**Policy:**

It shall be the policy of PFPD to utilize the Thermal Imaging Camera (TIC) at every structure fire and any other situations as identified where it will enhance the safety of fire department personnel. It will be the officer's or acting officer's responsibility to assign a TIC operator on each run.

The camera is carried on each Pumper and Multi-response Unit in a charging base mounted in the cab. Personnel should become familiar with the location of the TIC on the apparatus and how it fits properly in the charging base. The TIC should be turned on while the apparatus is enroute so it is ready for use immediately upon arrival at the incident scene.

Standard firefighting practices must be observed with the Thermal Imaging Camera acting as a tool just like any other hand tool. In moderate to heavy smoke conditions the TIC allows a crew to quickly check a smoke filled area to determine whether or not there is fire or victims present. The camera operator must remember not to move too quickly, so that the rest of the team is not lost in the zero visibility environment. The TIC has the potential to inspire overconfidence because it allows firefighters to "see" in an environment that in reality has zero visibility. Firefighters should remember that they must stay low even if the camera allows them to see that the majority of the heat is at the ceiling. The possibility of a flashover in the dynamic atmosphere of a structure fire is higher than ever before because of new materials, construction methods and rapid responses. Personnel must understand that the camera could fail and an escape route must be easily located, either by following a hose line or rope tag line to safety.

The TIC can also serve as a tool for detecting heat during the overhaul phase of an incident. It must be remembered, however, that the TIC cannot penetrate most construction materials including drywall, plaster and lathe, concrete, glass or plastic. Because the camera has a black and white display it is sometimes difficult to differentiate between what is heat or fire trapped in a wall and what is radiant heat. Common sense and experience must be used along with the TIC during overhaul.

The TIC operator must exit the fire building to change the TIC battery pack. The spare battery and battery tool shall remain on the apparatus.

The TIC must be cleaned with a soft rag dampened with water and mild (e.g.; dishwashing) soap after every use. The battery pack must also be rotated.

The TIC shall be checked as part of the regular truck check of the apparatus. The camera should be inspected for cleanliness. If any part of the camera is dirty, a clean rag dampened with water and mild (e.g.; dishwashing) soap should be used to clean the camera. The camera should be turned on and checked for proper operation and then turned off and returned to its charging base. Problems with the TIC should be reported to the Officer immediately.

**Operation of the Camera**

1. The camera is stored in the apparatus charger on all Apparatus. The camera, including its carrying strap and accessories must be dry before returning them to the charger or the case so moisture is not trapped inside.
2. Included with the charger are the following: thermal imaging camera, lanyard strap, and a spare battery tool and battery. The Thermal Imager and spare battery will be kept in the vehicle charger at all times to ensure that both batteries are fully charged at all times.
3. In order to deploy the camera, remove it from the charger and firmly grasp the handle. The carbineer and retractable strap should be utilized in order to lessen the chance of the unit being dropped. If the retractable strap and carabineer are not being used to attach to the firefighters, it should be removed to prevent damage to the camera.
4. To turn the unit on, push the GREEN button on the bottom center of the unit. It will take approximately 5 seconds for the unit to warm up; self check and become operational.
5. Once the camera is active, an image will be visible on the screen. Cool areas appear dark while heat sources appear white.
6. On the bottom of the screen, a battery indicator light allows the operator to see the amount of energy reserve that remains in the units battery pack.
7. On the center of the toolbar, a solid light indicates the power to the camera is on, a blinking light indicates the camera is in sleep mode, and no light indicates unit is turned off.
8. On the right side of the toolbar, a thermometer color shading based upon the temperature of an object.
9. If the battery power bar graph indicates that the battery has less than 1/4 of its energy capacity remaining, it should be replaced with a fully charged battery. To remove the battery, release the bottom screws which will then allow the battery to be removed. Use the battery tool to push the battery from the handle. Ensure that the replacement battery is reinserted with the same orientation so that the battery’s contact points coincide with those of the camera. Do not over tighten battery screws.
10. To shut unit off, push and hold the GREEN button on the bottom center of the unit for approximately 5 seconds.

**Inspection**

1. The camera shall be checked as part of the routine equipment check of the apparatus to which is assigned.
2. The camera should be inspected for cleanliness. If any part of the camera is dirty a clean rag dampened with water and mild soap should be used to clean the camera.
3. The camera should be turned on and checked for proper operation and then turned off.
4. The camera should be returned to its charger and secured.
5. The charger lights should indicate the camera and spare battery pack are properly installed and charging.
6. Problems with the unit should be reported to the officer in charge so that they can be noted and repaired as soon as possible.

Maintenance

1. After the camera is used on an incident it should be thoroughly cleaned and dried before it is returned to its vehicle charger and the batteries fully charged.