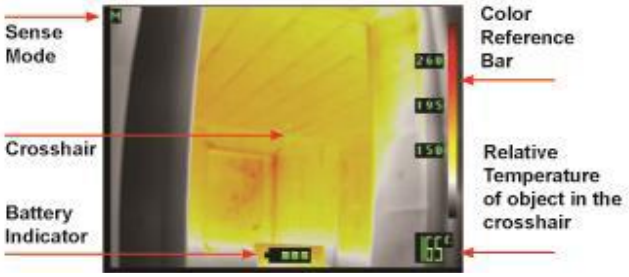
Overheat Indicator

The X380 is equipped with an internal electronics overheat indicator, . This indicator will activate when internal electronics have reached temperatures beyond their safe operating range. The over temp indicator will begin flashing at least 30 seconds before the camera shutdown sequence begins.

Intelligent Focus

The Intelligent Focus feature enhances the thermal imager's usability by enabling the user to optimize its imaging performance based on the surrounding environment.

The thermal imager will automatically select what it believes to be the most appropriate Sensitivity. The user selects an alternative Sensitivity Mode by simply pointing the thermal imager's crosshair at the desired object.



High Sense Mode H

This mode is automatically activated when objects in its field of view are at room temperature or cooler. For example, when you activate your thermal imager and look around the fire station, it will most likely be operating in High Sensitivity Mode. Likewise, High Sensitivity Mode is automatically selected when you are searching or navigating in a cold smoke-filled basement.

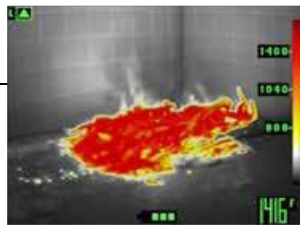


Mid Sense Mode M

This mode is automatically activated when the temperature of objects in its field of view is elevated. This mode is automatically activated when there are objects in the field of view that are generally greater than 150°F.



Low Sense - 1000+ Plus Mode L



This mode is automatically selected when the entire field of view exceeds 475°F, or when the crosshair in the center of the viewing screen is directed to objects that are generally greater than 475°F. While operating in this mode, the thermal imager is capable of imaging objects that are in excess of 2000°F.

Color Reference Bar

The Color Reference Bar provides a visual indication of the range of scene temperatures detected. It is displayed on the right-hand edge of the screen and provides a point of reference for the user to quickly identify the different temperature ranges in the scene. Heat-indicating colorization overlays over the thermal images and is designed to assist users approximate the relative temperature of objects in the scene. The numeric anchor temperatures change based on the sense mode detected by the camera to help users approximate the relative temperature of objects within the colorized region.

Note: when the camera changes mode (from Low sensitivity, mid sensitivity, and low sensitivity), the scale changes so that users always have an accurate representation of the relative temperature.

1) The coolest objects in the scene are depicted in the black to white color band with black being the coldest and white being the hottest.
2) Yellow starts immediately following the hottest (white) temperature. Light yellow is displayed to depict the lowest temperature within the yellow temperature band. The hue changes to a darker yellow to depict hotter temperatures within the yellow band.
3) Orange starts immediately following the hottest temperature in the yellow temperature band. Light orange is displayed to depict the lowest temperature within the orange temperature band. The hue changes to a darker orange to depict hotter temperatures within the orange band.
4) Red starts immediately following the hottest temperature in the orange band. Light red depicts the lowest temperature within the red temperature band, and the hue gradually changes to a darker red to depict hotter temperatures within the red temperature band.

Note: the user must be aware of the sense mode the camera is in at all times to better utilize the heat indicating colorization and its corresponding temperature based on the Color Reference Bar numeric anchor temperatures.

Zoom

The Zoom feature enables the user to magnify the on-screen image to enhance imaging performance form a distance.



<u>2X / 4X Zoom</u>

1) From Basic Mode, press the Zoom button.
2) The live image is magnified by a factor of 2.
3) To operate with 4X Zoom, press the Zoom button a second time.
4) The live image is magnified by a factor of 4.

<u>Zoom Off</u>

1) Press the Zoom button a third time to exit.

Hot / Cold Spot Tracker

The Spot Tracker enables the user to track the hottest or the coldest object in the scene and displays its relative temperature.



Spot Tracker On

1) Press the Spot Tracker button.
2) The Hot Spot Tracker crosshair tracks the hottest pixel in the scene and displays its temperature on-screen.
3) To operate with Cold Spot Tracker, press the Spot Tracker button a second time.
4) The Cold Spot Tracker crosshair tracks the coldest pixel in the scene and displays its temperature on-screen.

Spot Tracker Off

1) Press the Spot Tracker button a third time to exit.

4. ROUTINE MAINTENANCE

- When not in regular use, the camera should be switched on for a period of five minutes every Sunday duty to check for correct operation.
- The battery should be switched every Sunday duty.
- After use and prior to storage, the camera should be cleaned using a cloth soaked with warm water. Solvents should not be used.
  - Keep the lens clean.
    - Dirt or soot build up on the lens will obscure or reduce the clarity of the thermal image. Wipe the lens with a cloth as needed. Clean lens thoroughly after use.

5. BATTERY CHARGING

1) Upon power up, the charger's two LED status indicators will Flash from RED to YELLOW to GREEN and then turn OFF. The LEDs will remain OFF when no battery or X380 is detected.
2) Insert thermal imager into Fast Attack as shown. The X380 should be placed into the FA with the three charging contacts aligned and the handle protruding thru the "U" shaped opening.
3) Ensure the latch is securely fastened prior to the apparatus moving.
4) Once the X380 is fastened securely, the GREEN LED should begin flashing indicating the battery in the X380 is charging or SOLID GREEN if it is fully charged.
5) Insert the spare battery into the charging port in the lower right of the FA charger. Ensure the battery locks into place by rotating the battery end cap clockwise 90 degrees.
6) Once the X380 is fastened securely, the GREEN LED should begin flashing indicating the battery in the X380 is charging or SOLID GREEN if it is fully charged.

7) Ensure Battery is securely fastened prior to the apparatus moving.

LED INDICATORS

1. Power on – cycles from red to green to off
2. Battery charging – flashing green.
3. Battery charge – solid green
4. Battery failure – flashing red and green.



6. REPAIR

If the camera is placed out of service, an officer must be notified, and the member shall prepare the appropriate form on the website.